



**ASSOCIATION OF
METROPOLITAN
WATER AGENCIES**

LEADERS IN WATER

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Christopher P. Weis, PhD, DABT
David M. Balshaw
National Institute of Environmental Health Sciences

Via NIEHSCEC@nih.gov

Re: [RFI Response: Drinking Water Contaminants of Emerging Concern](#)

Dear Dr. Weis and Mr. Balshaw,

The Association of Metropolitan Water Agencies (AMWA) is the nation’s only policy-making organization solely for the largest publicly owned metropolitan drinking water utilities. AMWA’s membership serves more than 156 million people – from Alaska to Puerto Rico – with safe drinking water. The association represents the interests of these water systems by working with Congress and federal agencies to ensure federal laws and regulations protect public health and are cost-effective. AMWA continually advocates for establishing environmental priorities based on sound science and greatly supports expanding research in the arena of water so that public policy makers can make decisions and judge risk trade-offs based on the newest peer-reviewed science.

AMWA would like to applaud the National Institutes of Health/National Institute of Environmental Health Sciences (NIH/NIEHS) for prioritizing such an important and complex issue as contaminants of emerging concern (CECs). Addressing CECs requires a fresh look at how to be more responsive and timely regarding research priorities and regulatory actions. As NIH/NIEHS develops a National Emerging Contaminant Research Initiative (NECRI), this group must work in tandem with research already undertaken at the Environmental Protection Agency (EPA).

CECs are of great importance to public water drinking water utilities as they can impact both surface water and groundwater sources of drinking water and, therefore, have the potential to become public health risks. Although the prevention of contamination of drinking water sources has always been a high priority for AMWA, the hazards associated with the use of per- and polyfluoroalkyl substances (PFAS) have highlighted the need to use every tool available to prevent the intrusion of these and other emerging contaminants from entering water supplies. PFAS have been used for decades, but as our knowledge of these substances has grown, these

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substances have been shown to be increasingly problematic.

PFAS have underscored the overwhelming need to better evaluate chemicals before allowing them to be used in commerce. Had more information been available at the onset of their use regarding possible health impacts, bioaccumulative and persistent properties, and the difficulties surrounding the disposal of PFAS, we might have addressed these concerns earlier and prevented widespread contamination. Basic data such as these are necessary before chemicals are put into commercial use to avoid chemicals such as these, that may pose health risks, from entering the environment and contaminating source waters.

Preventing pollutants from entering drinking water supply sources is a complex task. However, prevention is essential to avoid shifting the economic burden of addressing CECs to local drinking water treatment works. It is easier, more effective, and more equitable to control pollutants at the source, where they are highly concentrated, than it is to remove them at the consumer's expense after they have entered a water body or supply source. Controlling pollutants at the source also helps ensure that those who pollute our natural resources are not allowed to pass the cost of correcting the problem onto others. With this policy position in mind, AMWA offers the following comments in response to NIH/NIEHS's request for information to help inform the development of a NECRI.

Many new and emerging chemicals lack adequate testing methods, data on health effects, and reporting requirements for locations of (and releases from) chemical manufacturing, industrial processing, and production facilities. This lack of information leaves drinking water utilities unable to adequately assess and address potential public health impacts and investigate the source of chemicals from a site or watershed.

Section 1 – Feedback on Improving and Coordinating DW CEC Efforts:

Barriers that prevent or limit you or your organization's DW CEC research capabilities and success.

It appears that the work this RFI is meant to inform would be focused on risk assessment, health impacts, mitigation, and communication of emerging contaminants after they have been released into the environment. However, emerging contaminants should be identified and analyzed before they ever reach source waters or become a concern to public drinking water supplies. Therefore, AMWA believes that public drinking water utilities should not be relied on to research "identification, analysis, monitoring and treatment methods of contaminants of emerging concern," the topics specific to this RFI.

Public drinking water utilities are customer-focused and funded by their ratepayers. Therefore, utilities are limited in what research activities they can pursue if they have the resources to invest at all. Utilities must focus their resources on addressing what is

already known to be a concern. These contaminants are more likely to be established with already existing research rather than an entirely new chemical. For example, some AMWA members have initiatives looking for new treatment technologies to help solve the complexities surrounding known PFAS. However, utilities are not as likely to invest in research opportunities looking at exposure, risk assessment, or health effects. This research is better handled by epidemiologists and the manufacturers of the CECs themselves. Research initiatives focusing on these topics are where a program such as a NECRI could work to fill in data gaps.

Potential opportunities to improve coordination and partnership among public and private entities participating in DW CEC research and prevent unnecessarily duplicative efforts.

AMWA believes that a significant obstacle to improving research efforts is the difficulty of connecting the dots among already completed and currently ongoing research. The association encourages NIH/NIEHS to reach out to drinking water associations, including AMWA, to identify utilities that may already be undergoing contaminant removal research. Similarly, many drinking water utilities have source water protection programs that could provide NIH/NIEHS with additional information. NIH/NIEHS should also reach out to state drinking water programs which may have various data on CECs that are not regulated at the federal level but have state drinking water standards in place. AMWA also suggests that NIH/NIEHS work with the [Water Research Foundation](#), which conducts research related to the technology, operation, and management of water, wastewater, reuse, and stormwater collection, treatment, and supply systems.

Another significant barrier is that the current federal government structure is not conducive to large-scale initiatives such as a NECRI. There is an extensive lack of coordination between federal agencies and the offices within each agency. For example, the regulatory actions undertaken by EPA's Office of Chemical Safety and Pollution Prevention are often not coordinated with related activities being carried out at EPA's Office of Water, which may be impacting drinking water sources.

To ensure the most timely and cost-effective results, these communication barriers and obstacles preventing strategic planning must be overcome. One way to address these concerns would be for NIH/NIEHS to develop tools for federal agencies geared towards bridging this disconnect and ensuring that research efforts are not duplicated. For example, creating a central location where data can be posted and shared in real-time would significantly improve the access and advancement of research efforts within the various federal agencies. Tools such as these would also allow interested parties within academia, non-profits, and industry to best leverage their investment in research to answer questions that arise in NIH/NIEHS's research areas outlined under Section 2 of this RFI.

Lastly, AMWA suggests that NIH/NIEHS consider assembling a task force to help guide the NECRI once it is established. A diverse set of stakeholders, including drinking water utilities, academics, health departments, federal agencies, and industry, would help ensure that the initiative's resources are used efficiently so that the group's deliverables are of most use to further understand and manage the CECs.

As an affected community member, the most significant concerns and recommendations for DW CECs.

AMWA members have multiple concerns for addressing CECs:

- It often falls to drinking water utilities to manage CECs once they reach source waters used for drinking water. Any mitigation efforts are ultimately paid for by the ratepayers and can exacerbate already-existing affordability and equity issues.
- As stated previously, a top concern for AMWA's members with addressing CECs is the lack of federal agency coordination, particularly between the offices of each agency.
- AMWA members have significant concerns related to viable and cost-effective treatment and removal options. If an effective treatment would require methods above and beyond a utility's conventional water and wastewater treatment processes, this can become highly cost-prohibitive.
- AMWA members are also worried about a lack of risk communication tools to address public concerns when CECs are found within their drinking water and source water without having the necessary information related to health effects. We have expanded on this topic under Section 2.

AMWA has multiple recommendations for NIH/NIEHS to consider:

- NIH/NIEHS should focus its initial efforts on ensuring that research efforts on CECs are not duplicative and are working in concert with other federal agencies engaging in similar work. Once this is completed, NIH/NIEHS should extend this to academia, non-profit, and industry work. A task force, as mentioned above, consisting of stakeholders within these different arenas could help identify overlapping efforts.
- NIH/NIEHS should coordinate its research with ongoing work in the federal agencies that manage the various regulatory constructs, such as the Toxic Substances Control Act (TSCA), the Safe Drinking Water Act, and the Federal Insecticide, Fungicide, and Rodenticide Act. The NECRI should focus its efforts on filling in the knowledge gaps not covered by these federal programs.
- NIH/NIEHS should obtain data on CECs, particularly health effects data, directly from chemical producers or manufacturers. EPA already has the ability to require these data from chemical producers under TSCA. These data should be used

agency-wide and between federal offices and within any work that NIH/NIEHS undertake.

- Next, NIH/NIEHS should expand knowledge in the realm of toxicity and health effects studies. This is an area that currently lacks adequate funding and staff within federal agencies, most importantly EPA. These data would help inform EPA's risk prioritization and management of chemicals.
- Risk communication should be a top priority and produced ahead of any work to monitor or address CECs.
- Finally, NIH/NIEHS should develop a timeline for the NECRI's work which includes regular progress reports and check-ins with the various stakeholders currently undergoing similar research.

Section 2 – Feedback on DW CEC Research Areas:

Research Area 1: Exposure

NIH/NIEHS should coordinate with EPA to ensure research dollars and initiatives are focused on developing analytical methods to test for CECs within drinking water as well as other media such as wastewater, sludge, biosolids, landfill leachate, and air emissions from incineration. Having these tools will help give a complete picture of exposure throughout a chemical's entire lifecycle.

Research Area 2: Human Health and Environmental Effects

As previously stated, drinking water utilities will likely not have the resources or capacity to engage in research in the areas of human health and environmental effects. Therefore, AMWA believes this is an area where an initiative like a NECRI could be of the most use.

Research Area 3: Risk Characterization to Inform Risk Mitigation

Risk characterization is paramount to prioritizing the thousands of contaminants in the environment and commerce. Knowing the current state of the science for health effects and exposure is needed to best allocate limited resources to risk mitigation measures. Therefore, NIH/NIEHS's work should focus on helping inform chemical prioritization.

Finally, NIH/NIEHS should coordinate with EPA to help identify research gaps within the development of cost-effective drinking water treatment technologies for removing CECs. Successful technologies are highly dependent on the properties of a contaminant, and this should be considered in the prioritization of these efforts. NIH/NIEHS could also support EPA and other federal agency work by helping find ways to expedite the adoption of these new technologies by both utilities and regulatory agencies.

Research Area 4: Risk Communication

CECs present a unique risk communication challenge for drinking water utilities and should be a top priority for any research or regulatory actions. Identifying a substance within drinking water but being unable to explain what is known or unknown about the health effects and risks associated with the chemical can cause mistrust between drinking water utilities and their customers. PFAS are a prime example of the difficulty of addressing these issues. We are aware of the thousands of PFAS in existence, can test for dozens of these substances, and are aware of extensive impacts to both groundwater and surface water sources of drinking water. However, for most PFAS, we lack sufficient health effects data and relative risk information to allow for effective decision-making.

Work done by NIH/NIEHS to develop risk communication tools should be in tandem with those being created by other federal agencies – specifically EPA – as well as state regulatory programs and drinking water utilities. These tools should be formatted in such a way that allows public drinking water utilities to share this information directly to their ratepayers to reduce duplicative efforts. AMWA encourages NIH/NIEHS to refer to the Interstate Technology and Regulatory Council’s [Risk Communication Toolkit for Environmental Issues and Concerns](#) for examples of communicating complex topics such as PFAS, 1,4-Dioxane, and Harmful Cyanobacterial Blooms to the public. NIH/NIEHS should also delegate resources to help vet new approaches being developed by outside private and public entities in order to expand the toolbox of alternatives available to utilities.

The following statements are provided to obtain feedback to fill existing gaps in DW CEC knowledge and practice in these research areas. Please comment on: The critical, impactful research questions and topics that should be addressed in order to better protect American public health in regard to DW CEC.

As previously mentioned, NIH/NIEHS should focus resources on obtaining health effects data to inform prioritization of mitigation efforts. NIH/NIEHS should also develop reliable destruction methods for problematic CECs such as PFAS, which have extremely strong carbon-fluorine bonds that are difficult to break down, to ensure the substances are destroyed. Many PFAS removal technologies currently in use move PFAS from one medium to another. To fully manage contaminants, we need to ensure that we are not simply shifting the burdens to others. This research is critical to ensuring problematic CECs are managed throughout the entire lifecycle of the chemical.

Innovation is also needed to address the regulation of CECs. The current regulatory structure that exists at the federal level is structured to be careful, methodical, and deliberate, and for good reason. This careful consideration helps to ensure regulations are based on the best and most sound science. However, with the amount of time it takes to

do proper research to characterize risk, regulating emerging contaminants often takes several years or more. As has been the case with PFAS, this can result in a patchwork of regulations that make compliance and risk communication difficult for drinking water utilities. Regulatory innovation is needed to develop new ways to expedite needed regulations to protect public health and the environment.

In conclusion, CECs must be managed as close as possible to their origin of creation. The burden of management should not fall on public drinking water utilities and their ratepayers. This is a complex undertaking and will require close coordination across all federal agencies, academia, non-profits, and industry. However, AMWA believes this strategy is necessary to ensure a project as ambitious as a NECRI is successful and effective in preventing CECs from entering the environment and impacting drinking water sources.

AMWA thanks NIH/NIEHS for collecting public feedback on an issue as important as CECs. Once a NECRI is established, the association encourages NIH/NIEHS to reach out if AMWA can assist in this work.

Sincerely,



Diane VanDe Hei
Chief Executive Officer
Association of Metropolitan Water Agencies

Cc: Radhika Fox, Assistant Administrator, Office of Water
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