Testimony of Shellie R. Chard

President, Association of State Drinking Water Administrators (ASDWA) and

Water Quality Division Director, Oklahoma Department of Environmental Quality

to the

Subcommittee on Environment and Climate Change

House Committee on Energy and Commerce

There's Something in the Water:

Reforming Our Nation's Drinking Water Standards

Tuesday, July 28, 2020

Executive Summary

ASDWA's state, territorial, and tribal members (hereinafter "states"), have been implementing the Safe Drinking Water Act (SDWA) and subsequent SDWA Amendments since the initial SDWA in 1974 and have considerable experience working through its many complexities. Over time there has been a shift away from the methodical process of developing regulations based on the best available, peer-reviewed science and collaboration with the states, who are EPA's co-regulators, to an approach based on litigation response, highly publicized events, and other factors. All of these factors contribute to a fragmented regulatory development process that is not fulfilling the needs of the regulators or the regulated community or the public.

ASDWA would like to highlight six (6) main themes in this testimony:

1) **EPA must set standards in a reasonable timeframe, using sound science and in collaboration with the states**. The timeline to develop a new Maximum Contaminant Level (MCL) must be reasonable. If the process is too lengthy, the public and the regulated community may lose confidence in the regulatory agencies and the necessity of regulation. Conversely, if the process moves so quickly that EPA fails to properly engage the states or to appropriately consider sound science, the entire process is undermined. Benefit-cost analysis needs to be part of the standard setting process.

2) **EPA must consider the availability of, and help develop, appropriate test methods, laboratory capacity, treatment technologies, and capacity of the federal and state data systems.** While establishing MCLs is the goal of the SDWA standard setting process, it is useless unless there are appropriate analytical test methods and laboratory capacity to conduct the analysis. Additionally, while identifying contaminants is a first step, if MCLs are established, affordable and effective treatment technologies must be made available to

public water supply systems of all sizes. Appropriate consideration of waste streams from advanced treatment have to be part of the standard setting process. Finally, data systems must exist for both EPA and the states to properly report and track compliance.

3) **EPA must consider the differences in water system characteristics based on geography, population served, affordability, and source water**. In the efforts to ensure uniform application of federal standards, it is important for EPA to consider the site-specific characteristics of a water system. One size does not fit all in terms of water sources, populations served, geographic separation, local economic conditions, and other factors that should be appropriately considered in the standard setting process.

4) **EPA must be clear in its regulatory framework.** It is critically important that the standards set and the compliance determination specified in rulemaking be clear and understandable for regulators, regulated communities, and the general public. The differences in immediate impact to health (acute health effects) versus potential long-term impacts (chronic health effects) have been distorted over time. Health advisories should not be used as “de facto” standards.

5) **EPA must consider the need for workforce training and assist the sector in achieving a sustainable workforce**. As new standards are established, it is critical to ensure that public water supply operators and laboratory staff understand the various technologies and testing that is required in order to obtain compliance. As experienced operators retire, it will be vital to the protection of public health that new operators are recruited and trained to implement SDWA requirements. Additionally, it is important that the federal and state

regulatory workforce be adequately trained to understand the new requirements, necessary treatment technologies, reporting needs, and other rule components.

6) **Funding for Public Water Supply Supervision (PWSS) and EPA Programs must be increased.** While funding for the PWSS program increased by 4.2% in FY20 appropriations, the total funding gap for states' drinking water programs has increased by $197 million since 2011[1], with an increase of only $4.3 million in PWSS appropriations in FY20. Without adequate funding for EPA to fulfill their obligations and for states to meet their responsibilities, the protection of public health through drinking water programs is much more difficult.

Testimony

Good Morning Subcommittee Chairman Tonko, Ranking Member Shimkus, and Members of the Subcommittee. Thank you for this opportunity to appear before the Subcommittee and discuss how we can best address the protection of public health through the collaborative partnership among the states, tribes, territories and the federal government in implementing the Safe Drinking Water Act (SDWA).

My name is Shellie Chard and I am the President of the Association of State Drinking Water Administrators (ASDWA), whose 57 members include the 50 state drinking water programs, five territorial programs, the District of Columbia and the Navajo Nation (hereinafter "states"). Our members have primary enforcement authority, or primacy, for the SDWA. Our members and their staff are on the front lines every day, implementing the SDWA by providing technical

[1] "2019 Analysis of State Drinking Water Programs' Resources and Needs: Addressing Emerging Issues and State Specificity in Program Implementation," ASDWA, prepared by The Cadmus Group LLC and GEC, July 2020.

assistance, support, and oversight of drinking water systems, which is critical to ensuring safe drinking water and protecting public health. I am also the Water Quality Division Director for the Oklahoma Department of Environmental Quality where I oversee the drinking water, wastewater and the operator certification and training programs.

Today, I will discuss ASDWA's perspective on the Environmental Protection Agency's (EPA) drinking water standard setting process as well as my own experiences.

Background

ASDWA's members operate state level public water supply programs to protect public health through safe drinking water. Like many federal programs, Congress established the SDWA programs to be implemented by states with oversight by EPA. One of the key responsibilities for EPA is the establishment of Maximum Contaminant Levels (MCLs). Section 1412 of the Safe Drinking Water Act[2] requires EPA Administrator to establish such national standards that are necessary to protect public health across the United States and prescribes a detailed process for setting those standards.

Over time EPA has established National Primary Drinking Water Regulations (NPDWRs) that address 91 contaminants, a relatively large number when compared to other environmental protection programs such as air with National Ambient Air Quality Standards (NAAQS) for 7 pollutants. However, there have been an increasing number of contaminants of emerging concern in drinking water. These are contaminants that have been newly discovered in the environment (e.g., per- and polyfluoroalkyl substances [PFAS])[3] or contaminants that have

[2] Safe Drinking Water Act, Section 1412. https://www.epa.gov/sites/production/files/2020-05/documents/safe_drinking_water_act-title_xiv_of_public_health_service_act.pdf
[3] https://www.asdwa.org/pfas/

been recognized for a long time but are generating increased interest in the scientific community due to new scientific information about their impacts on public health or the environment.

While it is important for EPA to expedite the investigation and review of emerging contaminants, which may lead to the development of new regulations, expedited timeframes should not result in reducing the necessary work with the states on standard setting. As co-regulators, the states must be at the table with our federal partners to develop appropriate, reasonable, and consistent implementation of the program across the country. While consistency is important, it is noteworthy to consider that "consistent" does not necessarily mean the "same." States may choose to go beyond what EPA has established[4] and they should retain that right. In the past, EPA considered the different sizes of water systems when establishing regulations, for example, the staggered compliance deadlines for the Stage 1 and Stage 2 Disinfection Byproduct Regulations.[5] These considerations should continue as new regulations are established due to the financial limitations of extremely small systems and their inability to consolidate/regionalize due to geographic separation. Because very small systems and rural communities struggle with maintaining compliance and addressing aging infrastructure, with a small and often shrinking customer base, additional MCLs only add to the unsustainable burden these systems face. It does not mean we should sacrifice public health protection to account for these systems, but rather their struggles need to be considered when developing NPDWRs.

States work with their water systems to identify reasonable approaches to complying with drinking water regulations. Many of these efforts have been reviewed and considered as part of

[4] 40 CFR, §142.16 Special primacy requirements. https://www.ecfr.gov/cgi-bin/text-idx?SID=7d6f84b409b9efa8e606f07161bb9314&mc=true&node=pt40.25.142&rgn=div5#se40.25.142_116

[5] "Comprehensive Disinfectants and Disinfection Byproduct Rules (Stage 1 and Stage 2): Quick Reference Guide." https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100C8XW.txt

EPA's National Compliance Initiative on *Reducing Non-Compliance with Drinking Water Standards at Community Water Systems*[6]. In Oklahoma, we have modified EPA's Enforcement Targeting Tool to not only look at the number of systems out of compliance but to also look at the percentage of population served by systems that are out of compliance. These two approaches tell very different stories that dramatically impact allocation of funding and other resources. For example, Oklahoma began evaluating compliance success in terms of percentage of citizens served by a public water supply system that was in compliance as opposed to the percentage of systems in compliance. By modifying the tool to focus on public health (i.e., citizens served) rather than simply the number of systems with a violation, we have reduced the number of individuals that are impacted by non-compliance. This approach also allows the state to focus limited resources where there can be the most improvement in public health protection through safe drinking water. Another tool utilized by Oklahoma and other states is drone technology to inspect water towers, intake structures, and other water infrastructure, as appropriate. Another example of differing state approaches is water audits and leak detection surveys, which can inform utilities of their water loss and help reduce unaccounted for water. At least 10 states have state standards for non-revenue or unaccounted for water, but many states that do not have specific regulations strongly recommend systems complete water loss audits. Some states encourage this through Drinking Water State Revolving Loan Fund (DWSRF) projects, during inspections, through asset management requirements or capacity development programs.

These differing approaches illustrate the extensive experience ASDWA members have in SDWA implementation. There are hundreds of examples where states have adapted tools for achieving compliance with the national regulations to meet site-specific conditions. This

[6] https://www.epa.gov/enforcement/national-compliance-initiative-reducing-noncompliance-drinking-water-standards-community

experience uniquely positions ASDWA members to be able to provide expert advice and meaningful collaboration with EPA as new standards are established.

A challenge that the states, EPA and drinking water systems share in implementing the SDWA, is the flat, and in some cases decreasing, funding for drinking water program implementation. For example, in Oklahoma, the workload has increased over the last 20 years due to the establishment of new drinking water regulations, including the Radionuclides Rule (2000), Arsenic (2001), Filter Backwash Recycling Rule (2001), Long-Term 1 Enhanced Surface Water Treatment Rule (2002), Long-Term 2 Enhanced Surface Water Treatment Rule (2006), Stage 2 Disinfectants and Disinfection Byproducts Rule (2006), Ground Water Rule (2006), and Revised Total Coliform Rule (2013). There has also been an increased need to address nonregulatory drinking water concerns such as harmful algal blooms, contaminants of emerging concern, and water loss auditing. At the same time, there has been only a 4.2% increase in federal appropriations in fiscal year 2020 for drinking water funding after a decade of flat funding. Now, with the economic impacts of the coronavirus pandemic, budgets are being stretched very thin. It may be years before state and local economies rebound to a point that drinking water systems and state programs are adequately funded.

ASDWA's Recommendations

Through the work ASDWA members complete on a regular basis and our extensive experience over many years, we offer the following recommendations on SDWA Section 1412 and the standard setting process:

1) **EPA must set standards in a reasonable timeframe, using sound science and in collaboration with the states**. The timeline to develop a new NPDWR must be

reasonable. If the process is too lengthy, the public and the regulated community may lose confidence in the regulatory agencies and the necessity of regulation. A perfect example of this is perchlorate's journey through the regulatory process. Perchlorate, a chemical that can be found in both food and water and can disrupt normal thyroid functioning, has been listed on multiple Contaminant Candidate Lists (CCL), including CCL1 (1998), CCL2 (2005) and CCL3 (2009). Perchlorate was also included in the very first Unregulated Contaminant Monitoring Rule (UCMR1) in 1999, where EPA collected monitoring data from water systems from 2001 to 2003. In 2011, EPA announced its decision to regulate perchlorate under the SDWA after determining the chemical met all of the criteria for regulating a contaminant, that is, that perchlorate may have an adverse effect on the health of persons; perchlorate is known to occur or there is a substantial likelihood that perchlorate will occur in public water systems with a frequency and at levels of public health concern; and in the sole judgment of the Administrator, regulation of perchlorate in drinking water systems presents a meaningful opportunity for health risk reduction for person served by public water systems. Just last week, EPA published its final decision to not regulate perchlorate under the SDWA[7]. It has been over 20 years since the chemical was first identified as a potential contaminant of concern. Because of slow EPA action, in 2006, Massachusetts developed a drinking water standard for perchlorate of 2 µg/L, and in 2007, California adopted a standard of 6 µg/L. Twelve other states have established non-enforceable guidance, action, or advisory levels for perchlorate.

When a contaminant is detected and raises concerns about potential human health or ecological effects, citizens turn to state primacy agencies for answers and actions. States are often placed in the difficult position of formulating responses to concerns and prescribing

[7] Drinking Water: Final Action on Perchlorate. 85 FR 43990 https://www.govinfo.gov/content/pkg/FR-2020-07-21/pdf/2020-13462.pdf

actions while needed information on toxicity, occurrence, or treatment options is lacking. As experiences with compounds such as PFAS have shown, states and their citizens can be left vulnerable to a combination of mixed messages, fear, insufficient actions, and mistrust of best methods to protect public and ecological health when EPA is slow to respond to emerging issues. Conversely, if the process moves so quickly that EPA fails to properly engage the states, regulated community or public, the legitimacy of the regulation may be questioned. For example, after the conclusion of the Lead and Copper Rule Working Group under the National Drinking Water Advisory Council (NDWAC) in mid-2015[8], states, as co-regulators with EPA, were only consulted with a short Federalism Consultation in early 2018[9] prior to the proposed Lead and Copper Rule Revisions (LCRR) in late 2019. Due to the rush to get the proposed LCRR published, some opportunities for states to provide additional constructive input for the proposed LCRR were likely missed. Therefore, it is critically important that the appropriate balance is found to ensure all of the necessary steps are taken and in a reasonable time.

An important component of that balance in the standard setting process is the continued use of benefit-cost analysis. Benefit-cost analysis has been a component of the standard setting process since the first SDWA in 1974 and has continued through the SDWA Amendments in 1986 and 1996. Both quantitative numbers and qualitative considerations should be part of this process. The standard setting process should take into account how much it costs to treat for a particular contaminant, as well as the health benefits provided. For advanced treatment, a combination of the initial capital costs, as well as the ongoing operation and maintenance (O&M) costs need to be considered. How often absorbent media needs to be

[8] Report of the Lead and Copper Working Group to the National Drinking Water Advisory Council. https://www.epa.gov/sites/production/files/2017-01/documents/ndwaclcrwgfinalreportaug2015.pdf
[9] https://www.asdwa.org/2018/03/08/asdwa-submits-detailed-comments-on-lead-and-copper-rule/

replaced (in perpetuity) can lead to O&M costs that can dwarf the initial construction costs. ASDWA is open to discuss how benefit-cost analysis can be better utilized in the standard setting process but recommends that it should continue to be a part of developing NPDWRs.

The importance of sound science in establishing government regulations is vital. If only limited studies or lawsuits are the basis of an MCL, the validity will be called into question. While EPA establishes an MCL, the states must understand the MCL in order to educate the public water supply systems, their customers, and the public in why the MCL is necessary and describe why the cost to comply is a worthwhile expenditure to protect the public in light of the many expenses the system is facing. If the engineers and scientists that implement the federal programs at the state level cannot understand the science and public health urgency that have led to the development of the MCL, it will be extremely difficult for them to explain to the public and elected officials the need for additional fees or appropriated dollars to operate the program. Confidence in the standard-setting process and trust in the system that develops the new standards make those conversations more straightforward and effective.

EPA must work to cooperate and collaborate with the states in the standard setting process. Under the SDWA,[10] EPA sets the baseline standards and the states implement the program with EPA in an oversight role. When EPA fails to set national MCLs, individual states may decide to dedicate their resources to take on the role of standard setting. This can lead to a wide range of contaminant levels developed by individual states, which is happening more and more across the country as states address emerging contaminants in the absence of federal regulatory action. At the same time, there are many states that do not have the

[10] Safe Drinking Water Act, Sections 1401(4) and 1413. https://www.epa.gov/sites/production/files/2020-05/documents/safe_drinking_water_act-title_xiv_of_public_health_service_act.pdf

financial resources or the technical expertise to complete the work of setting a new standard and see this as a key function of EPA. To help the states that are setting their own standards for the first-time, in early 2020, ASDWA released a toolkit of resources[11] to assist states in this effort. This toolkit mirrors the SDWA regulatory development process by taking into account health effects, analytical methods, occurrence, and treatment data, and then conducting the appropriate cost-benefit analysis.

While intuitively the idea of complete uniformity of drinking water standards may be appealing, it is important to recognize that Congress envisioned a regulatory scheme where states established additional standards beyond that which the federal agency established. However, as states established different regulatory parameters and/or different regulatory levels for the same parameter, the legitimacy of the entire public health-based protection argument is called into question. This legitimacy can be seen in the differences in states' standards for some PFAS. For example, for PFOA, New Jersey has set their standard at 14 parts per trillion (ppt), New Hampshire's standard is at 12 ppt, and Michigan's standard of 8 ppt is effective on August 3, 2020. It should be noted that EPA's health advisory for PFOA is 70 ppt, which adds to the confusion for the public[12].

In recent years, we have seen EPA move away from using its financial resources to set standards and into what many perceive as a duplication of effort. Instead of federal funding going to new MCL standard setting and the extensive research and study that must be conducted as a part of that process, EPA is developing new initiatives that are state Primacy Agency responsibilities such as increasing the number of EPA inspectors. While

[11] "State CEC Rule Development and Management Strategies Toolkit." https://www.asdwa.org/wp-content/uploads/2020/03/State-CEC-Rule-Development-and-Management-Strategies-Toolkit.pdf
[12] Drinking Water Health Advisories for PFOA and PFOS. https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos

EPA should be overseeing state efforts, new federal inspectors are doing the same jobs as the Primacy Agencies.[13] It would be a better use of resources of our federal partners to inspect facilities that are under their direct implementation authority rather than re-inspecting sites that states are inspecting.

There are some simple changes that could help focus EPA's efforts and speed up the process of moving a contaminant from its listing on the CCL to a national drinking water regulation. One idea is to shorten the CCL, which is EPA's list of drinking water contaminants that are known or anticipated to occur in public water systems. Shortening the CCL to better focus research efforts could be promoted by making additional negative regulatory determinations for CCL contaminants with either zero, one or two detections from national occurrence data. Published regulatory research from 2015 found 55 contaminants where there was no need to consider further in the CCL process.[14] Another change, one that would make an impact on the speed of the regulatory development process, is to encourage EPA to work on the many regulatory development steps simultaneously rather than consecutively. This, however, would require additional staff and funds for EPA's Office of Groundwater and Drinking Water (OGWDW).

While EPA must follow the requirements in the SDWA in developing its rules, the slow process for doing this, which may have been understandable in the twentieth century, is less so today and the public is losing faith in the effectiveness of SDWA. Given that some states have developed or are developing their own regulations on a much shorter timescale

[13] National Compliance Initiative: Reducing Noncompliance with Drinking Water Standards at Community Water Systems. https://www.epa.gov/enforcement/national-compliance-initiative-reducing-noncompliance-drinking-water-standards-community

[14] Roberson, J.A., et al, 2015, "Development of Recommendations for the Fourth Contaminant Candidate List", *Journal AWWA.* *https://doi.org/10.5942/jawwa.2015.107.0127*

for emerging contaminants, particularly for PFAS, the current timeline for EPA to develop a NPDWR is not timely. Expediting the process must also include using sound science and available data for determining drinking water treatment feasibility; conducting public health and economic benefit-cost analysis; determining the number of PWSs that are (and are not) impacted by a contaminant; and ensuring laboratory capacity for compliance monitoring.

2) **EPA must consider the availability of and help to develop appropriate test methods, laboratory capacity, treatment technologies, and capacity of the federal and state data systems.** While establishing MCLs is an important step in the regulatory process, they are useless unless there are appropriate analytical test methods and laboratory capacity to conduct the analysis. Once the MCL is established, a state may have a three- or more-year process to procure and install needed laboratory equipment. Highly specialized equipment may be needed due to the extremely low levels that may be established based on risked based models. Additionally, analytical methods are developed in a research laboratory using a pristine matrix like ultrapure water spiked with the contaminant of concern. Drinking water laboratories are analyzing “real world” samples that have multiple compounds that can interfere with the analysis. Drinking water laboratories need time to identify and overcome these challenges. Finally, there must be training for water system operators in how to collect the new sample, preserve them and deliver them to an appropriate laboratory.

Additionally, while establishing MCLs and laboratory test methods are critical early steps, compliance cannot be achieved if there are not affordable and effective treatment technologies available to public water supply systems of all sizes. As identified by the National Rural Water Association Small and Rural Community Affordability Consensus

Report[15] small systems routinely struggle with the cost of upgrading systems to comply with new regulations. EPA should take advantage of their Office of Research and Development (ORD) and work with states, small water systems, and others to ensure the ability to achieve compliance opportunities for all water systems and in turn protect public health for residents served by water systems of all sizes. An excellent example of this is provided by a multi-day workshop held in the summer of 2019, when EPA Region 6 and ORD worked with the Region 6 states to conduct a multi-day workshop. The workshop also included small systems, engineering firms that work primarily with small systems and technical assistance providers, and during the workshop multiple options were discussed for complying with the Stage 2 Disinfection Byproducts Rule. Another example involves arsenic treatment. In 2001, EPA adopted a new standard lowering the arsenic standard to 10 micrograms per liter (µg/L), previously at 50 µg/L. To help states meet these new standards, EPA researchers developed and evaluated innovative methods and cost-effective technologies.[16] These demonstrations provided states and water utility operators with important information about removing arsenic from drinking water.

Another important factor that EPA must consider related to treatment technologies is the potential waste streams that are generated. Removing a contaminant from a drinking water source water and relocating it into a wastewater creates a Clean Water Act (CWA) regulatory compliance issue. The appropriate reuse and/or regeneration of adsorptive media for arsenic and nitrate treatment, for example, is a key decision in selecting the appropriate treatment technology. The appropriate disposal of brine from reverse osmosis treatment systems is a limiting factor for the use of this treatment technology in many areas.

[15] http://www.ruralwater.org/nrwa%20minority%20report%20affordability.pdf
[16] EPA, Arsenic Treatment Technology Demonstrations. https://www.epa.gov/water-research/arsenic-treatment-technology-demonstrations

Incineration of spent granulated activated carbon used in the treatment of PFAS can result in transferring the PFAS to the air and lead to ingestion or soil deposition. Reasonable and appropriate technologies and processes that consider pathways and media beyond the SDWA are required in order to ensure public health protections.

Finally, data systems must exist for EPA and the states to report and track compliance. EPA must work with the states to ensure information technology systems can manage the large amount of data that the various rules require. Data collection and management is central to every component of the SDWA and considering data management throughout the rule development process is critical to the long-term sustainability and effective implementation of the national drinking water program. While data management requirements should never drive regulatory development, a failure to consider the complexity of modifying data systems to track new regulatory requirements can have a significant impact on states' ability to implement the rule and meet compliance deadlines, and in addition, can upend states' established business processes.

Capable data systems must exist for EPA and the states to monitor compliance, inform regulatory decision-making, and answer critical questions about the health of the national drinking water program. The successful implementation of the NPDWRs is dependent on a robust and reliable data management system. Currently, information about public water systems (PWSs) and their violations of EPA's NPDWRs is stored in EPA's Safe Drinking Water Information System (SDWIS). The importance of SDWIS to the drinking water program cannot be overstated. However, this decades old system is in desperate need of modernization, leaving both EPA and states without an adequate data system capable of effectively managing the information required to implement pending regulations, for example the proposed Lead and Copper Rule Revisions (LCRR). EPA must work with the

states to ensure information technology systems, like SDWIS, are properly funded, maintained, and are capable of managing the ever-growing volume and complexity of data management that the rules, like LCRR and others, require.

3) **EPA must consider the differences in water system characteristics based on geography, population served, affordability, and source water**. To ensure compliance with federal standards, it is important for EPA to consider the site-specific characteristics of a water system. One size does not fit all in terms of water sources, populations served, geographic separation, local economic conditions and other factors that should be considered in the standard setting process.

When EPA establishes an MCL, consideration must be given to the possible disproportional impacts to some water systems over others. In cases where the drinking water source is surface water, a more extensive level of treatment may be required to achieve the same contaminant level as a different surface water or groundwater source. Additionally, a very small drinking water system may be incapable of funding needed treatment. Where possible, states and EPA should encourage regionalization of systems to improve the economies of scale. However, in some cases, particularly in rural areas of the country, the distance between systems may be too great to physically combine systems but efficiencies in administrative costs may improve the operating budgets to help improve compliance.

NPDWRs are most often thought of as applying to cities and private water systems serving homes and business. But there are tens of thousands of small, non-community systems such as campgrounds, restaurants, convenience stores, churches, and schools that must also comply with these standards. The incredible diversity in public water systems only adds to the complexity of developing NPDWRs.

4) **EPA must be clear in the regulatory framework.** It is critically important that the standards set and the compliance determination specified in rulemaking must be understandable for regulators, regulated communities, and the public. In cases of bacteria, the rules are very clear.[17] If there is a detection, confirmation samples are taken. If there is a confirmation of *E. coli*, the system is not in compliance and a boil order is issued and the system must take immediate steps to comply. That is very straightforward. However, other rules such as those for radionuclides or disinfection byproducts (DBPs) use multiple sample collections. For radionuclides[18] samples may be collected once every three years if the system is on reduced monitoring. If a result is above an MCL, samples will then be collected quarterly, and an average is calculated based on the values of the last four quarters. Then this average is compared against the MCL to determine compliance. For DBPs, samples are collected quarterly, and an average is calculated based on the values of the last four quarters. Every quarter, the average of the last four quarters is compared against the established standard to determine compliance. This is complicated for some systems and the public to understand as opposed to comparing a single sample with a single number. Inability to understand the requirements can impede compliance and the perception of compliance by the public.

The differences in immediate impact to health (acute health effects) versus potential long-term impact (chronic health effects) have been distorted over time. EPA and states recognize the importance of acute health impacts (immediate illness) versus chronic health impacts (potential long-term health impacts) and have tried to prioritize accordingly.

[17] "Revised Total Coliform Rule: A Quick Reference Guide." https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100K9MP.txt
[18] "Radionuclides Rule: A Quick Reference Guide." https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=30006644.txt

However, the public and sometimes water systems consider all noncompliance equally. It is important that EPA clearly identify MCLs that are acute versus chronic for those cases where a system cannot afford to immediately comply with all standards. System responses should be targeted to ensure that noncompliance of acute parameters is addressed immediately through 24-hour public notices, boil water advisories, and other notification, and the needed repairs or upgrades in treatment.

Another area that can cause confusion is when health advisories are established but MCLs are not. If EPA believes that there is enough evidence to establish a health advisory level, they should establish an MCL in a timely manner. States are left in an untenable position of explaining that drinking water exceeds a health advisory, but it is considered to be in compliance with the SDWA. Health advisories are not an appropriate long-term solution for contaminants. Health advisories should not be used as "de facto" standards. In some cases, states are being asked to hold systems accountable to a health advisory without the regulatory authority to do so.

5) **EPA must consider the need for workforce training and assist the sector in achieving a sustainable workforce**. As new NPDWRs are established, it is critical to ensure that public water supply operators and laboratory staff understand the various technologies and testing that are required in order to obtain compliance. EPA should work the with state operator certification programs to ensure that the operators who are now responsible for additional testing and treatment receive the training that is required to ensure compliance. EPA could work with states, through existing contracts with technical assistance training providers, universities, or other groups to help build the needed skills. As experienced operators retire, it will be vital to the protection of public health that new operators are recruited and trained to implement the SDWA. Additionally, it is important that the federal

and state regulatory workforce be adequately trained to understand the new requirements, necessary treatment technologies, and other important components of the rule. EPA is integral in providing such training and guidance.

6) **Funding for Public Water Supply Supervision (PWSS) Programs must be increased.**

Over the past decade, up until last year, PWSS funding was essentially flat. While funding for the PWSS program increased by 4.2% in FY20 appropriations, the total funding gap for states' drinking water programs has increased by $197 million since 2011, with an increase of only $4.3 million in PWSS appropriations in FY20.[19] Without adequate funding to EPA to fulfill their obligations and for states to meet their responsibilities, the protection of public health through drinking water programs is much more difficult.

In addition to the flat federal funding for the past decade, the ongoing impact of the COVID-19 pandemic on states' revenues will likely result in multi-year reductions to state program funding. The percentage of program funding provided by state revenues varies across the states and it is challenging to predict reductions in specific states at this time. Currently in Oklahoma, state General Revenue funds approximately 13% of the drinking water budget and drinking water systems pay 34% of the cost through user fees. Future financial impacts are also difficult to predict in the current economic environment. The National Conference of State Legislatures (NCSL) is tracking the budgetary and economic consequences of the COVID-19 pandemic. As of July 7, 2020, NCSL reported that every state is forecasting

[19] "2019 Analysis of State Drinking Water Programs' Resources and Needs: Addressing Emerging Issues and State Specificity in Program Implementation," ASDWA, prepared by The Cadmus Group LLC and GEC, July 2020.

reductions in state revenues ranging from 2%-18% for fiscal year (FY) 2020.[20] Beyond 2020, the impacts to states' revenues are predicted to continue. The NCSL compilation for FY 2021 shows state projections for the reductions in state revenues from 4%-30%. The decreases in state revenues will likely continue past 2021. A short survey of ASDWA's members conducted in mid-July 2020 found several states have been told of budget reductions ranging from 5%-30%. Some state staff are currently facing furloughs ranging from 10 days/year (3.8% salary reduction) to 1 day/week (20% salary reduction). Most states are under a hiring freeze. At this time, it is not clear how significant the broader economic impact will be to funds for state drinking water programs, but many states are being asked to prepare for a range of potential budget reductions in the future. For Oklahoma, the current fiscal year cut was $500,000 plus 4.7% which equates to approximately 11%. In addition, state agencies have been told to expect additional cuts throughout the year.

EPA and the states both have important roles in protecting public health. Both must be successful in order for the program to be successful. Funding for EPA's Office of Groundwater and Drinking Water (OGWDW) and Office of Research and Development (ORD) need to be increased to adequately support a robust standard setting process and all of the research that must occur before an MCL is set. Without adequate funding, success will be more challenging and public health will suffer. As we have all learned during this unprecedented time of the COVID-19 pandemic and the increased need for handwashing and sanitation, successful public water systems are foundational to strong public health protection.

[20] National Conference of State Legislatures (NCSL). Coronavirus (COVID-19): Revised State Revenue Projections. https://www.ncsl.org/research/fiscal-policy/coronavirus-covid-19-state-budget-updates-and-revenue-projections637208306.aspx

Funding for states and EPA have been further stretched by the past two rounds of SDWA Amendments. Both the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 (P.L. 114-322) and the America's Water Infrastructure Act (AWIA) of 2018 (P.L. 115-270) created additional mandates for states and EPA to implement. While ASDWA appreciates the additional appropriations for the WIIN grants for lead testing in schools and child care facilities and supports the testing for lead and the remediation, if necessary, for public health protection, starting this new grant program has been a new burden, and has required additional resources, for states and EPA to get this testing program off the ground.

Regulatory complexity and costs of providing clean, safe drinking water continue to increase. At the same time, high profile water contamination events, such as Flint, Michigan, and the public's access to information has led to increased concern around drinking water and calls for non-detections of contaminants, a near-impossibility for water systems to achieve. The regulatory process must adapt in order to restore the public's trust in America's drinking water.