massachusetts water works association

www.masswaterworks.org

July 18, 2019

Ms. Elizabeth Callahan
Director of Policy & Program Planning
Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup, 6th Floor
One Winter Street
Boston, Massachusetts 02108

RE: Comments on Proposed Changes to the Massachusetts Contingency Plan (MCP)
Via email to bwsc.information@mass.gov

Dear Ms. Callahan:

Massachusetts Water Works Association (MWWA) is submitting the following written comments to the Massachusetts Department of Environmental Protection (MassDEP) on proposed changes to the MCP regulations, 310 CMR 40.0000. MWWA is a non-profit membership organization representing over 1,200 drinking water professionals throughout the Commonwealth of Massachusetts. MWWA members are committed to protecting public health and providing a safe and sufficient supply of drinking water to consumers.

Our Public Water Systems are operated by licensed professionals who work each day to provide this essential service at a reasonable cost. Like other sectors of government, our Public Water Systems are facing resource constraints at a time when regulatory programs are increasing, infrastructure is aging, and revenues are declining. Despite these resource constraints, Massachusetts' Public Water Systems still must meet their mandate to provide clean, safe drinking water and to protect public health.

MWWA understands that MassDEP intends to use information received during the public comment process on the MCP revisions to "inform" potential revisions to the current Office of Research and Standards Guideline (ORSG) for Per- and Polyfluoroalkyl Substances (PFAS), which includes five compounds: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), perfluorononanoic acid (PFNA),

perfluorohexanesulfonic acid (PFHxS), and perfluoroheptanoic acid (PFHpA). We have been informed that the ORSG and MCP efforts will be used in the development of a Massachusetts Maximum Contaminant Level (MMCL) for PFAS. For this reason, MWWA provides comments in this letter relative to those initiatives, even though they are not formalized, nor out for public comment at this time.

PFAS is an example of an emerging and unregulated contaminant which poses daunting challenges for Public Water Systems on every conceivable front, including, but not limited to, the introduction of unfamiliar and unforgiving sampling protocols, a paucity of reliable analytical resources, water treatment uncertainties, and most notably unprecedented cost, funding, and risk communication obligations. Despite the existence of only a "non-enforceable" Health Advisory Level for PFAS, there are several Public Water Systems which have detected these compounds and are voluntarily conducting emergency public notification and outreach efforts and multi-million-dollar mitigation activities which have included the distribution of alternative drinking water methods (i.e. provision of bottled water, point of use treatment….) and greatly accelerated planning, design and construction services required to proceed with rapid installation of expensive treatment systems. These Public Water Systems and their consulting engineers are to be commended for all they are doing to address the challenges posed by an unregulated contaminant and for providing transparent communications to their customers in light of evolving scientific discovery and real-time regulatory oversight. It remains to be seen if these herculean efforts will represent the exception or the rule for water suppliers across the Commonwealth.

MWWA has considerable experience in evaluating and commenting on proposed initiatives under the Safe Drinking Water Act, MassDEP drinking water regulations and policies, Water Management Act regulations and guidelines, drought management and more recently on Conservation Law Foundation's Petition for Rulemaking on PFAS Treatment Techniques. We embrace our role as a stakeholder in the MMCL development process and on Representative Hogan's proposed PFAS Task Force. MWWA and its members are very comfortable offering our expertise and opinions as they relate to the very real impact that new drinking water standards will have on our operations and related services. Our ability to offer comments and opinions on more nuanced toxicological principles is well beyond our area of expertise. As we are becoming increasingly aware of the impact and importance that this specific standard setting process will have on our industry, we have reached out to scientists, toxicologists, risk assessors, LSPs, and engineers for a better understanding of some of the underlying public health issues. Specifically, we have reached out to experts from Sanborn Head & Associates, Green Toxicology and the several of the engineering firms that have been working on PFAS treatment for the impacted municipalities. We have reviewed their assessments and believe that we would be well served if MassDEP not only acknowledge these comments but address them before establishing any standard, most notably those comments submitted by Sanborn Head & Associates and Green Toxicology. Based upon our assessment of their work, we are very concerned that any standard that would be established based upon the "abundance of caution" principle will

not only be overly protective, but given the very real and practicable impacts that we can anticipate within the drinking water industry, would be untenable and irresponsible.

MWWA wants to be very clear that protection of public health is the core mission of all our members. To this end, water system managers and operators must ensure compliance with the Safe Drinking Water Act requirements. MWWA supports the development of an appropriate Federal MCL for PFAS if the process follows properly established, transparent, science-based health standards and takes into consideration available analytical methods, reasonable sampling protocols, appropriate sample result analysis, viable treatment options, full consideration of a cost benefit analysis, scientifically proven health effects, and sufficient due process for stakeholders.

MWWA supports a PFAS cleanup standard under the MCP. That will be a necessary step in the regulatory process. That being said, it is premature to be moving ahead with regulatory standards before there is a better understanding of expected background levels and sources, an understanding of the extent of PFAS prevalence in the Commonwealth, and most importantly, a better understanding of the real potential human health impacts at the low levels that are being detected and potentially regulated in drinking water within Massachusetts.

There is anecdotal evidence that PFAS is being found at levels of "concern" in surface waters, groundwaters and soils throughout Massachusetts. Before regulating these compounds through the MCP or an MMCL, MassDEP needs to have a much more comprehensive database of occurrence, in addition to data on health effects and at what levels those health effects occur. It would be irresponsible to move forward with regulating at exceedingly low concentrations without knowing the likelihood of it being detected and requiring subsequent response actions. MWWA had recommended at the last PFAS stakeholder meeting that MassDEP should begin sampling the groundwater wells in the climate response network used by the MA Department of Conservation and Recreation. Many of these wells have been termed "unimpacted" and would be a good place for MassDEP to begin their data collection.

PFAS is not just a Massachusetts issue; it is a national issue. PFAS is not just a drinking water issue; it requires a comprehensive approach to address air, food, and consumer product sources. Costs of mitigation and management across all these sectors are expected to be formidable. Research, particularly on toxicity and health effect is ongoing and the scientific understanding of these compounds on human health continues to evolve. Even while human health toxicity uncertainties exist, significant investments are being made by many communities to install treatment systems to remove PFAS compounds. For these reasons, it is important that MassDEP take a deliberative approach based on sound science, and not overly conservative politics, to any regulatory initiatives related to PFAS.

In terms of the MCP and development of a clean-up standard, MWWA urges MassDEP to identify specific areas where PFAS has been found, the general types of industry and human activities associated with PFAS and identify the responsible parties contributing

to that contamination. Treatment options for Public Water Systems not only are prohibitively expensive in capital cost, but also significantly add to each community's operating costs going forward. It is unfair to expect water system ratepayers alone to bear the burden of the costs associated with treatment. Pursuing cost recovery against sources of PFAS is also very expensive and will take years of legal battles, a cost that may be prohibitive for communities spending millions for immediate water treatment or for permitting alternative sources of drinking water.

MassDEP also needs to consider establishing a strict timeframe for investigation into where contamination is coming from and then a much quicker response for the responsible party(ies) to implement remediation at a site, as well as contaminated drinking water sources. If Public Water Systems detect PFAS above the ORSG, MassDEP has required them to immediately take action to provide finished water below the ORSG. The same urgency does not seem to exist for responsible parties to remediate the source of contamination and this must be changed.

We offer the following specific comments on the proposed regulations:

Definition of Containerized Waste: The proposed amendment to the definition of Containerized Waste is intended to clarify that contaminated media, i.e., contaminated soil or groundwater, that is not otherwise a hazardous waste does not become Containerized Waste as a result of being placed in a container for off-site disposal. MWWA does not believe that the amended language provides adequate clarification. MassDEP should revisit the definition to provide more clarity.

Definition of Current Drinking Water Source Area: MWWA disagrees with the proposed language to exclude Zone A around emergency sources from the requirements for protection from contamination as a drinking water source. Under the Drinking Water Regulations, it may make sense that the Public Water System isn't required to provide the same level of protection as it does to its active or inactive sources, however the same argument does not hold under the MCP regulations where the standards are designed to protect future sources. Emergency sources have been activated in the past and therefore should remain protected in case they are needed as a potential future source. MWWA asks that the proposed language be stricken.

Definition of Non-potential Drinking Water Source Areas (NPDWSA): MWWA supports this change which would make the MCP regulations consistent with the Drinking Water regulations prohibiting the siting of permitted landfills and wastewater residuals "monofills" within the Zone II or III of a water supply. MWWA does question whether this change will impact existing water supplies that are located near closed landfills?

Definition of Rail Right-of-way: MWWA suggests that MassDEP amend this language to clarify that this could be either a current or former railway. If an abandoned railway has been transformed into another use, like a rail-trail, MWWA does not want to see that area lose designation from clean-up if necessary.

40.0317(20): MWWA supports this amendment which expands the existing notification exemption for releases that are the result of leakage and discharges of water from a public water supply or public water supply distribution system to include, in addition to chloroform, the other trihalomethanes (bromodichloromethane, dibromochloromethane and bromoform) that may be present in drinking water as the result of chlorination. Haloacetic acid compounds and other disinfection by-products found in drinking water should also be included.

40.0362: Reportable Concentrations of Oil and Hazardous Material in Groundwater: At the public forum in Harvard, MA on June 19, 2019, Paul Locke made brief mention of "background" in the context of private drinking water wells and potential influence on those wells from septic systems. MWWA believes MassDEP needs to give more thought to the issue of background levels of PFAS in this regulation package. The MCP establishes the concept of background from anthropogenic factors, but nowhere is it determined what an acceptable level of background for PFAS might be. Given the ubiquitous nature of PFAS in so many consumer products and in products used in the water works industry, MWWA fears that Public Water Systems might be put in a position to have a "Reportable Concentration" if the limit is in the low parts per trillion. MWWA believes clarification is necessary in this section of the regulations to prevent drinking water sources from being classified as waste sites if they find PFAS upon initial sampling. Perhaps it could be made clear that subsequent sampling would need to occur over a specified period to prove that the compounds are no longer present. This issue also needs to be discussed by the Drinking Water Program as they need to consider that products commonly used in the water supply industry (but without NSF 61 approval) should not be considered a significant contribution, as often there is too small a quantity of compounds in use, as well as too low a contact time to leach.

40.0993(3): MWWA supports this amendment which is intended to clarify that the requirements of 310 CMR 22 for the evaluation of drinking water in public water supplies includes both numerical water quality standards and procedural requirements that must be met even when the assessment is being conducted as part of an MCP site. Specifically, MWWA supports the proposed change which cites the drinking water provisions for site-specific risk assessment so that the MCP Method 3 assessment will also meet the drinking water requirements.

40.0317 (13) Releases and Threats of Release Which Do Not Require Notification: MWWA has concern regarding transfer of soil from one area to another without notification to the water supplier where is it being deposited, especially if it is in a designated water supply area. Further, we would suggest that any soil reuse project containing or potentially containing OHM or meeting criteria for RCS-1 but below RCS-2 should require a much higher level of scrutiny and control if it is located within the watershed of a surface water supply (ORW) or in the Zone II of a groundwater supply.

40.0461(9): This language is intended to clarify that Other Persons conducting Utility-related Abatement Measures are not required to tier classify the disposal site where they are conducting the URAM or achieve site closure if they have not otherwise

assumed responsibility for MCP response actions beyond the utility work under the URAM, but they do need to follow the procedures at 310 CMR 40.0170(9) (notify the Department and provide a Status Report) when discontinuing work. MWWA does not believe the included language clarifies this point and contends MassDEP needs to add clarifying language to address materials that may be moved off the disposal site and later be deemed to pose a risk.

40.0974: Identification of Applicable Groundwater Standards in Method 1 (GW-1):
In the draft MCP regulations, MassDEP is seeking input on specific questions it raised relative to PFAS evaluation and regulation, and while some of the questions posed related directly to a GW-1 standard, many will inform future decisions regarding an MMCL, so MWWA is responding with that in mind.

At 20 ppt as a sum of six PFAS, the proposed GW-1 standards, which are likely to become MMCLs, are significantly lower than the Lifetime Health Advisory (LHA) issued by the United States Environmental Protection Agency (EPA) in 2016. The EPA has stated more than once that the LHA is considered a "safe level" and that concentrations below 70 ppt are not of concern based on their review of the available health studies. In addition, an LHA is defined as the level which does not result in "any adverse noncarcinogenic effects for a lifetime of exposure" (EPA, 2018, 2018 Edition of the Drinking Water Standards and Health Advisors, EPA 822-F-18-001). Further, the LHA document states that the LHA is protective of cancer effects for PFOA and PFOS (EPA, 2016, Drinking Water Health Advisory for PFOA, EPA 822-R-16-003; EPA, 2016 Drinking Water Health Advisory for PFOS, EPA 822-R-16-004). Therefore, any level below 70 ppt for drinking water standards is unnecessarily below the "safe level" established by the EPA in the LHA and provides no additional benefit to a drinking water standard set at 70 ppt. Furthermore, EPA can issue an updated LHA if it chooses to do so, and the fact that it has not done so indicates a lack of compelling scientific evidence to merit such a change.

With respect to MassDEP's proposed revision of EPA's Reference Doses (RfD), we understand that EPA's RfD, upon which the MassDEP relies, has (i) not been subject to peer-review and (ii) stands at odds with acceptable intakes set by other reputable, national, regulatory agencies. For example, just last year, Health Canada set drinking water guidelines for PFOA[1] and PFOS[2] of 200 parts per trillion (ppt) and 600 ppt, respectively. These two guidelines have been derived using standard, highly health-protective methods, and are better justified than the methods used to date by EPA for setting their PFOS/PFOA guidelines. EPA's RfDs for both PFOA and PFOS are based not on effects in either humans or other primates, but instead on very minor, reversible, effects in laboratory rodents. Good practice suggests that when dose-response data

[1] https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-technical-document-perfluorooctanoic-acid/document/PFOA_2018-1130-eng.pdf

[2] https://www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/publications/healthy-living-vie-saine/guidelines-canadian-drinking-water-quality-guideline-technical-document-perfluorooctane-sulfonate/PFOS%202018-1130%20ENG.pdf

from studies in humans and/or nonhuman primates are available, these should take precedence for purposes of predicting risks to public health. For both PFOA and PFOS, there are data from human studies, lab monkey studies, and "humanized," genetically engineered mouse studies. Some of these studies were not available when EPA derived their overly conservative RfDs for PFOA and PFOS. There is a considerable degree of safety built into the EPA LHA. We urge MassDEP to consider the comments on this topic submitted by Sanborn Head & Associates. Basically, the Reference Dose for PFOA/PFOS contains three factors of safety that are arguably unnecessary to protect human health, and hence all represent protective biases that suggest 70 ppt is a safe level. These factors more than compensate for the additional safety factor of 4 proposed by MassDEP as an adjustment to the EPA value. For these reasons, MassDEP should not be adding additional uncertainty factors to the RfDs.

MassDEP has stated that they are proposing a standard of 20 ppt given new information released by the Agency for Toxic Substances and Disease Registry (ASTDR). ASTDR released draft toxicological profiles for PFAS in June of 2018. It is important to acknowledge that they are not yet final. We believe that comments[3] submitted by Dr. Laura Green and Dr. Edmund Crouch from Green Toxicology regarding ASTDR's draft Toxicological Profile for PFAS should be considered in MassDEP ORS's evaluation of the scientific studies. We have attached their analyses to these comments for MassDEP's review. Drs. Green and Crouch point out many concerns with the interpretation of certain studies in deriving the toxicological profiles. Comments such as the ones made by Drs. Green and Crouch should cause changes to ASTDR's final profiles; therefore, MassDEP should not be relying on ASTDR's profiles until they are published as final.

If MassDEP moves forward with setting specific standards for a GW-1 or an MMCL, MassDEP should develop compound-specific standards for each of the PFAS compounds and not employ a cumulative approach. The compounds should not be combined because of different toxicity endpoints, different uncertainty factors between humans and mammal toxicities, different reference dosages, differences in half-lives, bioaccumulation, etc. Summing the six PFAS compounds has the effect of regulating any detection of PFAS as an exceedance of the GW-1 since the typical laboratory reporting limit for the six PFAS is approximately 5 ppt, and adding in non-detects at half detection limits will push six PFAS sum to near or above 20 ppt. Since the compounds being regulated are the most commonly detected compounds, it is likely that more than one PFAS will be detected in many samples. Therefore, in effect based on the added decision to have the sum of the six compounds also be regulated at 20 ppt, the proposed GW-1 is actually 5 ppt or effectively the practical quantitation limit (PQL) for each compound. At a recent PFAS stakeholder meeting, MassDEP pointed out that this has the practical effect of regulating PFAS to non-detect. This is not only inappropriate but also impractical and will significantly increase response action costs by water systems and their customers without providing any additional known health benefit.

[3] Comments on ATSDR's *Toxicological Profile for Perfluoroalkyls,* Edmund A. C. Crouch, Ph.D. and Laura C. Green, Ph.D., D.A.B.T, August 20, 2018; Docket ATSDR-2015-0004

In addition to the analytical challenges associated to the potential standards being close to or at minimum reporting limits for individual PFAS, the potential for drinking water being out of compliance for the presence of individual PFAS in single-digit levels may require many more municipalities to install treatment systems than one may expect, especially considering PFAS levels in the Commonwealth's drinking water are not known. In the Unregulated Contaminants Monitoring Rule (UCMR) 3 study completed by EPA in 2016, less than 1% of public drinking water systems (serving more than 10,000 customers) had PFOA (0.3%) or PFOS (0.9%) at concentrations above the LHA of 70 ppt. However, review of the same data shows a significant increase in the number of water systems above 20 ppt for PFOA and 40 ppt for PFOS (the reporting limits in the UCMR3 study) at 2.4% for PFOA and 1.9% for PFOS. This will substantially increase the number of water systems that will be required to treat to standards that are lower than the LHA which EPA states is protective for both non-cancer and cancer effects, significantly increasing the cost of response actions but providing no additional benefit. Further, since the reporting limit for PFOS was elevated above the proposed GW-1 of 20 ppt, the percentage of water systems above 20 ppt for PFOS would be expected to be higher, further increasing costs to water systems and their customers without providing any additional benefit.

A cumulative-regulatory approach also ignores the complexities of selecting, implementing and operating the appropriate and affordable PFAS treatment solutions. There are a limited number of the drinking water treatment technologies that are known to be effective for PFAS removal. However, there is no one-size-fits-all solution. Depending on several site-specific factors, such as the levels and types of PFAS present in water, general water quality, and existing treatment processes, treatment technologies may show different removal effectiveness depending on several factors, such as the carbon chain length and attached functional group.

If a cumulative approach is taken by MassDEP, the potential for drinking water being out of compliance for the presence of individual PFAS in single-digit levels may also impose significant operational challenges for running PFAS treatment systems; increased spent adsorptive media will be generated requiring disposal or incineration. With adsorptive media technologies that are commonly used for PFAS treatment, such as granular activate carbon (GAC) and anion exchange (AIX) resin systems, water is sampled from the different media bed depths to detect a breakthrough of PFAS, along with monitoring of the finished water level. When the breakthrough of the media is approaching the PFAS standard, the system requires a change-out with new media. Media change-outs are costly (although hopefully infrequent in well-designed systems), and therefore should be based on accurate analytical results. MWWA is concerned that at such low parts per trillion accuracy will be difficult and may cause inefficient use of resources such as requiring an excessive number of PFAS samples to ensure accurate results.

The State of New Hampshire just released their final MCL values and have selected different levels for each of the four individual compounds they will be regulating, which

are PFOA, PFOS, PFNA, and PFHxS. MWWA also notes that many other states have proposed to follow a similar approach as NHDES, including New Jersey that proposed and adopted the country's first individual PFAS MCLs for PFNA, PFOA, and PFOS; Minnesota has individual health risk values for PFOA, PFOS, and PFHxS; and California enforces individual notification levels for PFOA and PFOS only.
The State of Michigan just released a report and also has separate values for each compound it intends regulate through an MCL (copy of report attached).

MassDEP asked if PFHpA and PFDA should be included, excluded or treated separately, and MWWA would like to point out that New Hampshire is not regulating PFHpA and PFDA at this time. Because, as it admits, there is a dearth of toxicity, epidemiology and pharmacokinetic data on PFHpA and PFDA, MWWA believes it would be premature for MassDEP to regulate these compounds at this time.

We would request that MassDEP tighten the standards that are being proposed for the GW-3 standard for PFAS. At the low parts per trillion that are being proposed, the sooner we are able to identify and remediate the source of contamination, the better chance we have of protecting our water sources from being contaminated.

MWWA is quite concerned about analytical controls and capabilities to reliably and accurately quantify the compounds when looking at very low parts per trillion. MassDEP is suggesting that laboratories should be capable of identifying a minimum reporting level (MRL) of 5 ppt for each respective compound. MassDEP is further suggesting that anything between 1/3 the MRL and the MRL be considered as ½ the MRL. MWWA believes that anything detected below MRL should not be governed by an arbitrary rule assuming a certain level exists; such an interpretation is not scientific. Values below the MRL should not be reportable nor counted towards anything at these low parts per trillion levels. We note that in other areas of the Drinking Water Program, it is explicit that all values below the MDL be recorded as zero, as seen in the line below from the MassDEP "Stage 2 Disinfection By-Products Rule (DBPR) Quarterly Compliance Worksheet." Why would PFAS be treated differently?

Note: Record and calculate all ND or < MDL results as the number 0 (zero).

It is concerning that EPA does not currently have an approved method for soil evaluation or detection in other matrices aside from finished drinking water, so we wonder how MassDEP will reliably and accurately evaluate PFAS concentrations in soil?

It is also important to note that advances in analytical techniques have allowed laboratories to detect substances at lower and lower levels. Substances found at low levels do not always correlate to health impacts. There needs to be robust toxicological studies conducted on the human health impacts of PFAS at the levels being detected. Further, because there is a real difference in the way in which mice and humans react to chemical influence, Drs. Green and Crouch have urged that guinea pigs might be a

better study animal than mice. MWWA is attaching to our comments a paper[4] written by Drs. Green and Crouch which outlines their reasoning. MWWA urges MassDEP to conduct a thorough evaluation of existing toxicological studies and perhaps fund future studies to better understand how these levels specifically impact human health.

Proposed Development of an MMCL:

With respect to establishing an MMCL, MWWA firmly believes that any new drinking water standard must be developed through a transparent process that:

- Follows a clearly documented and transparent legal process
- Relies on a strong scientific foundation, which includes studies that are peer-reviewed, comprehensive, and repeatable
- Involves key stakeholders
- Evaluates the cost-benefit of the proposal, and
- Evaluates the effectiveness of the regulatory action in achieving better health outcomes

The EPA is responsible for oversight of the Safe Drinking Water Act and is tasked with setting drinking water quality standards on a national basis. MassDEP has been delegated the authority (otherwise known as primacy), to oversee the Safe Drinking Water Act in Massachusetts. The issue of emerging contaminants is one to which EPA pays close attention. For public health protection, EPA has a rigorous process for evaluating contaminants of concern in drinking water and deciding whether regulation is warranted. EPA employs experts who derive protective health-based standards (e.g., toxicologists and health risk assessors), economists who produce cost and benefit analysis, and chemists and engineers who can determine lab and treatment capabilities.

EPA regularly mandates water systems of a certain size to test for substances on their Contaminant Candidate List (CCL) through the Unregulated Contaminant Monitoring Rule. This process allows EPA to assess the prevalence of a substance throughout the country. There were several PFAS substances included in the last round of the UCMR sampling (UCMR 3) and several more are proposed for UCMR 5.

EPA has already completed a PFAS Action Plan[5] which outlines the concrete steps the agency is taking to address PFAS and protect public health. This plan:

- *Demonstrates the agency's critical national leadership by providing both short-term solutions and long-term strategies to address this important issue.*
- *Provides a multi-media, multi-program, national research, and risk communication plan to address this emerging environmental challenge.*
- *Responds to the extensive public input the agency has received over the past year during the PFAS National Leadership Summit, multiple community engagements, and through the public docket.*

[4] Advancing the ball: Using guinea pigs to study perfluorinated alkyl substances (PFAS)
Laura C. Green, Ph.D., D.A.B.T. and Edmund A.C. Crouch, Ph.D., January 5, 2019

[5] https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

EPA is committed to proposing a national drinking water regulatory determination for PFOA and PFOS and has begun that process. American Water Works Association and the National Association for Water Companies both advocate for an MCL to be developed by EPA at the National level and not at the state level.

As we stated earlier in our comments, setting drinking water standards involves a multi-step process. The toxicity level (in particular, with respect to humans) of the substance or contaminant must be determined. The prevalence of the substance must be evaluated. The ability to reliably detect and quantify the substance must be determined. The feasibility of treating to remove the substance must be evaluated. The cost to the affected parties must be assessed. The benefits to the environment and human health of reaching the standard must be quantified. We are not sure that MassDEP has enough information on each of the above steps to properly develop an MMCL right now.

MWWA has always believed that it is in the best interest of the public for EPA to take the lead on setting health-based drinking water standards, so there is a consistent protocol and messaging for all water suppliers across the nation. In the past, Massachusetts has imposed regulatory controls on Perchlorate and Manganese before the national process was complete. Jumping out ahead of the EPA puts Massachusetts water suppliers in the untenable position of complying with standards of uncertain value and places a burden on the water suppliers and their customers before the public health benefits have been completely evaluated. Perchlorate is a perfect illustration of this, as EPA just put a proposed standard out for public comment which is significantly higher than the MMCL established back in 2003. When states act independently and have differing standards for particular substances, it causes confusion and concern among the public. It is critical that MassDEP understand this contaminant at the levels being discussed; it will have an enormous financial impact on the entire state, both public and private sectors. MWWA urges MassDEP not to act based on what other states may do. Further, MassDEP should not apply an excessive conservative factor to a number not supported by sound science. MWWA suggests that MassDEP closely follow the EPA process on PFAS and implement standards only after the scientific and public health merits of doing so have been methodically and carefully considered.

Implementation Considerations:

MassDEP needs to carefully consider implementation challenges for Public Water Systems from regulatory efforts related to PFAS. Water sources are not quickly or easily treated or replaced. There is significant engineering effort and cost that goes into selection of the appropriate treatment technologies for a given water system. Site-specific testing, either bench-scale or pilot-scale, that evaluates the effectiveness of the treatment technologies with the actual contaminated water conditions and the follow-up cost analysis are critical for 1) identifying the appropriate treatment solution for that specific water and existing treatment processes; 2) selecting the cost-effective alternative; and 3) identifying and avoiding any potential unintended consequences that

are inherently possible when any new water treatment process is added (e.g. although this is a very infrequent occurrence, coal-based carbon has been observed to release arsenic under certain water conditions). While such testing provides critical design parameters and potentially cost-saving measures, it takes time. Engineering the design of the permanent PFAS treatment facility, assuming timely approval from MassDEP, local permitting, and constructing it can be a lengthy process. Renting temporary treatment equipment not only is very costly but also takes time. These considerations should be taken into account in MassDEP's timeframe for enforcing PFAS standards.

In some instances, Massachusetts Public Water Systems have been advised to take sources out of service so that finished water is below the ORSG; this will not be possible for most water systems. In addition, some water systems have limited sources and those sources may be constrained by other regulatory programs, such as the Water Management Act. Flexibility for limited use of impacted sources during peak demand periods may be necessary for public safety (adequate pressure and fire protection) or to maintain reasonable operating costs while permanent solutions are implemented. Interconnections with neighboring communities to provide an alternative water source may pose challenges in terms of cost and time required to design and construct the needed infrastructure, as well as potential incompatibility with that water. It is also recommended that MassDEP streamline their new technology review process to more quickly grant approvals.

MWWA is also concerned that Public Water Systems may face procurement challenges if new drinking water standards are put in place. MassDEP needs to give some consideration as to whether statutory changes are needed to enable water systems to more quickly procure treatment technologies or if procurement thresholds need to be raised to avoid prolonged bidding processes. MWWA is also concerned that certain treatment components may become harder to procure if demand for treatment increases. The state may consider whether it should make some bulk purchases and stockpile certain common treatment equipment so that components will be more readily available to water systems if needed, or MassDEP must allow a reasonable amount of time for water systems to fund and procure treatment (if required).

MWWA would also like to reiterate a concern we raised back when the petition to regulate PFAS was initially filed and that is time and effort needs to be spent by the Commonwealth on a communication strategy so that water suppliers are not left on their own to individually figure out how to handle the risk communication. Thus far there have been many questions raised by residents at public forums in the communities grappling with PFAS contamination, especially about potential impacts to health, with very few direct answers from MassDEP and the Massachusetts Department of Public Health. MassDEP needs to be better prepared to answer questions and address mounting fears of residents, and to assist Public Water Systems who are often the first line of defense for questions from their customers.

Finally, MWWA strongly encourages MassDEP to establish and maintain communications with Administration and Finance, the Clean Water Trust, and the

Legislature regarding how to provide more funding to communities facing PFAS contamination. There is obvious attention to the initial capital costs that Public Water Systems will incur to install treatment. In some situations, the responsible party may pay for the capital costs. In most cases, municipalities will need to front the costs and chase the responsible part(ies) for reimbursement. It is likely that the majority of contaminated water supplies may not have an easily identifiable source or responsible party. There will be ongoing costs for sampling, operation, and maintenance of the treatment system. Who will be responsible for these ongoing costs? Ratepayers should not have to bear this burden for harms caused by others.

Thank you for the opportunity to provide these comments. MWWA respectfully requests that MassDEP publish a response to comments prior to finalizing the final MCP regulations. That response to comments should be available for review by the public prior to MassDEP moving forward with any other regulatory initiatives related to PFAS (either revisions to the ORSG or development of an MMCL).

As mentioned previously and throughout this letter, public water suppliers understand the importance of ensuring that the drinking water that reaches their customers meet Safe Drinking Water Act requirements and protect the public health. Water suppliers work hard each day to meet these goals and satisfy their customers' expectations. As we have all come to be keenly aware, the issue of emerging contaminants is a huge challenge. Our members will be tasked with meeting any and all regulatory requirements and standards set; therefore, MassDEP has an obligation to determine what the real human risk exposure is, and then, when and if the science dictates, move towards standards that will achieve desired public health outcomes. EPA has its national strategy for PFAS and MWWA recommends and encourages MassDEP to follow that process closely. We look forward to working collaboratively with MassDEP as this process moves forward.

Sincerely,

Jennifer A. Pederson
Executive Director

Enclosures
cc: Martin Suuberg, Commissioner, MassDEP
Stephanie Cooper, Deputy Commissioner, MassDEP
Kathleen Baskin, Assistant Commissioner, MassDEP
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