ASDWA PFAS MCLs White Paper

Deirdre White
November 29, 2021
ABOUT ASDWA

• **Mission:** ASDWA provides information, opportunities, and guidance to state and federal leaders and partners in the drinking water sector to protect public health and the environment.

• **Members:** Drinking Water Program Administrators: 50 states, 5 territories, the Navajo Nation, and the District of Columbia
  - Public Water System Oversight
    • Regulation
    • Technical assistance
    • Funding – DWSRF
  - Coordination with Partners
NOVEMBER 2021

Lessons Learned from States and Challenges Ahead in Setting State-Level Per- and Polyfluoroalkyl Substances (PFAS) Standards

WHITE PAPER

Association of State Drinking Water Administrators

Supported by the ASDWA State PFAS MCLs Group
WEBINAR AGENDA

Moderator/Presenter: Deirdre White, ASDWA

Panelists:
- Ben Montross, Vermont
- Lisa Daniels, Pennsylvania
- Damon Guterman, Massachusetts
- David Dani, Colorado
• Please type your questions into the questions box or into the chat on your webinar control panel.
• We will not be taking verbal questions.
• You may type in your questions at any time during the webinar.
• We will be pausing to have a panel discussion on each section of the white paper and take audience questions.
AFTER THE WEBINAR

Please note that a video recording of today’s webinar will be made available for viewing on ASDWA’s web site within the next few days at

www.asdwa.org
• **States helping states:** States that have MCLs are providing advice and assistance and answering questions for states that are considering or in the process of developing MCLs for:
  - The regulatory setting process
  - State challenges during the process
  - How to address or overcome challenges
  - Helpful tips and resources

• **Building from existing resources:**
  - ASDWA’s State CEC Rule Development and Management Strategies Toolkit
  - ECOS White Paper: Processes and Considerations for Setting State PFAS Standards
ASDWA PFAS MCLs Group - 15 States

**States without MCLs**

**States with MCLs**
- Massachusetts, Michigan, New Hampshire, New Jersey, New York, Vermont
Ten (10) States have developed PFAS drinking water standards or guidelines that are different than EPA’s current HAL for PFOA and PFOS combined at 70 ppt.

Six (6) states are developing PFAS standards or guidelines.

At least fifteen (15) states have a prohibitive law or policy that prevents them from setting drinking water MCLs that are more stringent than federal regulations.
<table>
<thead>
<tr>
<th>Specific PFAS</th>
<th>NHDES MCLs</th>
<th>NJDEP MCLs</th>
<th>VT DEP MCL</th>
<th>MI DHHS MCL</th>
<th>MA DEP MCL</th>
<th>NY DOH MCLs</th>
<th>MN DOH Guid.</th>
<th>CA Response Level</th>
<th>CA Notif. Level</th>
<th>IL EPA HA Guid.</th>
<th>CT DPH Advisory</th>
<th>USEPA LHA</th>
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<td>PFOA</td>
<td>12</td>
<td>13</td>
<td>20* combined</td>
<td>8</td>
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<td>10</td>
<td>35</td>
<td>10</td>
<td>5.1</td>
<td>2</td>
<td>70* combined</td>
<td>70*</td>
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<td>*</td>
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<td>*</td>
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<td>400,000</td>
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All units are in part-per-trillion (ppt)

Chart Date: As of July 28, 2021
Monthly Meetings and White Paper Topics

- Standard Development - Overarching Rulemaking Process
- Health Effects
- Occurrence
- Analytical Methods and Lab Capacity
- Treatment and Compliance Options
- Benefits, Costs, and Economic Considerations
EACH SECTION INCLUDES

- Topics and content
- State considerations

| State Experience | Massachusetts’ SDWA Advisory Committee and Laboratory Certification Office’s Laboratory Advisory Committee were not established formally though they both exist to provide a forum for interacting with the regulated community and interested stakeholders. Additionally, its Health Effects Advisory Committee works with their Office of Research and Standards to inform toxicological reviews. Michigan set its MCLs for seven PFAS based on the Michigan PFAS Action Response Team (MPART) Science Advisory Workgroup recommendations that considered the latest scientific data available. |

| Resource Documents | Illinois PFAS Statewide Health Advisory  
New Hampshire PFAS Rules and Amendments, Summary of Comments  
Michigan Rulemaking Process Overview  
Massachusetts PFAS Drinking Water Regulations Quick Reference Guide  
New Jersey DWQI Recommendations for PFOS, PFOA, and PFNA  
ASDWA State CEC Rule Development and Management Strategies Toolkit  
ECOS Standards White Paper  
Conservation Law Foundation State PFAS Petitions |
STANDARD DEVELOPMENT
OVERARCHING RULE MAKING PROCESS

- State PFAS Regulatory Drivers
- PFAS MCLs and Drinking Water Sources
- Regulatory Development Process and Approach
- Role of State Committees
- Stakeholder Engagement
- State Regulatory Structure
- Rule Implementation
- Staggered Monitoring and Compliance Schedules
- Reporting and Data Management
Questions and Considerations

• What was the driver for your state’s decision to develop PFAS regulations or take other actions?
• How will your state consider new EPA toxicological data, studies, and NPDWR actions?
• Audience questions?
ASSESSING HEALTH EFFECTS

• The Role of Toxicologists, Health Risk Assessors, and State Advisory Committees
• Health Risk Assessments
  – Reference doses (RfDs)
• Using Health Risk Assessments to set MCLs
• Relative Source Contribution (RSC)
• Regulating PFAS as Chronic, Sub-chronic, or Acute Contaminants
  – Considerations for sensitive subpopulations
Questions and Considerations

• Why have states set different PFAS MCLs?
• Audience questions?
MONITORING AND OCCURRENCE

• State Drinking Water PFAS Sampling Program Design for States without MCLs
• State PFAS Sampling to Determine Sources and Likely Occurrence
• Initial Monitoring
• State PFAS MCL Monitoring Requirements
• State Compliance Determinations
• Occurrence - General Observations and Trends to Consider from ASDWA’s Survey
• Data Sharing, Transparency, and Public Engagement
MONITORING AND OCCURRENCE

Questions and Considerations

• What challenges are impacting state monitoring and reporting?
  - UCMR3, UCMR5
  - Costs and funding
  - Lab capacity

• Audience questions?
ANALYTICAL METHODS AND LAB CAPACITY

Analytical Methods

• EPA Developed Analytical Methods for Drinking Water
• Other Analytical Methods for Additional PFAS, Raw Water and Other Media
• Total Organic Fluorine (TOF) Method
ANALYTICAL METHODS AND LAB CAPACITY

Lab Capacity, Accreditation, and Reporting

• Lab Capacity
• Lab Accreditation
• Lab Reporting Reviews for QA/QC
• Minimum Reporting Levels/Limits
• Nomenclature in Lab Reports
  – “ASDWA-APHL Bulletin”
• Field Reagent Blanks (FRBs)
• Potential FRB Solutions
Questions and Considerations

• What challenges still need to be addressed to ensure adequate lab capacity, methods, and standards?
• Audience questions?
TREATMENT AND COMPLIANCE OPTIONS

Compliance Determinations and Response Actions

• Sampling Location/Frequency and Compliance Determinations
  – e.g., Locational running annual average (LRAA)

• Emergency, Short- and Long-term Regulatory Response Actions
  – Enforceable timeline for installing treatment

• State Review and Approval of Treatment
  – Site specific circumstances: source water quality and specific PFAS
  – Cost, availability, and effectiveness
TREATMENT AND COMPLIANCE OPTIONS

Treatment Technologies

• Granular Activated Carbon (GAC):
• Ion Exchange (IX) Resin
• Reverse Osmosis (RO)
• Best Available Technologies
• Treatment Differences
• Residuals Handling and Disposal
• Treatment Equipment Availability Delays and Costs
TREATMENT AND COMPLIANCE OPTIONS

Questions and Considerations

• What challenges have you experienced with review and approval of treatment?
  – Pilot studies and treatment design standards?

• Audience questions?
BENEFITS, COSTS, AND ECONOMIC CONSIDERATIONS

- Human Health Benefits
- State Administrative Costs
  - Staff and resource needs
- State Sampling and Lab Costs
- Costs for Water Systems
  - For different MCLs, Costs and O&M for number of PWSs impacted
- Economic Impacts
  - PWSs, Businesses, and Small Communities
- State Considerations for Affordability Analysis and Environmental Justice
## BENEFITS, COSTS, AND ECONOMIC CONSIDERATIONS

### New York PFOA/PFOS Occurrence and Treatment Cost Summary for Community Systems

<table>
<thead>
<tr>
<th>Target MCL (ppt)</th>
<th>Estimated Percent Community Water Systems Requiring Treatment</th>
<th>Estimated Number of Community Water Systems Requiring Treatment</th>
<th>Total Statewide Estimated Capital Cost*</th>
<th>Total Statewide Estimated Annual O&amp;M Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>40 percent</td>
<td>1,125</td>
<td>$1,500,000,000</td>
<td>$78,000,000</td>
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<tr>
<td>10</td>
<td>23 percent</td>
<td>645</td>
<td>$855,000,000</td>
<td>$45,000,000</td>
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<tr>
<td>20</td>
<td>14 percent</td>
<td>410</td>
<td>$544,000,000</td>
<td>$29,000,000</td>
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<tr>
<td>36</td>
<td>10 percent</td>
<td>276</td>
<td>$366,000,000</td>
<td>$19,000,000</td>
</tr>
</tbody>
</table>

*Cost estimates assume $1,325,000 capital cost per treatment system, weighted based on number of small (2,513), mid-size (180), and large (156) community water systems in NYS*
Questions and Considerations

• How are state regulatory requirements different from EPA’s regulatory development process?
• Audience questions?
RISK COMMUNICATION

• Use of existing resources from ITRC, AAAS EPI Center, and States
• Public communication, transparency, and stakeholder engagement
• Information should include:
  − Potential health impacts (including heightened impacts for sensitive subpopulations)
  − How the state used safety and uncertainty factors to develop more protective MCLs compared to the actual levels where health effects are observed in humans and animals
  − What the public can do to reduce their risks.
• Ensure necessary and consistent information for public health officials and health providers to communicate with their stakeholders and patients
Questions and Considerations

• What recommendations do states have for EPA to provide more guidance, specific information, and health messages?

• Audience questions?
QUESTIONS?

Association of State Drinking Water Administrators