PFAS Policy and Regulations Subgroup

Final Meeting Minutes (approved 3/15/21)

WebEx, Office of Drinking Water, 109 Governor Street 6th Floor, Richmond, VA 23219

11:00 am to 12:00 pm, February 22, 2021

1. Welcome and meeting overview – ODW Policy Director, Nelson Daniel called the meeting to order 11:02 a.m. The meeting was conducted in a public format and recorded. Nelson used a presentation for the meeting. It follows the Minutes and will be posted on Town Hall.

2. Subgroup members present:
   Phillip Musegaas (Potomac Riverkeeper Network)
   Paul Nyffeler (Chem Law)
   Jamie Hedges (Fairfax Water)
   Jillian Terhune (City of Norfolk)
   Wendy Eikenberry (Augusta County Service Authority)
   John Aulbach (Aqua Virginia)
   Jessica Edwards (Loudoun Water)
   Mike McEvoy (Western Virginia Water Authority)
   Nelson Daniel (VDH Office of Drinking Water) – VDH Lead*

   Guests:
   Ellen Egen (AquaLaw)
   Amanda Waters (AquaLaw)

   ODW: Christine Latino

3. Minutes from the January 14, 2021 meeting – Subgroup members did not have any substantive changes; one member noted a typo which Nelson will revise. Nelson will post final minutes from the January Subgroup meeting on Town Hall.

4. Update reports on research (as needed)
   a. EPA: Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle Climate Change (memo dated January 21, 2021 – summary in presentation)
   b. EPA: Regulatory Freeze Pending Review (memo dated January 21, 2021 – summary in presentation)
      i. EPA is reviewing regulations/regulatory determination, other actions issued between 2017 and January 2020 – status of rulemaking dictates EPA action. Rules that were sent to the Federal Register for publication, but had not been published were withdrawn. Rules published, but not yet effective (an example is the Lead and Copper Rule Revisions) – consider postponing effective date, additional public comment, etc. UCMR 4 ws

subject to a regulatory freeze (EPA has subsequently announced they will go forward with regulating PFOA (perfluorooctanoic acid or perfluorooctanoate) and PFOS (perfluorooctane sulfonate or perfluorooctanesulfonic acid) – see: https://www.epa.gov/ccl/regulatory-determination-4)

ii. On 2/9, EPA withdrew its toxicity assessment for PFBS (perfluorobutane sulfonate or perfluorobutanesulfonic acid), citing 'political interference.' (prior administration recommendation was range of values, which is not typical so current administration wants to revisit – it is more common to provide single recommendation)

iii. Link to EPA announcement re: PFBS assessment https://www.epa.gov/newsreleases/epa-takes-action-protect-scientific-integrity

iv. Members noted that PFBS is not among the PFAS (Per- and PolyFluoroAlkyl Substances) specified in HB586. It can be detected using EPA methods 533 and 537.1. PFBA (perfluorobutanoic acid/perfluorobutyric acid or perfluorobutanoate/perfluorobutyrate) is not detectable in EPA method 537.1 (which is why the Occurrence and Monitoring Subgroup recommended using EPA method 533).

c. Vermont – (see presentation for rule summary). Members noted that Vermont's PFAS results database is available to the public (as a .pdf). PFAS contamination varied, but one site has high levels of compounds… PFHxS (perfluorohexane sulfonate or perfluorohexanesulfonic acid) is 134 ppt and PFOS is 161 ppt. See: https://dec.vermont.gov/sites/dec/files/documents/Water-Supply-Rule-March-17-2020.pdf

d. New Jersey/North Carolina – New Jersey seems active with efforts to update, review standards. North Carolina is waiting on EPA to establish limits for drinking water, NC more focused on sources of pollutants.

e. ASDWA resource page with overview of states with drinking water actions: https://www.asdwa.org/pfas/

5. Discussion about additional research needs

a. Overview of the rulemaking process in Virginia and what is applicable to the development of MCLs for PFOA, PFOS, etc.

i. Va. Code § 32.1-169 B. (effective January 1, 2022) establishes the requirements for the Board of Health to adopt regulations establishing MCLs for PFOA, PFOS, etc. The statue does not provide an exception to the Administrative Process Act for the regulatory process, therefore VDH will have to follow the standard process, unless there is sufficient consensus among stakeholders to support fast-track. The standard rulemaking process consists of issuing a Notice of Intended Regulatory Action (NOIRA), followed by proposed amendments and final amendments. Each stage of the process involves Executive Branch Review and an opportunity for public comment.

ii. See generally: https://www.townhall.virginia.gov/um/chartstandardbasic.pdf
iii. With other drinking water standards (MCLs, treatment techniques), ODW has adopted EPA's standards, being "no less stringent" to maintain primary enforcement authority for the Safe Drinking Water Act in Virginia.

b. Discussion about Policy Subgroup "needs" to be able to develop recommendations for MCLs, including information from other subgroups
   i. Timing of policy subgroup in relation to other subgroups: to develop recommendations, we need information from other subgroups, incl. sampling data, treatment technology assessment – from the Treatment Technology Subgroup, members would like their research to address the following questions:
      1. What is efficacy of current treatment technology?
      2. Is the current technology capable of removing all PFAS? How much removal?
      3. What is relative cost? i.e., for removal to 10 ppt, v. 5 ppt (10 v. 5 is not important, but representative of the issue).
      4. What are capital costs, along with ongoing O&M costs?
      5. Consider impacts of transferring pollutant to another medium – spent activated carbon, etc. (creating another waste stream).
   ii. Members suggested following a rulemaking process that is consistent with what is required under the Safe Drinking Water Act (SDWA).
      1. See: https://www.epa.gov/sdwa/how-epa-regulates-drinking-water-contaminants#develop; [SDWA § 1412(b)(3)–(6), (7)(A), and (15) but not § 1412(b)(4)(E)(v) or (6)(C) (codified at 42 U.S.C. § 300g-1(b)(3)–(6), (7)(A), and (15))][1].
      2. Members asked what kinds of information the Toxicology Subgroup could provide and thought development of maximum contaminant level goals would be beneficial. They also said there would be challenges to setting standards without federal guidelines, and without taking costs into consideration.
      3. Members asked if the Toxicology Subgroup could provide information about consensus within the scientific community on limits for the entire family of PFAS or groups of PFAS compounds as a class as an alternative to separate limits for individual compounds within the family of PFAS.
         a. Considering states with limits for individual PFAS compounds and states with a combined limit for the sum concentrations of several PFAS compounds.

[1] Subgroup members added citations to the SDWA following the meeting. They are included for reference.

b. Is there a range between 70 ppt and 0 that is protective of public health and technologically/economically feasible?

iii. Members asked about timing of work by the Policy Subgroup while other subgroups are gathering information/performing research, while the Workgroup is waiting for sampling to begin and results to come back.

iv. Members suggested we consider implications for small systems and their ability to implement an MCL – which is included in the SDWA process for choosing an MCL. [See SDWA § 1412(b)(4)(E)(ii), (b)(15) (codified at 42 U.S.C. § 300g-1(b)(4)(E)(ii), (b)(15))]. The Policy Subgroup could also ask each Subgroup what information they think they can or should provide.

c. Old Dominion University is going to do a literature review for VDH/PFAS Workgroup. We anticipate the review will begin in March and be completed in a couple of months.

6. Public comments - none

7. Set recurring meeting (3rd week of the month: preferred day – Monday; time – 11:00 am)
   a. For the next meeting, members suggested the Subgroup review the SDWA rulemaking approach and discuss – considering the dynamic between being protective of public health and cost/benefit to inform recommendations under HB586 and the satisfy the requirements for HB1257 (32.1-169)
   b. Next meeting in March 2021 (March 15, 2021, 11:00 am). Meeting information will be posted on Town Hall and the PFAS Workgroup's SharePoint site.
   c. The PFAS Workgroup is going to meet on March 4 to review the Sampling Plan that the Occurrence and Monitoring Subgroup developed. Look for an email with the meeting information and draft plan. Please review prior to the March 4 meeting. You may provide comments to Tony Singh prior to the meeting.

8. Nelson concluded the meeting at 12:15 pm

PFAS Policy and Regulations Subgroup

Draft Meeting Agenda

WebEx, Office of Drinking Water, 109 Governor Street 6th Floor, Richmond, VA 23219

11:00 am to 12:00 pm, February 22, 2021

1. Welcome and meeting overview
2. Minutes from the last meeting (Town Hall)
3. Update reports on research (as needed)
    a. California: Andrea Wortzel
    b. Colorado: Jessica Edwards
    c. Connecticut: Jillian Terhune
    d. EPA, Maryland: Philip Musegaas
    e. New York: Philip Musegaas
    f. Massachusetts: Jamie Hedges
    g. Michigan: Mike McEvoy
    h. Minnesota: Wendy Eikenberry
    i. New Hampshire: Paul Nyffeler
    j. New Jersey: John Aulbach
    k. North Carolina: John Aulbach
    l. Vermont: Russ Navratil
    m. Other states: Steve Risotto
4. Discussion about additional research needs
    a. Priorities for information from other subgroups
    b. Other states
    c. Focus on certain states regulations/regulatory process
5. Public comments
6. Set recurring meeting (3rd week of the month: preferred day? time?)

Next meeting in March 2021 (week of March 15, 2021)

PFAS Policy and Regulations Subgroup

Nelson Daniel

Virginia Department of Health

February 22, 2021

PFAS Policy Subgroup Meeting Overview

Meeting Overview

Update Member Reports on Research

- CA, CO, CT, MD, NY, MA, MI, MN, NH, NJ, NC, VT, Other States

Additional Research Needs

Deliverables for the next meeting

Public comments

Set recurring meeting schedule, 3rd week of the month

Conclusion

Meeting Minutes

Minutes are published on:

- Virginia Town Hall
- https://townhall.virginia.gov/ search for **PFAS**

Members receive email with minutes

Minutes saved on the PFAS Workgroup SharePoint

- PFAS Policy… Subgroup > Meetings

Need to approve meeting minutes of:

- January 14, 2021

Subgroup Members

- Phillip Musegaas (Potomac Riverkeeper Network)
- Paul Nyffeler (Chem-Law)
- Jamie Hedges (Fairfax Water)
- Jillian Terhune (City of Norfolk)
- Wendy Eikenberry (Augusta County Service Authority)
- Mark Estes (Halifax County Service Authority)
- John Aulbach (Aqua Virginia)
- Russ Navratil (VA AWWA)
- Jessica Edwards (Loudoun Water)
- Mike McEvoy (Western Virginia Water Authority)
- Andrea Wortzel (Mission H20)
- Steve Risotto (ACC)
- Nelson Daniel (VDH Office of Drinking Water)

Virginia PFAS Workgroup - Objectives

Determine the occurrence of PFAS in drinking water throughout the Commonwealth,

Identify possible sources of PFAS contamination, and

Evaluate existing approaches to regulating PFAS, including regulatory approaches adopted by other states and the federal government.

Six specific PFAS, including:

- Perfluorooctanoic acid (PFOA)
- Perfluorooctane sulfonate (PFOS)
- Perfluorobutyrate (PFBA) [aka Pentafluorobutanoic acid???]
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexane sulfonate (PFHxS) [Perfluorohexane sulfonic acid]
- Perfluorononanoic acid (PFNA)

Other PFAS “as deemed necessary”

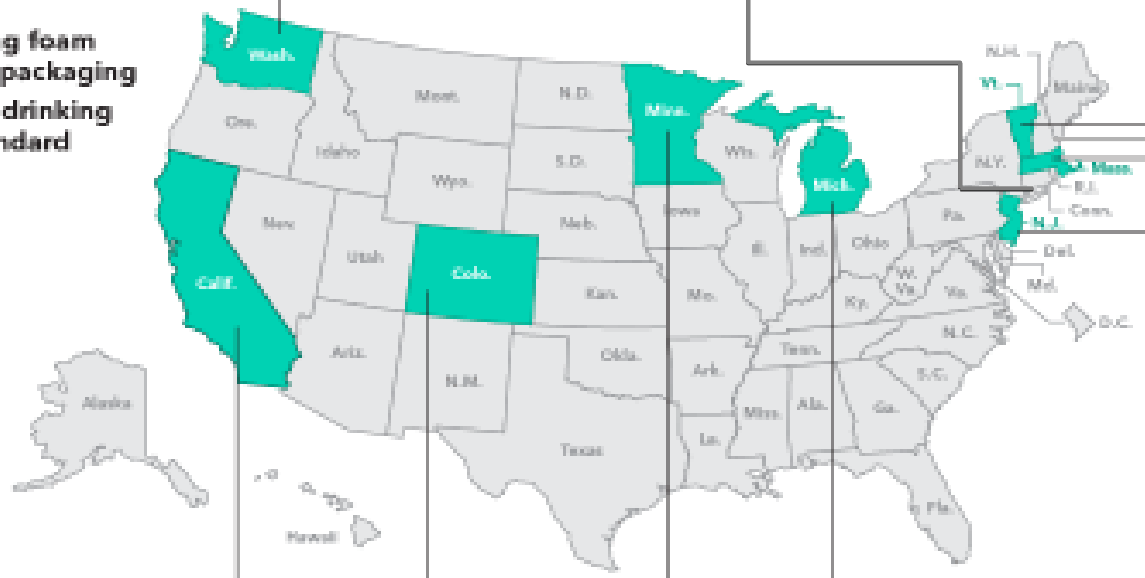
Virginia PFAS Workgroup - Objectives

May develop recommendations for specific maximum contaminant levels (MCLs) for:

- Perfluorooctanoic acid (PFOA)
- Perfluorooctane sulfonate (PFOS)
- Perfluorobutyrate (PFBA)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexane sulfonate (PFHxS)
- Perfluorononanoic acid (PFNA)

And other PFAS “as deemed necessary”

States With Numerical PFAS Limits



Connecticut
Σ (PFOA , PFOS, PFNA, PFHxS, PFHpA) < 70ppt

Washington
- Banned in firefighting foam and food packaging
- Proposed drinking water standard

Vermont
- 20 PPT (PFAS)
- Drinking water health advisory for 5 PFAS

New Hampshire
12 ppt PFOA
15 ppt PFOS
11 ppt PFNA
18 ppt PFHxS

Massachusetts
- ~~70 PPT~~ (PFAS)
- State guidance fo concentrations of ~~5~~ PFAS in drinking water

20 ppt Σ (PFOA , PFOS, PFNA, PFHxS, PFHpA, PFDA)

New Jersey
- Set PFNA standard at 13 ppt
- ~~Weighing proposed standards for:~~
  PFOA at 14 ppt
  PFOS at 13 ppt

California
- 14 PPT (PFOA)
- ~~13 PPT (PFOS)~~
- Drinking water notification guidance

40 ppt PFOS

Colorado
- PFOA/PFAS listed as hazardous waste
- 70 PPT (Combined PFOA/PFOS)
- Groundwater quality standard for El Paso County only

Minnesota
- 35 PPT (PFOA)
- ~~27 PPT (PFOS)~~
- Health-based guidance values

15 ppt PFOS
47 ppt PFHxS

Michigan
- ~~70 PPT (Combined P~~
- State standard for c in drinking water

8 ppt PFOA
16 ppt PFOS
6 ppt PFNA
51 ppt PFHxS
420 ppr PFBS
400,000 PFHxA
370 ppt Gen X

Bloomberg Environment

VIRGINIA DEPARTMENT OF HEALTH
...g You and Your Environment

	California	Connecticut	Massachusetts	Michigan	Minnesota	New Hampshire	New Jersey	New York	Vermont	EPA	avg
PFOA	10			8	35	12	14	10			14.8
PFOS	40			16	15	15	13	10			18.2
PFNA				6		11	13			not included	10.0
PFHxS				51	47	18				not included	38.7
PFHpA										not included	
PFDA		not included							not included	not included	
PFBS		not included	not included	420					not included	not included	
PFHxA		not included	not included	400000					not included	not included	
Gen X		not included	not included	370					not included	not included	
SUM		70	20						20	70	

Updates from January Policy Subgroup Meeting

U.S. EPA

– Nelson/Bob

CT

MD

NY

MA

MN

NH

Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis

Memo dated January 20, 2021

- Immediate Review of Agency Actions Taken Between January 20, 2017, and January 20, 2021 against Administration policy:
  - listen to the science;
  - improve public health and protect our environment;
  - ensure access to clean air and water;
  - limit exposure to dangerous chemicals and pesticides;
  - hold polluters accountable, including those who disproportionately harm communities of color and low-income communities;
  - reduce greenhouse gas emissions;
  - bolster resilience to the impacts of climate change;
  - restore and expand our national treasures and monuments; and
  - prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.

Regulatory Freeze Pending Review

Memo dated January 20, 2021 for the Heads of Executive Departments and Agencies

President's appointees or designees review and approval of new or pending rules:

1. Sent to OFR but not yet published – withdraw for review and approval
2. Published but not yet effective – consider postponing effective date for 60 days, consider opening a 30-day comment period, consider further delaying, or publishing for notice and comment, beyond 60 days
    1. For those rules that raise no substantial questions of fact, law, or policy, no further action needs to be taken.
    2. For rules that raise substantial questions of fact, law or policy, take appropriate action…

Subject to Regulatory Freeze

Regulatory Determination 4 - Signed but not yet published in the Federal Register

- Subject to regulatory freeze
- Final regulatory determinations for CCL 4
  - Regulate: PFOS and PFOA
  - Not regulate: 1,1-dichloroethane, acetochlor, methyl bromide (bromomethane), metolachlor, nitrobenzene, and RDX.
- Would lead to standards for PFOS and PFOA

Other States

CA, CO, MI, NC, NJ, VT

Vermont

Adopted Regulation 3/17/20 Σ (PFOA, PFOS, PFNA, PFHxS, PFHpA) 20 ppt

Annual source water monitoring for all C, NTNC, and Domestic Bottled systems.

- If the total is about 15 ng/l - sample quarterly.
- The reporting level is the MCL of 0.0000020 mg/l (2ppt) for any combination of these PFAS: PFOA, PFOS, PFHxS, PFHpA, and PFNA.

Reduced monitoring - if the sample results are not above the reporting limit then you can sample every three years.

Testing by EPA method 537.1 or latest.

Vermont has sampling data from mid-2019 to today.

Needs

What does the subgroup might want to consider in order to come up with recommendations for MCLs for some or all of the PFAS the Workgroup is studying?

What information do we need from other subgroups to make recommendations about MCLs?

- Concentration data (sample results)
- Do we need to consider treatment techniques?
- Do we need to consider detection limits?
- Do we need to consider health effects/toxicology?
- Do we need to consider test methods?

Research Needs and Assignments

Additional information to collect (workgroup suggestions):

- ?
- ?
- State level of funding for research, monitoring?

Where to compile

- Send copies of presentations to Nelson, he will compile for meeting minutes
- VDH is developing a shared file space for the Workgroup

Timeframe – research Jan (provide status, findings to date); complete Feb/Mar; be prepared to present findings/recommendations to PFAS Workgroup at April mtg.

Next meeting – Monday, March 15, 11:00 am

Public Comment

Other PFAS Events:

PFAS Workgroup – March 4, 2021

Occurrence and Monitoring Subgroup – March 4, 2021 (following Workgroup)

Nelson Daniel

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