

Virginia PFAS Occurrence & Monitoring Subgroup
Virginia Department of Health Office of Drinking Water
October 7, 2021, 2:15 pm
Virtual Meeting by WebEx

1. Call to Order

Bob Edelman with the Office of Drinking Water (ODW) called the meeting to order at 2:15 p.m. The meeting was by electronic communication means (WebEx) due to the ongoing coronavirus pandemic. Refer to the PowerPoint presentation along with these minutes.

2. Attendance

Attendees entered their name and affiliation into the chat box.

Subgroup Members

Jamie Hedges (Fairfax Water)

Michael McEvoy (Western Virginia Water Authority)

Carroll Courtenay (Southern Environmental Law Center, substitute for Anna Killius (James River Association))

Jessica Edwards-Brandt (Loudoun Water)

David Jurgens (City of Chesapeake)

Henry Bryndza (Backup for Steve Risotto, ACC)

Jeff Steers (VDEQ)

VDH ODW

Tony Singh

Nelson Daniel

Jack Hinshelwood

Dwight Flammia

Dwayne Roadcap

Guests

Paul Nyffeler (Chem Law)

Ellen Egen (AquaLaw)

3. Meeting Overview – Review Agenda (slide 3)

Bob Edelman reviewed the agenda. No changes to the agenda were proposed.

4. Approve minutes from the September 2, 2021 Subgroup meeting

Bob Edelman asked if there were any changes or corrections to the minutes from the September 2, 2021 meeting. Henry requested a change to the description of his comments about biodegradation cascades, described in an email he sent to Bob earlier this week. No other changes were proposed and the Subgroup approved the minutes, subject to this correction.

5. Show and Tell – GIS maps of sample locations (see slides 5 and 6)

The group reviewed the static map in slide 5 and provided the following comments:

- A scale for the bubble sizes would be helpful.
- Check that sample data is connected to the correct geographic location.

- Large bubbles should move off to the side of the map and connect to the sample location with a line/arrow.
- One ODW staff member, who is colorblind, commented that some colors look about the same.
- This map will end up in the hands of the general public. There is a lot to explain, and this is not the best, but don't have a specific suggestion on how to improve.
- Bob offered to accept additional suggestions on the map, via email.
- Make it clear that the map represents the results of the current PFAS sampling study.
- Add context, units of measure, definition of PQL. This map could be taken out of the context of the report.
- If a Public Information Officer (PIO) had the map, could they explain it?

The group observed a demonstration of an interactive GIS map and provided the following comments (slide 6):

- Add units of measure to the sample results.
- Results associated with sample locations at Carvins Cove and Spring Hollow are switched.
- Define/explain "PQL."
- Loudoun Water entry point 1 from Fairfax Water is in the wrong place.
- Use "PFAS Detected" instead of "PFAS Above PQL."
- Use "PFAS Not Detected" instead of "PFAS Below PQL" because this suggests PFAS are present when, in reality, they may not be.
- Add context, including words to describe what information is on the map, units of measure, when the sample event took place, etc. (e.g., "results of PFAS sampling conducted May through July 2021," represents a single sample from each location, measurements are in parts per trillion ... possibly add this information to the blank space on the left side of the map).
- A member suggested that giving the Subgroup a chance to review the GIS map before it is released to the public would help with QA/QC.

6. Review Recommendations from Subgroup (slide 7) – The Subgroup affirmed the following:

- 1. Need more occurrence data**
- 2. Temporal data set**, meaning sampling over time, rather than a snapshot. Henry pointed out that the data needs to have a purpose. Bob pointed out that during UCMR3, waterworks using surface water sources collected 4 PFAS samples (quarterly) and waterworks using groundwater sources collected 2 PFAS samples, which is an example of a temporal data set.
- 3. Resample current locations**, meaning resampling at locations sampled by the current study, which addresses items 1 and 2 above.
- 4. Sample additional locations**, which addresses item 1, above.
- 5. Sample waterworks using groundwater sources**, which are underrepresented by this current study.
- 6. Focus on Community and Nontransient Noncommunity waterworks**
- 7. Consider waterworks at a higher risk of PFAS contamination** – added by subgroup members
- 8. Focus on finished water** – Subgroup members clarified that ODW and waterworks should focus on the finished water quality. Most, but not all, waterworks will have no ability to remove PFAS (one waterworks that uses reverse osmosis treatment has some ability to remove PFAS). One stakeholder asked about the benefit for measuring the transformation caused by treatment. Several members indicated that occurrence study was not designed to measure

treatment effectiveness and pointed out that PFAS is not destroyed or transformed during water treatment but instead, moved to another media.

9. Continue EPA Method 533, same detection limits – the Subgroup discussed that EPA is proposing 29 PFAS under the fifth Unregulated Contaminant Monitoring Rule (UCMR5), which is the sum of the analytes from EPA methods 533 and 537.1. Bob indicated that he recently spoke with a laboratory that offers to analyze for all 29 PFAS proposed for monitoring in UCMR5 using the Department of Defense Isotope Dilution Method (which is different than EPA methods 533 and 537.1), and would be less expensive than running two methods. Bob raised the prospect of not knowing about the 4 analytes that are not covered by method 533. One member suggested this is a budget issue if it costs twice as much, and to continue with Method 533.

10. Continue sampling by waterworks staff – Subgroup members were comfortable with waterworks staff conducting sampling in a future sampling program (in the same manner as the current sample study). A member questioned if sampling by smaller waterworks with fewer staff would be practical.

7. Budget Information and Program Information (see slides 8 through 10)

Bob presented a total PFAS sampling budget of \$150,000 is available for sampling/laboratory analysis in state fiscal year 2022. The cost of sample analysis and the requirement for field reagent blank (FRB) samples sets the number of samples that the budget covers. The most optimistic case is the budget will cover 857 samples. (See slides 8 and 9 for more details). This falls short of at least one sample for each community waterworks with groundwater sources (715 systems) plus community waterworks with surface water and GUDI sources (173 systems). Therefore, we need to prioritize the samples.

8. Next phase of sampling (slide 11)

Goal: Sample Study Design by Thanksgiving

Need: Input on priorities – not enough budget to cover all waterworks (or all community waterworks)

ODW should prioritize as follows:

1. Focus on community waterworks first, then representative nontransient noncommunity (NTNC) waterworks or perhaps prioritize where there is opportunity to protect public health at certain NTNCs
2. Level of risk of PFAS contamination
3. Surface Water/GUDI - may represent a higher risk
4. Hybrid approach – potential risk, location or other factors
5. Entry point sampling
6. Exclude consecutive waterworks because the wholesale waterworks is being sampled
7. Consider resampling at waterworks/sample locations with PFAS > PQL in the current sample study (May-July 2021)

9. Public Comments – There were no public comments.

10. Action Items

The next PFAS Workgroup Meeting is October 8, 2021 at 1:00 pm. Nelson encouraged members to attend the meeting in person, if possible.

ODW will start work on the sample study plan for the Phase 2 PFAS sampling.

Virginia PFAS Workgroup

Monitoring and Occurrence Subgroup

Robert D. Edelman, PE
Virginia Department of Health
October 7, 2021

Subgroup Members

David Jurgens (City of Chesapeake)

Jamie Hedges (Fairfax Water)

Mark Estes (Halifax County Service Authority)

Jessica Edwards (Loudoun Water)

Mike McEvoy (Western Virginia Water Authority)

Henry Bryndza (Consultant, formerly with DuPont)

Jeff Steers (VDEQ)

Dwight Flammia (State Toxicologist)

Anna Killius (James River Assoc)

Tony Singh (VDH ODW)

Jack Hinshelwood (VDH ODW)

Bob Edelman (VDH ODW) - VDH Lead*

PFAS Workgroup Meeting Overview

Meeting Overview

- Call to Order
- Attendance
- Meeting Overview – Review Agenda
- Approve minutes from the previous subgroup meeting
- Show and tell – GIS maps
- Subgroup recommendations and conclusions from current phase of PFAS monitoring
- Goals/Objectives and planning for the next phase of PFAS monitoring
- Public Comments
- Action Item Review
- Adjourn



Meeting Minutes

Need to approve meeting minutes of September 2, 2021

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 Monitoring and Occurrence Subgroup > Meetings

PFAS Sampling Results

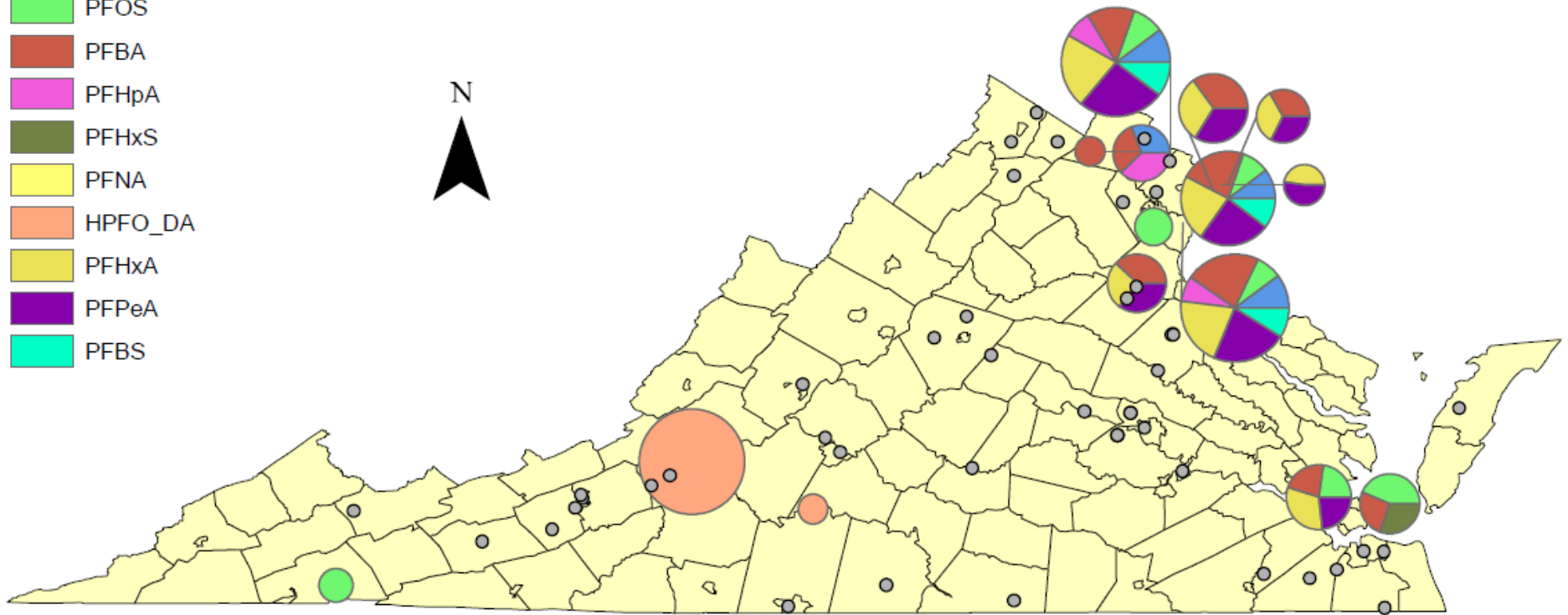
PFAS Contaminants

Results

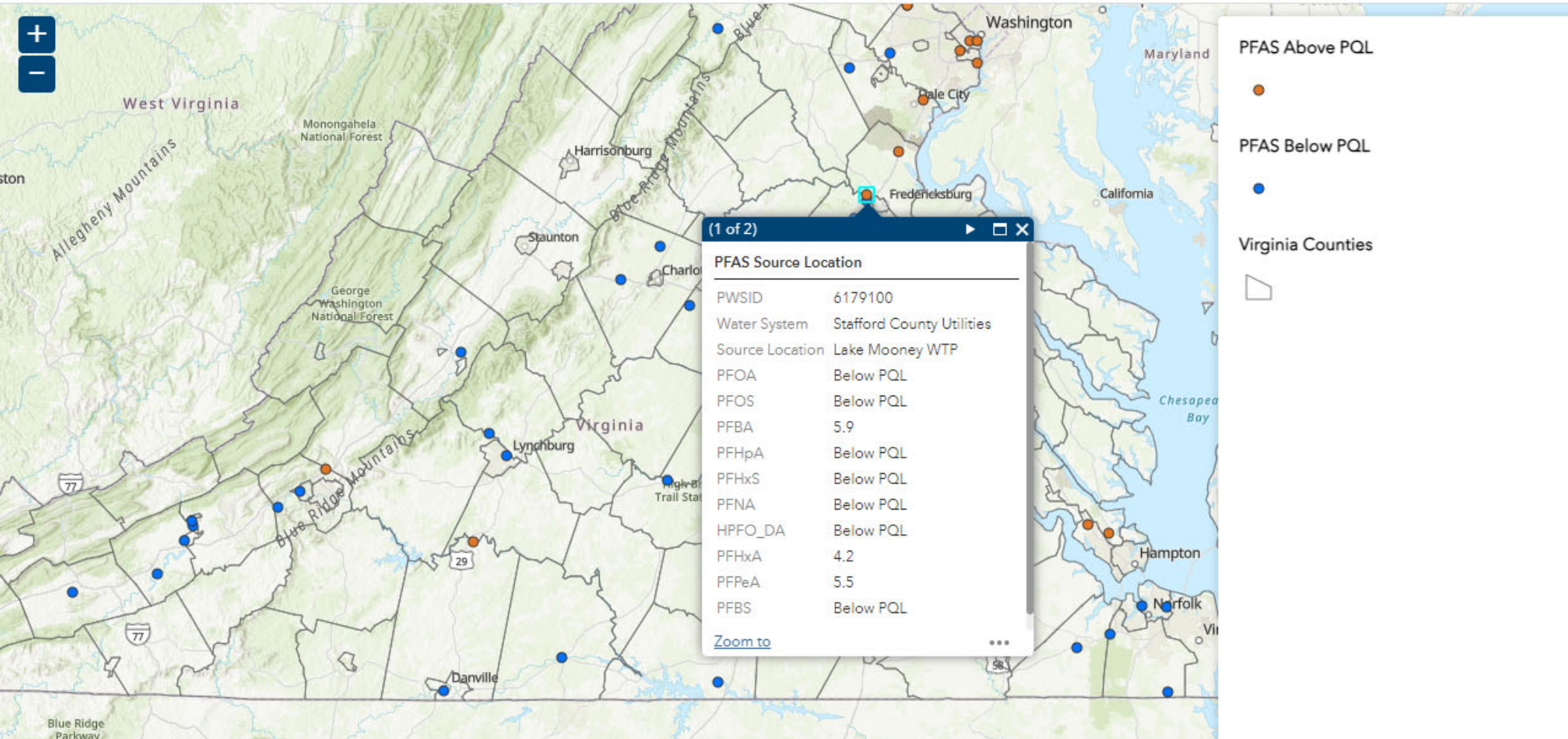


● Below PQL

- PFOA
- PFOS
- PFBA
- PFHpA
- PFHxS
- PFNA
- HPFO_DA
- PFHxA
- PFPeA
- PFBS



Demonstrate Interactive Map



Recommendations from Subgroup

1. Need more occurrence data
2. Temporal data set
3. Resample current locations
4. Sample additional locations
5. Sample well systems
6. Focus on Community and Nontransient Noncommunity systems
7. Consider both source water and finished water
8. Continue EPA Method 533, same detection limits
9. Continue sampling by waterworks staff

Budget Information

Available for FY 2022 (PE June 30, 2022):

\$60,000 - General Funds (Earmarked for PFAS study)

\$90,000 - EPA Emerging Contaminants Grant - PFAS

\$150,000 - Total available for PFAS analysis

Selected laboratory for Phase 1:

- \$585 = EPA Method 533 analysis of water sample + Field Reagent Blank
- \$715 = DOD PFAS nonpotable water sample + Field Reagent Blank

Another laboratory quoted (but was not certified at the time):

- \$350 = EPA Method 533 analysis of water sample + Field Reagent Blank
- \$350 = DOD PFAS nonpotable water sample + Field Reagent Blank

- 256 - 428 entry point samples @ \$585 - \$350
- 115 - 428 pairs of raw water + treated water samples at surface water plants

Budget Information

Available for FY 2022 (PE June 30, 2022):

\$60,000 - General Funds (Earmarked for PFAS study)

\$90,000 - EPA Emerging Contaminants Grant - PFAS

\$150,000 - Total available for PFAS analysis

Other Options:

- \$175 = EPA Method 533 analysis of water sample (potable water)
- \$300 = DOD Isotope Dilution Method (29 analytes) nonpotable water sample covers UCMR5 PFAS analytes

- 857 entry point samples @ \$175 each - **most optimistic case**
- 500 entry point samples @ \$300 each
- 250 pairs of raw water + treated water samples at surface water plants @ \$300 ea

Program Information

August 2021 data (varies) for PWSS Report:

1,097 Community Waterworks

514 Nontransient Noncommunity (NTNC) Waterworks

1,230 Transient Noncommunity (TNC) Waterworks

158 Community Waterworks with Surface Water or GUDI sources

5 NTNC with Surface Water or GUDI sources

2 TNCs with Surface Water or GUDI sources

127 conventional filtration plants on SW or GUDI sources

46 membrane filtration plants on SW or GUDI sources

715 Community Waterworks with Groundwater sources

501 NTNC with Groundwater sources

1,225 TNCs with Groundwater sources

Next phase of sampling

Goal: Sample Study Design by Thanksgiving

Need: Input on priorities - not enough \$\$\$ to cover all systems

What should ODW prioritize?

1. Community vs. NTNC vs. TNC
2. Large vs. small (population served)
3. Surface Water/GUDI vs. Groundwater
4. Source water + Entry Point vs. Entry Point
5. All systems vs all sources = exclude consecutives
6. Sample Phase 1 systems vs. sample new systems
7. Temporal study of Surface Water vs. complete coverage of Groundwater
8. Schools and daycares?

Public Comments

Action Items Review

Are we clear about action items and due dates?

Next PFAS Workgroup Meeting: October 8, 2021, 1:00 pm

Have any Question, Comment or Suggestion, contact Us

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