

## **Virginia PFAS Workgroup Meeting Minutes (Draft)**

March 4, 2021 - 2:00 pm. to 3:00 p.m.

WebEx platform

Virginia Department of Health (VDH) Office of Drinking Water (ODW)  
109 Governor Street 6<sup>th</sup> Floor, Richmond, VA 23219

### **Workgroup Members /Alternate Attendees:**

**Chris Harbin** (City of Norfolk, Dept. of Public Utilities, waterworks > 50,000 consumers)  
**Jillian Terhune** (City of Norfolk, Dept. of Public Utilities, waterworks > 50,000 consumers)  
**Jamie Hedges** (Fairfax Water, waterworks > 50,000 consumers)  
**Mike Hotaling** (Newport News, waterworks > 50,000 consumers)  
**Mike McEvoy** (Western Virginia Water Authority, waterworks > 50,000 consumers)  
**Jessica Edwards** (Loudoun Water, waterworks > 50,000 consumers)  
**Russ Navratil** (Virginia Chapter, American Water Works Association, advocacy group)  
**Geneva Hudgins** (VA AWWA (alternate), advocacy group)  
**John Aulbach** (Aqua Virginia, waterworks < 50,000 consumers)  
**Wendy Eikenberry** (Augusta County Service Authority, waterworks < 1,000 consumers)  
**Andrea W. Wortzel** (Mission H2O, Advocacy group)  
**Steve Rissoto** (American Chemistry Council, manufacturer with chemical experience)  
**Henry Bryndza** (DuPont (retired), manufacturer with chemical experience)  
**Erin Rielly** (James River Association, environmental organization)  
**Jeff Steers** (Virginia Department of Environmental Quality)  
**Benjamin Hollard** (Alternate, Virginia Department of Environmental Quality)  
**Dwight Flammia** (VDH, State Toxicologist, Health & Toxicology Subgroup Lead)  
**Tony Singh** (VDH, Office of Drinking Water, PFAS Workgroup Lead)

### **ODW Staff Supporting the Meeting:**

**Dwayne Roadcap** (VDH Office of Drinking Water)  
**Robert Edelman** (VDH, Office of Drinking Water, Monitoring & Occurrence Subgroup Lead)  
**Nelson Daniel** (VDH Office of Drinking Water, Policy & Regulation Subgroup Lead)  
**Dan Horne** (VDH, Office of Drinking Water, Treatment Technology Subgroup Lead)  
**Christine Latino** (VDH Office of Drinking Water)

### **Guest**

**Anna Jeng** (Old Dominion University)

### **1. Call to Order**

VDH Office of Drinking Water (ODW) Deputy Director, Tony Singh, Ph.D. called the meeting to order 2:01 p.m. The meeting was conducted in a public format and recorded minutes will be posted on the Town Hall website (<https://townhall.virginia.gov>). ODW held the meeting via electronic communication means due to the public health emergency associated with the coronavirus pandemic. The meeting was recorded.

## **2. Meeting minutes from January 19, 2021**

Workgroup members did not have any comments or corrections to the minutes from January 19, 2021 meeting. ODW will post the minutes as final on Town Hall.

## **3. PFAS Literature Review Work – Introduction**

Dr. Singh introduced Dr. Anna Jeng, Professor of Environmental Health at Old Dominion University, School of Community and Environmental Health in Norfolk, Virginia. Dr. Jeng has more than 20 years' experience in public health assessment, epidemiology and toxicology related to health effects of organic compounds and metals in air and water. She has published more than 60 peer-reviewed articles and directed 18+ research projects. Currently, she serves as a member of the Virginia State Board of Health, a grant reviewer for the National Institutes of Health, a co-chair of the Hampton Roads Wastewater Surveillance for COVID Workgroup, a member of the Virginia Public Health Advisory Council, and numerous committees at ODU. Dr. Jeng will work on the PFAS literature review work.

## **4. Updates**

Dr. Singh updated the Workgroup on several items:

- A. Minutes and presentations from PFAS Subgroup Meetings have been posted and are available for viewing on Town Hall.
- B. The budget that the General Assembly passed includes \$60,000 in additional funding for PFAS sampling. If the Governor approves the budget, the funding for PFAS sampling will be available in July 2021.
- C. ODW has received three quotes from laboratories for the proposed PFAS sampling. More details on these quotes will follow in the Monitoring and Occurrence Subgroup meeting.
- D. To be consistent with the Environmental Protection Agency's (EPA) sampling requirements for Method 533, field reagent blanks (FRBs) will be submitted with each PFAS sample collected as part of the sampling study.
- E. ODW will retain flexibility to make minor modifications and amendments to the PFAS Sampling Plan as the agency implements it. Minor modifications could include specifying field reagent blanks for all samples, adding EPA's guidelines for responding to situations where PFAS levels (perfluorooctanoic acid (PFOA) + perfluorooctanesulfonic acid (PFOS)) exceed 70 ppt, and replacing one sampling site with another if a waterworks would decline the request to collect a sample or not be using a source or entry point that is currently identified in the plan. ODW will not make substantive changes to the plan without informing the Workgroup.

## **5. VA PFAS Sampling Study Design**

The Occurrence and Monitoring Subgroup looked at several approaches to sample waterworks and water sources for PFAS. The Subgroup recommended a hybrid approach that will sample

finished water from the 17 largest waterworks, then select water sources and waterworks that have the greatest potential for PFAS contaminants in raw water based on their proximity to locations where PFAS may have been used or disposed of, taking geographic distribution into account. The Virginia Department of Environmental Quality (DEQ) provided location data for unlined landfills, airports, publicly owned treatment works, and surface water discharge permit locations for industries (based on standard industrial classification (SIC) codes) which the Subgroup used to identify the remaining sample locations.

ODW will contact the waterworks identified in the Sampling Plan to let them know about the PFAS Workgroup, the study required by HB586 (2020), planned PFAS sample collection/analysis, and to get their concurrence to collect samples – which will be collected and submitted to the lab by the waterworks’ operators. ODW/lab will provide training on sample collection for the waterworks operators and all testing, sample collection equipment, analysis will be paid for by ODW using funds from EPA.

A number of Workgroup Members offered comments on the Sampling Plan, or asked questions during the meeting:

A Workgroup member stated that there are at least two military facilities included in the plan and asked, if the Department of Defense (DoD) has already sampled these sites, whether we need to look at them further and if the PFAS group currently has the data. If we do, can we replace these systems with other systems? Dr. Singh said that he met with DEQ and DoD officials about PFAS on military facilities and the DoD said they would share sample results if they have data that is applicable to this study.

Sampling source water also came up for discussion. Workgroup members asked if it is necessary – since none of the waterworks uses activated carbon for PFAS treatment, the PFAS content in intake and finished water should be the same. Dr. Singh indicated that, because the language of the bill [HB586], there is a need to consider source water also, noting that Virginia does not have a lot of data on PFAS in water.

Workgroup members also expressed concerns about how ODW will release and publish test results, what will happen if PFAS are found, and requirements for waterworks to undertake corrective action if PFAS is detected at some level. In response, Dr. Singh emphasized that the purpose of the Sampling Plan is to get data collection (sampling and analysis started) and acknowledged that ODW and the Workgroup need to develop guidelines for communicating results that are consistent with public records requirements under Virginia’s Freedom of Information Act (FOIA). Dr. Singh told Workgroup members that ODW has a webpage dedicated to PFAS on the VDH website (<https://www.vdh.virginia.gov/drinking-water/pfas/>) where ODW makes information available to the public. He expects this will include sample results, once they have undergone appropriate quality assurance/quality control (QA/QC) review. DEQ representatives noted that if waterworks find PFAS, DEQ may require monitoring at potential sources through its VPDES program [Virginia Pollutant Discharge Elimination System (discharge permits)].

A Workgroup member asked if corrective action would be limited to the presence of PFOA and PFOS? Dr. Singh responded that EPA guidance is currently limited to PFOA and PFOS, and without further guidance at this point, ODW would have to consider other PFAS on a case by case basis.

A Workgroup member also brought up the fact that [private] wells were not considered as part of the study. That leaves many people (served by these wells) not included in the study. Dr. Singh acknowledged this, but stated that the enabling legislation limits the scope of the study.

Dr. Singh asked Workgroup members to indicate whether or not they supported ODW going forward with the Sampling Plan, subject to the updates noted at the beginning of the presentation. Nelson Daniel polled individual Workgroup members who responded as follows (other meeting participants also voiced support for the Sampling Plan):

Chris Harbin –	support
Jamie Hedges –	support
Mike Hotaling –	support
Mike McEvoy –	support
Jessica Edwards -	approve
Russ Navrital -	support
Geneva Hudgins –	support
John Aulbach –	support
Wendy Eikenberry –	agree
Andrea Wortzel –	concerns regarding results – support sampling plan
Steve Risotto –	support
Henry Bryndza –	support not voting member
Phillip Masegaas –	support (not present at the meeting, but sent an email to Nelson Daniel prior to the meeting stating support for the plan)
Jeff Steers –	support
Dwight Flammia –	yes
Erin Reilly for Anna Killius -	yes
Ben Hollard –	support
Jack Hinshelwood –	support
Anthony Creech –	support
Bob Edelman –	supports

Following the poll of Workgroup members' support for the Sampling Plan, Dr. Singh acknowledged their concerns about how test results will be released and agreed to set up a specific conversation on best practices for data sharing. Dwayne Roadcap, ODW Director, added that VDH must comply with requirements of FOIA, but noted there is flexibility on how the agency shares the information as we get it, review it, and ensure it is valid data.

Dr. Singh presented a timeline for sampling (shown in the presentation that follows the minutes).

Workgroup members asked about specific training to collect samples. Dr. Singh responded that ODW will have discussions with labs and have some training materials, written instructions and

videos that we will share with the waterworks and confirm that they have the resources to conduct sampling.

## **6. Public Comments**

Dr. Singh invited members of the public to share any comments they had. No one commented.

## **7. Conclusion**

ODW will move ahead with the Sampling Plan, with revisions as noted in the presentation and discussed with Workgroup members during the meeting today. ODW will discuss communications with waterworks related to sample results at a future meeting.

The next regularly scheduled Workgroup meeting will be in late April. Details to follow.

The meeting concluded at 2:55 pm.

## **Virginia PFAS Workgroup Meeting**

Hosted by the Virginia Department of Health (VDH) - Office of Drinking Water  
109 Governor Street, Richmond, VA 23219

WebEx (Virtual),  
Thursday March 04, 2021  
2:00 p.m. – 3:00 p.m.

### **AGENDA**

<b>Subject</b>	<b>Time</b>
Connect to WebEx and Meeting Instructions	1:50 – 2:00 PM
Call To Order Meeting minutes from Jan 19, 2021 Meeting Overview	2:00 – 2:05 PM
VDH Updates & VA PFAS Sampling Study Design Presentation	2:05 – 2:30 PM
VA PFAS Sampling Study Design Discussion & Next Steps	2:30 – 2:55 PM
Public Comment Period	2:55 – 3:00 PM
Conclude Meeting (Next Meeting proposed Time – April 20, 2021)	3:00 PM

# Establishing Regulatory Limits for PFAS in Virginia Drinking Water

**Tony Singh**

3<sup>RD</sup> VIRGINIA PFAS WORKGROUP MEETING

Virginia Department of Health  
March 04 2021

# Meeting Agenda – 03/04/2021

1. Agenda Overview & Attendance
2. Review/Approval of Meeting Minutes – Jan 19, 2021
3. PFAS Literature Review Work - Introduction
4. **VA PFAS Sampling Study Design**





# PFAS Literature Review

Dr. Anna Jeng is a Professor of Environmental Health at Old Dominion University, College of Health Sciences, Norfolk, Virginia. She has more than 20-year experience in public health assessment, epidemiology and toxicology related to health effects of organic compounds and metals in air and water. She has published more than 60 peer-reviewed articles and directed 18+ research projects. Currently, she serves as a member of the Virginia State Board of Health, a grant reviewer for the National Institutes of Health, a co-chair of the Hampton Roads Wastewater Surveillance for COVID Workgroup, a member of the Virginia Public Health Advisory Council, and numerous committees at ODU



**Prof. Anna Jeng**  
[hjeng@odu.edu](mailto:hjeng@odu.edu)

PFAS Literature Review

May 2021

- Summarized literature review will be shared with the Workgroup

# Quick Updates

## Meetings:

- PFAS Subgroups (Jan and Feb. 2021) – Minutes at VA Townhall website

## Potential Funding:

- \$60,000 for sampling approved by the conference; If approved by Governor, it will be available in July 2021

## PFAS Analytical Work

- VDH received three quotes for the PFAS analytical work
- Field Reagent Blanks (FRB) for ALL samples

# VA PFAS Sampling/Monitoring Study

Approaches based on:

- Available funding → number of sampling sites
- Maximum public health risk reduction
- Proximity to potential PFAS contamination

Proposed strategy (depends on budget):

1. **Hybrid approach (17 large + select potential high risk waterworks + select source waters)**

PWSID	PWS name	City / County	Population	# EPs	#CCs
6059501	FAIRFAX COUNTY WATER AUTHORITY	FAIRFAX COUNTY	1074422	2	1
<b>3810900</b>	<b>VIRGINIA BEACH, CITY OF</b>	<b>VIRGINIA BEACH</b>	<b>446067</b>	<b>0</b>	<b>1</b>
3700500	NEWPORT NEWS, CITY OF	NEWPORT NEWS	407300	2	0
4041845	CHESTERFIELD CO CENTRAL WATER SYSTEM	CHESTERFIELD	320658	1	2
4087125	HENRICO COUNTY WATER SYSTEM	HENRICO	292000	1	1
6107350	LOUDOUN WATER - CENTRAL SYSTEM	LOUDOUN	286202	1	1
<b>3710100</b>	<b>NORFOLK, CITY OF</b>	<b>NORFOLK</b>	<b>234220</b>	<b>2</b>	<b>0</b>
6013010	ARLINGTON COUNTY	ARLINGTON	215000	0	1
4760100	RICHMOND, CITY OF	RICHMOND CITY	197000	1	0
3550051	CITY OF CHESAPEAKE - NORTHWEST RIVER SYS	CHESAPEAKE	166704	2	0
2770900	WESTERN VIRGINIA WATER AUTHORITY	ROANOKE CITY	155000	2	0
6153600	PWCSA - EAST	PRINCE WILLIAM	153000	0	1
6510010	ALEXANDRIA, CITY OF	ALEXANDRIA	146970	0	2
6153251	PWCSA - WEST	PRINCE WILLIAM	130001	0	2
3740600	PORTSMOUTH, CITY OF	PORTSMOUTH	120400	1	0
6179100	STAFFORD COUNTY UTILITIES	STAFFORD	112285	2	0
6177300	SPOTSYLVANIA COUNTY UTILITIES	SPOTSYLVANIA	84390	2	0
Totals				19	12
Total EP + CC = 31					



**17 Large  
Waterworks**

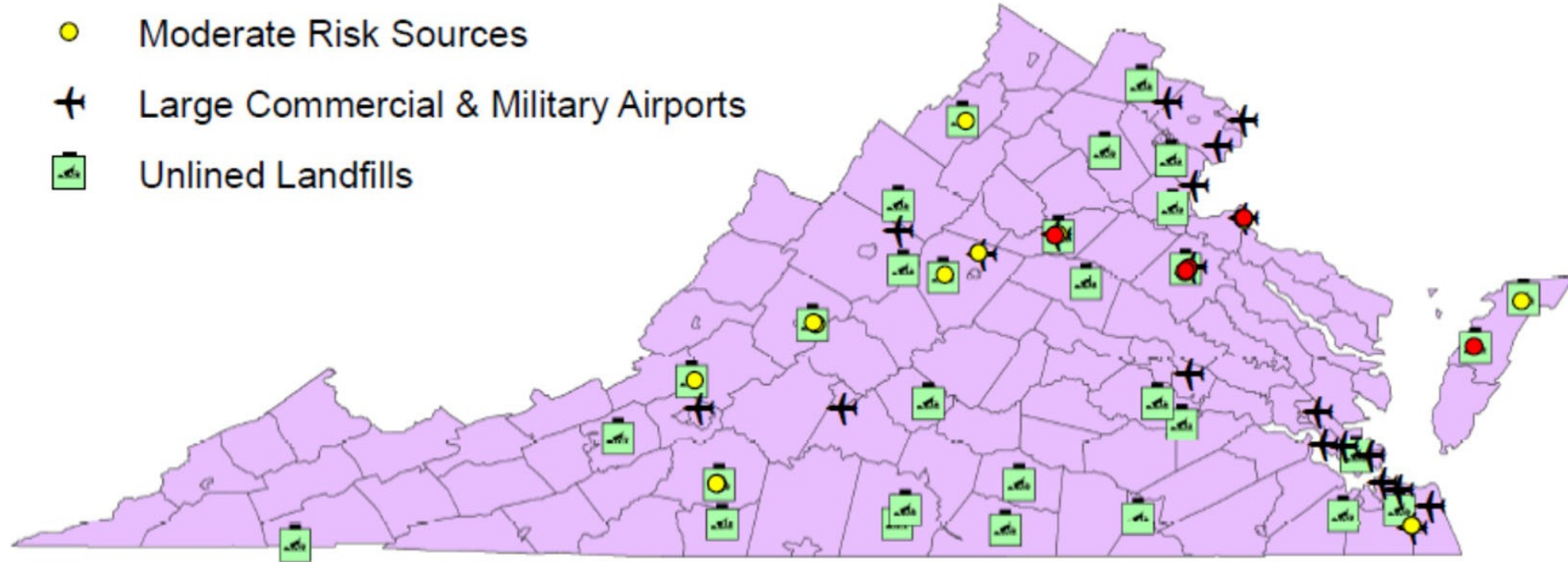
# Potential PFAS Contamination - Heat Maps

- Focus on “community and NTNC” waterworks
- Prioritize based on risk due to proximity to certain activities:
  - Landfills
  - Airports
  - Industrial sites
  - Military usage and discharge of fire fighting foams
- Known or suspected contamination
- Any previous available data



# Groundwater Systems

- High Risk Sources
- Moderate Risk Sources
- ✈ Large Commercial & Military Airports
- 🗑 Unlined Landfills

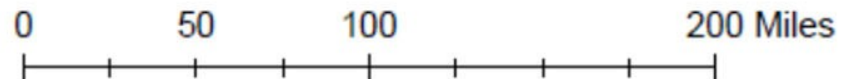


**Potential High Risk:** <½ mile of large airport or unlined landfill

**Potential Moderate Risk:** <1 mile of large airport or unlined landfill

6 - Potential High risk wells      --→ 5 Systems

13 - Potential Medium risk wells.      --→ 11 Systems







# Groundwater Systems

System Name	PWSID	Facility Name	ID	System Type	Population Served
NAVAL SUPPORT FACILITY_ DAHLGREN	6099340	WELL 3 - BLDG 274A (RESERVOIR WELL)	WL003	C	11000
NAVAL SUPPORT FACILITY_ DAHLGREN	6099340	WELL 1 - BLDG 1288 (BRONSON WELL)	WL001	C	11000
BOWLING GREEN_ TOWN OF	6033550	WELL 4	WL004	C	1152
PUNGOTEAGUE ELEMENTARY SCHOOL	3001790	WELL	WL001	NTNC	610
RSAROUTE 20	6137120	WELL #2 (MAY LANE)	WL002	C	6 387
FT A P HILL - HEADQUARTERS	6033251	WELL HQ #2 (PWAT 28)	WL028	C	180
NAVAL SUPPORT FACILITY_ DAHLGREN	6099340	WELL 2 - BLDG 1190 (CASKEY WELL)	WL002	C	11000
BOWLING GREEN_ TOWN OF	6033550	WELL 5	WL005	C	1152
BOWLING GREEN_ TOWN OF	6033550	WELL 1A	WL01A	C	1152
LONG HOLLOW	2163400	LHWDC WELL 1	WL001	C	578
LONG HOLLOW	2163400	LHWDC WELL 2	WL002	C	578
EARLYSVILLE FOREST	2003255	WELL 6	WL006	C	488
EARLYSVILLE FOREST	2003255	WELL 5	WL005	C	488
PEACOCK HILL SUBDIVISION	2003650	WELL 8	WL008	C	475
RSAROUTE 20	6137120	WELL #1 (PORTER RD)	WL001	C	387
MOUNTAIN VIEW ELEM SCHOOL	2163560	MTN VIEW WELL	WL001	NTNC	250
ROANOKE CEMENT COMPANY	2023180	WELL - ROANOKE CEMENT COMPANY	WL001	NTNC	190
FT A P HILL - HEADQUARTERS	6033251	WELL HQ #1 (PWAT 29)	WL029	C	180
FRANKLIN COUNTY COMMERCE CENTER	5067137	WELL NO. 5	WL005	NTNC	103

# Major Water Sources

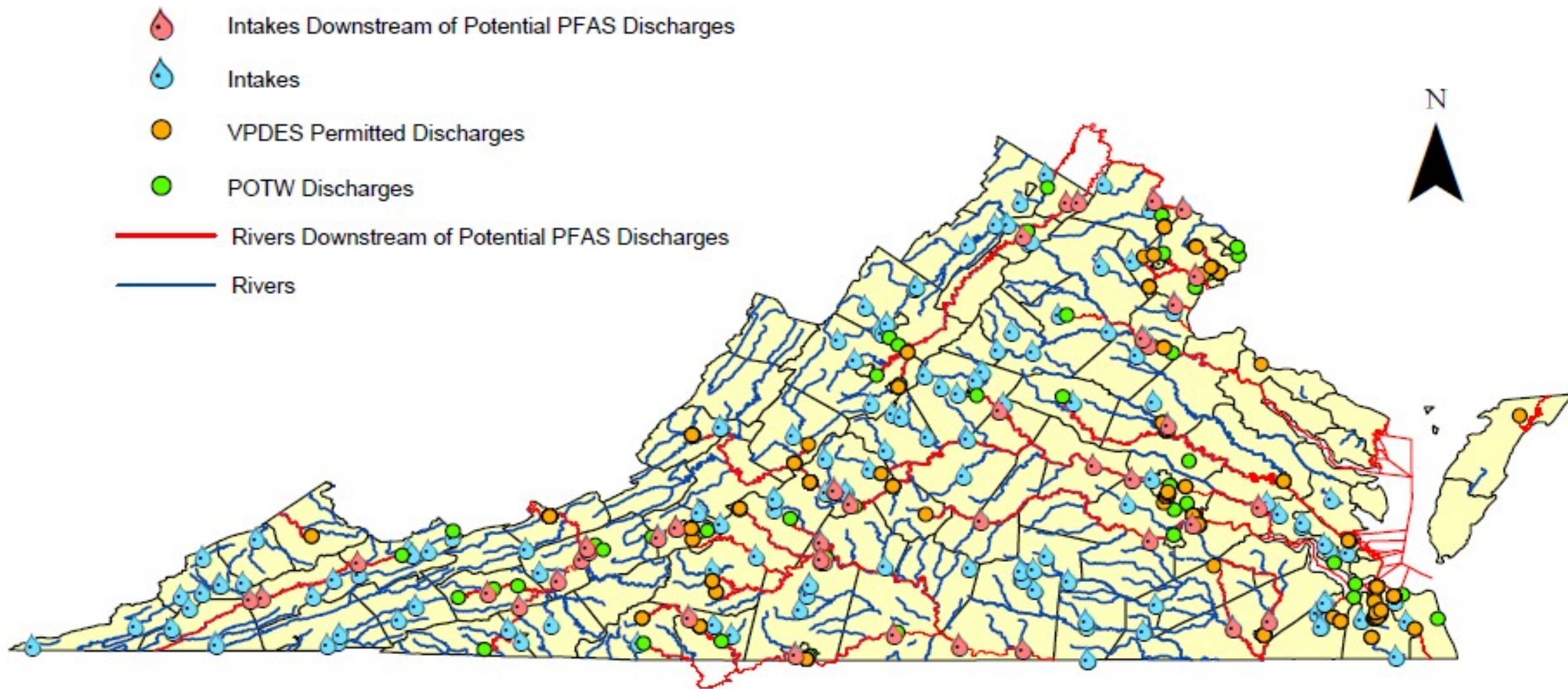
VDH-DEQ lists of potential sources of PFAS:

- VPDES discharge permits (Potential **direct dischargers**)
- POTWs with **Significant Industrial Users**
- Based on **Standard Industrial Classification** (SIC) Codes for
  - Significant Industrial Users
  - Direct Dischargers
  - Potential use and/or discharge PFAS

Approach: Use these to identify major water sources potentially impacted by PFAS



# Major Water Sources



# Major Water Sources - Approach

- Traced potentially impacted drinking water intakes (**45 intakes**)
- Excluded intakes from 17 large systems - covered by entry point sampling
- Sorted the remaining list (largest to smallest population served)
- Select one intake for each PWS
  - Yielded 29 intakes; Proposal is to select 22 from this list
    - Preference based on vulnerable age groups; population served etc
  - DEQ and ODW input may adjust priority from this list

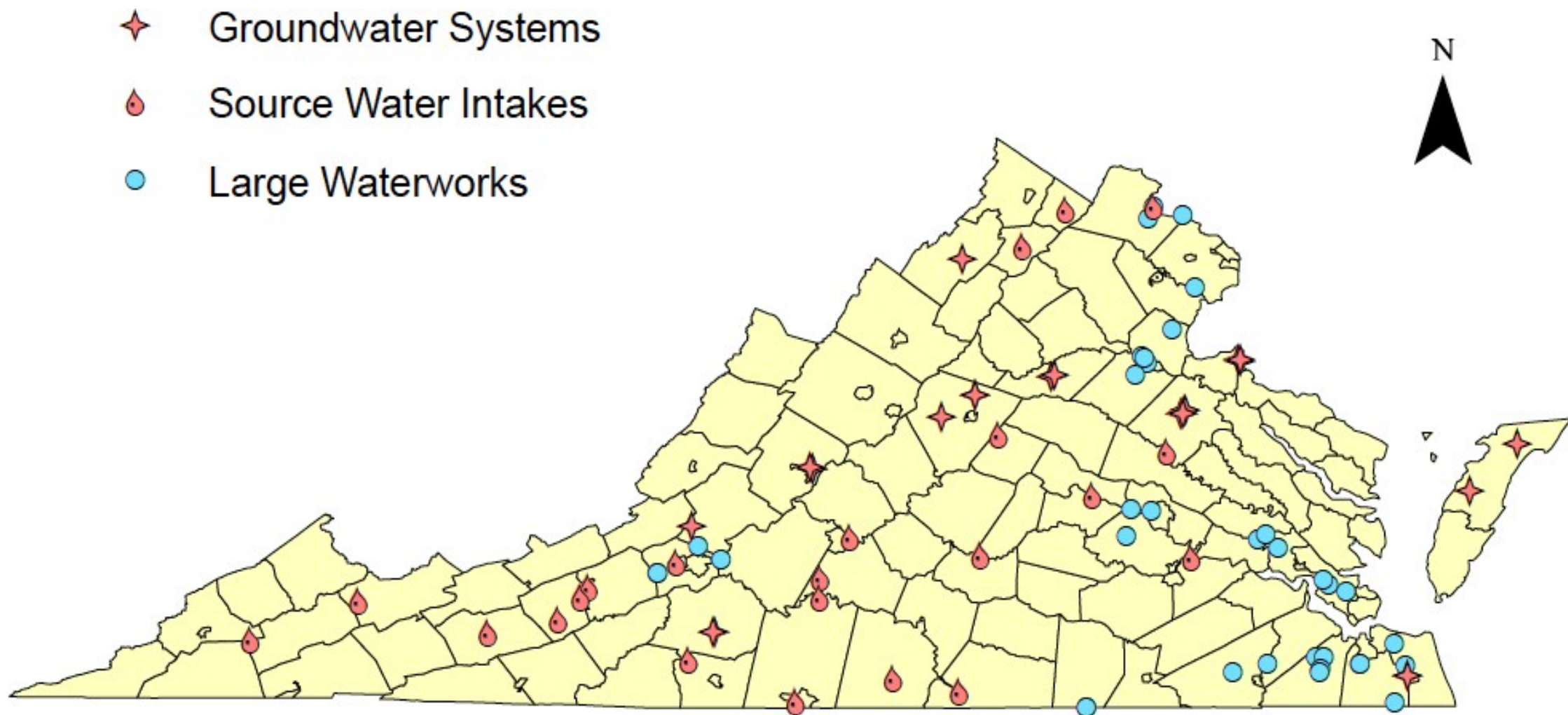
PWSID	System	Facility
5680200	LYNCHBURG, CITY OF	JAMES RIVER-ABERT
4085398	HANOVER SUBURBAN WATER SYSTEM	NORTH ANNA RWI
6107300	LEESBURG_ TOWN OF	POTOMAC INTAKE
5590100	DANVILLE, CITY OF	DAN RIVER INTAKE
5089852	UPPER SMITH RIVER WATER SUPPLY	SMITH RIVER INTAKE
3670800	VIRGINIA-AMERICAN WATER CO.	APPOMATTOX RIVER
2775300	CITY OF SALEM WTP	ROANOKE RIVER
5031150	CAMPBELL COUNTY CENTRAL SYSTEM	BIG OTTER RIVER
<b>6153675</b>	QUANTICO MARINE BASE-MAINSIDE	BRECKINRIDGE RESERVOIR
1750100	RADFORD_ CITY OF	INTAKE ON NEW RIVER
2187406	FRONT ROYAL_ TOWN OF	SOUTH FORK SHENANDOAH RIVER
2065480	LAKE MONTICELLO	RIVANNA RIVER
1195900	WISE COUNTY REGIONAL WATER SYSTEM	CLINCH RIVER INTAKE
1155641	PULASKI COUNTY PSA	CLAYTOR LAKE
5780600	HCSA- LEIGH STREET PLANT	RAW WATER INTAKE
5147170	FARMVILLE_ TOWN OF	APPOMATTOX RIVER
1197810	WYTHEVILLE_ TOWN OF	REED CREEK
4075735	JAMES RIVER CORRECTIONAL CTR	JAMES RIVER INTAKE
1185695	RICHLANDS_ TOWN OF	IN001 - CLINCH RIVER INTAKE
2043125	BERRYVILLE_ TOWN OF	SHENANDOAH RIVER
5031050	ALTAVISTA, TOWN OF	STAUNTON RIVER
1121643	RADFORD ARMY AMMUNITION PLANT	NEW RIVER
5117310	CLARKSVILLE_ TOWN OF	KERR RESERVOIR INTAKE
1195700	ST PAUL_ TOWN OF	CLINCH RIVER
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE
2043634	MOUNT WEATHER EMERGENCY OPERATIONS CENTE	SHENANDOAH RIVER
1121057	NRV REGIONAL WATER AUTHORITY	NEW RIVER (RAW WATER) PUMP STATION
1197435	NEW RIVER REGIONAL WATER AUTHORITY	INTAKE - NEW RIVER
4041035	APPOMATTOX RIVER WATER AUTHORITY	LAKE CHESDIN RAW WATER INTAKE



# Major Water Sources



# Proposed Sampling Site Locations



# Hybrid Approach Summary



	# Samples	# Systems	Population
17 Large Waterworks	31	17	4,541,619
GW - Potential High Risk	6		13,329
GW - Potential Medium Risk	13	11	2,124
Major Water Sources	22	22	
Total	72	50	4,557,072

# Comments & Suggestions

## Comments

- Add a Plan/Guidance on sites that need corrective action if sample show PFAS results (PFOA+PFOS > 70ppt)
- Field Reagent Blanks (FRB) for ALL samples (method 533)
- Flexibility for VDH-ODW sampling

## Recommendations

- Vote on VA PFAS Sampling Study Design

# Virginia PFAS Sampling Timeline

1. Workgroup Comments & Suggestions (on new items) - March 10, 2021
2. Review quotes and finalize an analytical Laboratory. - March 10, 2021
3. Revise QAPP and resubmit to UUS EPA - March 15, 2021
4. Inform LHD. ODW Field offices about PFAS sampling - March 15, 2021
5. Communicate with waterworks /Fo - March 17, 2021
6. VA PFAS Sampling – First Phase - March 25, 2021

# Have any Question, Comment or Suggestion, contact Us

**Tony S. Singh**

[Tony.Singh@vdh.Virginia.gov](mailto:Tony.Singh@vdh.Virginia.gov)

804-864 7517 / 804-310 3927

**Dwayne Roadcap**

[Dwayne.Roadcap@vdh.virginia.gov](mailto:Dwayne.Roadcap@vdh.virginia.gov)

804-864 7522



# **Virginia PFAS Workgroup Meeting Minutes (Final, Approved 3/4/21)**

January 19, 2021 - 1:00 pm. to 3:30 p.m.

WebEx platform

Virginia Department of Health (VDH) - Office of Drinking Water 109 Governor Street 6<sup>th</sup>  
Floor, Richmond, VA 23219

## **Workgroup Members /Alternate Participants:**

**Jillian Terhune** (City of Norfolk, Dept. of Public Utilities, waterworks > 50,000 consumers)

**David Jurgen** (City of Chesapeake, waterworks > 50,000 consumers)

**Jamie Hedges** (Fairfax Water, waterworks > 50,000 consumers)

**Mike Hotaling** (Newport News, waterworks > 50,000 consumers)

**Mike McEvoy** (Western Virginia Water Authority, waterworks > 50,000 consumers)

**Jessica Edwards** (Loudoun Water, waterworks > 50,000 consumers)

**Geneva Hudgins** (VA AWWA (alternate), advocacy group)

**Russ Navratil** (VA AWWA, advocacy group)

**John Aulbach** (Aqua Virginia, waterworks < 50,000 consumers)

**Wendy Eikenberry** (Augusta County Service Authority, waterworks < 1,000 consumers)

**Paul Nyffeler** (Aqua law, (Virginia Water Environment Association, advocacy group))

**Steve Herzog** (Hanover County, (Virginia Water Environment Association, advocacy group))

**Steve Rissoto** (American Chemistry Council, manufacturer with chemical experience)

**Henry Bryndza** (DuPont (retired), manufacturer with chemical experience)

**Anna Killius** (James River Association, environmental organization)

**Erin Rielly** (James River Association, environmental organization)

**Philip Musegaas** (Potomac Riverkeeper Network, environmental organization)

**Jeff Steers** (Virginia Department of Environmental Quality)

**William Mann** (Consumer for Public Drinking Water)

**Robert Edelman** (VDH, Office of Drinking Water, Monitoring & Occurrence Subgroup Lead)

**Dwight Flammia** (VDH, State Toxicologist, Health & Toxicology Subgroup Lead)

**Nelson Daniel** (VDH Office of Drinking Water, Policy & Regulation Subgroup Lead)

**Dan Horne** (VDH, Office of Drinking Water, Treatment Technology Subgroup Lead)

**Tony Singh** (VDH, Office of Drinking Water, PFAS Workgroup Lead)

## **ODW Staff Supporting the Meeting:**

**Dwayne Roadcap** (VDH Office of Drinking Water)

**Christine Latino** (VDH Office of Drinking Water)

## **Speaker:**

**Dr. Ian Smith** (Michigan's Emerging Contaminants Unit Manager)

## **1. Call to Order**

VDH Office of Drinking Water (ODW) Deputy Director, Tony Singh, Ph.D. called the meeting to order 1:08 p.m. The meeting was conducted in a public format and recorded minutes will be posted on the Town Hall website (<https://townhall.virginia.gov>). Dr. Singh discussed the agenda and checked attendance of Workgroup members. ODW held the meeting via electronic

communication means due to the public health emergency associated with the coronavirus pandemic.

## **2. Meeting minutes from October 20, 2020**

Workgroup members did not have any comments or corrections to the minutes from October 20, 2020 meeting. ODW will post the minutes as final on Town Hall (<https://townhall.virginia.gov>).

## **3. Development of MCLs for PFAS in Michigan**

Dr. Singh discussed the tasks of the PFAS Workgroup and the agenda; then introduced, Dr. Ian Smith, Michigan's Department of Environment, Great Lakes and Energy (EGLE) Emerging Contaminants Unit Manager. Dr. Smith played a primary role in the administration of the Michigan PFAS Action Response Team and EGLE's statewide public drinking water PFAS survey over the past two and a half years. He contributed to the successful promulgation of EGLE's PFAS Maximum Contaminant Levels (MCLs) and continues to work on the implements of these rules.

Dr. Smith discussed a brief history of Michigan's challenges, methods, discovery and conclusions developed to establish the current PFAS MCL's for the state of Michigan. His complete PowerPoint presentation follows the meeting minutes. Dr. Smith also provided these additional links if you are interested in further information:

<https://www.michigan.gov/documents/pfasresponse/Health> and  
[https://www.michigan.gov/documents/pfasresponse/Health-Based\\_Drinking\\_Water\\_Value\\_Recommendations\\_for\\_PFAS\\_in\\_Michigan\\_Report\\_659258\\_7.pdf](https://www.michigan.gov/documents/pfasresponse/Health-Based_Drinking_Water_Value_Recommendations_for_PFAS_in_Michigan_Report_659258_7.pdf)

## **4. VDH Update & Collaborative Work**

- a. Subgroups:** PFAS Workgroup members formed four subgroups following the October meeting. Most of the subgroups met in December and January. During subgroup meetings, several members raised concerns about the expectations for each subgroup and the potential for overlapping efforts. Dr. Singh reviewed the overall expectations for each of the subgroups:

*Subgroup 1: Health and Technology:*

- Review other states information and make recommendations on the What's & Why's
- These recommendations should accompany with:
  - o Rational (Scientific/Toxicology/Tech)
  - o Why chose these PFAS chemicals or
  - o Why add or remove all chemicals for VA
- What Approach (Past & Future)
- What Value (Rational)
- A Report on the Subgroup Findings

*Subgroup 2: Occurrence and Monitoring*

- Why, Why and How
- Rational & Approach on selecting sampling sites

- Sampling Methodology
- Coordinate Sampling Effort & Report Results
- A report on the Subgroup Findings.

*Subgroup 3: Policy and Regulation*

- What methodology did other States follow to regulate such PFAS chemical in their drinking water (How)?
- Based on what info/resources we have in VA; What framework would be best suited?
- What will the path be moving forward?
- A report on the Subgroup Findings.

*Subgroup 4: Treatment Technologies*

- Review & Recommend Best Available Treatment Technologies for PFAS removal.
- Technical & Economical Feasibility Analysis on the BATT for PFAS removal.
- Relevance & Limitations of Treatment Technologies in Virginia Proximity to potential PFAS contamination.
- A report on the Subgroup Findings.

- b. DEQ Update:** During the October PFAS Workgroup meeting, Jeff Steers (DEQ) indicated that DEQ staff would query the agency's databases to identify locations (VPDES discharge points) that are permitted for certain types of industries (based on SIC codes) that are possible users of PFAS compounds, with the idea that the receiving stream may have PFAS present below the discharge point. DEQ staff also identified POTW's that receive wastewater from industries that are possible users of PFAS (again, based on SIC codes) and un-lined landfills (those that DEQ permitted before landfills had to meet RCRA subtitle D requirements). DEQ shared the data with ODW to help identify areas with higher potential PFAS contamination. Mr. Steers noted that, at this time, DEQ does not require PFAS sampling under the VPDES program or groundwater monitoring associated with corrective action plans at most of the unlined landfills.

Workgroup members asked about including CERCLA/superfund sites in the list and which SIC codes DEQ used in compiling the tables.

- c. 2021 General Assembly Session – Budget Amendment:** Representative Guzman submitted a budget amendment to continue PFAS work in Virginia (\$60,000 for FY 2021, \$60,000 for FY 2022). See: <https://budget.lis.virginia.gov/amendment/2021/1/HB1800/Introduced/MR/307/2h/>
- d. Sharepoint:** Dr. Singh announced that the PFAS Workgroup will be able to access and share data through Sharepoint. Workgroup members should have received an email with information about access to the Sharepoint site shortly before the meeting. If Workgroup members would like to add any documents, please send them to Tony Singh ([Tony.Singh@vdh.virginia.gov](mailto:Tony.Singh@vdh.virginia.gov)), Nelson Daniel ([Nelson.Daniel@vdh.virginia.gov](mailto:Nelson.Daniel@vdh.virginia.gov)) or Christine Latino: ([Christine.Latino@vdh.virginia.gov](mailto:Christine.Latino@vdh.virginia.gov)).

## 5. Subgroup Reports

Three of the four subgroups met in December and January to work on the information outlined above. Each group discussed their findings. Their presentations follow the meeting minutes.

- a. **Health & Toxicology Subgroup:** The Lead of the Toxicology subgroup, Dwight Flammia, discussed the steps EPA follows to develop an MCL. His subgroup was tasked with investigating other states and the processes they took to develop their MCLs. The subgroup decided that Method 537.1 would be best because it incorporated the entire list of chemicals requested by the General Assembly.

The group is evaluating the material distributed after the December meeting and determining what to provide to the Occurrence and Monitoring workgroup. The group will start by researching each chemical individually per month based on amount of data available and report their findings, starting with PFOA then PFOS, PFNA, PFHxS, PFBA and finishing with PFHpA.

- b. **Occurrence & Monitoring Subgroup:** The Lead of the Occurrence subgroup, Bob Edelman, discussed the approaches necessary to look for PFAS in drinking water throughout the Commonwealth. The group researched other states and compared the differences and similarities between each. Some of the topics they investigated were: EPA method, water sampled, who would sample, location, number of samples, summary, and financial.

Based on the limitation of 50 sampling sites within Virginia, the subgroup is considering a hybrid approach that would sample 17 of the largest waterworks, groundwater systems based on risk potential for PFAS contamination using DEQ's risk information, and major water supplies.

The subgroup is still working out the exact sampling techniques, location at the major water sources, where to sample, potential locations based on risk and other details. Bob welcomes any suggestions. His email address is [Robert.Edelman@vdh.virginia.gov](mailto:Robert.Edelman@vdh.virginia.gov).

- c. **Policy & Regulations Subgroup:** The Lead of the Policy subgroup, Nelson Daniel, discussed the initial regulatory determination from the EPA and the specific information from each state.

Subgroup members researched the statutory/regulatory requirements in states that have imposed limits on PFAS in drinking water. Nelson provided a summary of the findings that subgroup members presented during their January meeting. Once the Workgroup has occurrence data for PFAS in Virginia, subgroup members expect to use data from other states to make recommendations for regulating and establishing MCLs for specific PFAS in Virginia.

- d. **Treatment Technologies Subgroup:** The Lead of the Treatment Subgroup, Dan Horne, is working to schedule this subgroup's first meeting, possibly during the last week of January 2021. Without information about PFAS occurrence in Virginia, there has been less need to start considering treatment alternatives. This subgroup did not have a presentation.

## **6. Next Steps**

The PFAS Workgroup will need to make decisions regarding:

Which PFAS analytical method should be used?

Whether Field Reagent Blanks (FRB) should be tested for each sample?

PFAS Sampling and Monitoring Approach?

Finding a Subject Matter Experts for Toxicology, Risk Assessment and Epidemiologist

## **7. Public Comment:**

Dr. Singh opened the meeting for comments from members of the public in attendance. There were not any public comments.

## **8. Conclusion:**

The VA PFAS Workgroup members indicated willingness to meet next in late February or early March 2021 to discuss and finalize the PFAS sampling methodology. Because of the limited scope of the meeting, Dr. Singh expects it will last approximately 1 hour. Dr. Singh will send out an invitation soon.

Dr. Singh adjourned the meeting at 3:02 p.m.

If there are any suggestions, questions or concerns, please feel free to email Tony Singh, ([Tony.Singh@vdh.virginia.gov](mailto:Tony.Singh@vdh.virginia.gov)), Nelson Daniel ([Nelson.Daniel@vdh.virginia.gov](mailto:Nelson.Daniel@vdh.virginia.gov)) or Christine Latino ([Christine.Latino@vdh.virginia.gov](mailto:Christine.Latino@vdh.virginia.gov))