Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
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David L. Bulova
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

PFAS Expert Advisory Committee (PEAC) Meeting Minutes from August 21, 2026, Meeting

The Virginia Department of Environmental Quality (DEQ), in consultation with the Virginia Department of Health (VDH), held the sixth PFAS Expert Advisory Committee (PEAC) meeting beginning at 10:00 AM on August 21, 2026 in an all-virtual meeting. The PEAC was created by Chapters 316 and 343 of the 2024 Acts of Assembly. The committee's purpose is to assist the VDH and DEQ in identifying PFAS sources through PFAS assessments and associated monitoring and reporting, public and private lab testing capacity issues, and options for reducing PFAS in source waters causing exceedances of PFAS maximum contaminant limits (MCLs) established by the U.S. Environmental Protection Agency (EPA) for drinking water. The committee's meeting was advertised on the Virginia Regulatory Town Hall website and open to the public. Jaime Robb opened the meeting at 10:08 AM.

PEAC members and alternates in attendance:

John J. Aulbach	Joe DiNardo	Michael McEvoy	Ben Shoemaker
Steve Barten	Tom Dunlap	Jamie Mitchell	Brian Stieglitz
Bryan Berger	Robert Edelman	Alex Mitchum	John Uzupis
Stacey Bradshaw	Mike Gerel	Nicholas Moody	JP Verheul
Vijay Chaganti	Jay Hundley	Wayne Pendleton	Barbara Walsh
Jen Cobb	Dr. Leigh-Anne Krometis	Chris Peot	
Allison Deines	Michael Lightfoot	Ashley Pierce	
Scott Dewhirst	Dr. Andrew Maizel	Erik Rosenfeldt	

PEAC Members Absent:

Lynn Gayle	Mark Romers
Dr. Samuel Miller	Rock Vitale

Interested Members of the Public:
60 members of the public attended the all-virtual meeting.

Welcome and Overview
DEQ facilitated the PEAC meeting with Jaime Robb, Water Operations Division Director at DEQ, opening the meeting by greeting members of the committee and the public and asking the new committee members to introduce themselves and their organizations. Ms. Robb's opening included a review of Virginia Freedom of Information Act (FOIA) requirements for public meetings, an overview of the purpose of the PEAC, updates on committee membership and requirements of

committee members to be in compliance with the Electronic Meeting Policy accepted at the June 1, 2026 meeting.

VDH Office of Drinking Water Updates

Robert Edelman, Director, Division of Technical Services for the VDH Office of Drinking Water (ODW), provided updates on PFAS regulations, legal challenges, monitoring requirements, compliance deadlines, and resources for water systems. He discussed the current legal challenges to federal PFAS regulations such as AWWA/AMWA (American Water Works Association / Association of Metropolitan Water Agencies) which are challenging EPA's PFAS rule, citing issues with scientific data and legal procedures. The litigation questions EPA's use of updated PFAS occurrence data and the hazard index approach. Mr. Edelman explained that concern has grown over potential trillion-dollar infrastructure costs and liability shifting to manufacturers. Next Mr. Edelman discussed proposed changes to the federal PFAS Rule, explaining that certain PFAS maximum contaminant levels (MCLs) and related determinations may be rescinded due to legal errors. EPA is proposing to extend the compliance deadline for PFOA and PFOS from 2029 to 2031 for systems that apply for an extension. Systems that request the extension with PFOA or PFOS above 12 ppt (parts per trillion) must implement interim control measures like alternative water sources or treatment devices.

ODW intends to update the Virginia Waterworks Regulations to incorporate the federal PFAS Rule as written. This approach aims to achieve primacy quickly and clarify enforcement, despite potential multiple regulatory updates. The process involves an expedited approval timeline of about six months. ODW will update the Virginia Waterworks Regulations when EPA finalizes any changes to the federal PFAS Rule. ODW requested input from the PEAC on this approach.

Mr. Edelman explained free PFAS sampling is being conducted for systems serving 10,000 or fewer people. Data collected satisfies the initial compliance monitoring requirement in the PFAS Rule. Pace Analytical is performing the PFAS analysis for the sampling program. Results show 11% of entry point samples analyzed exceed MCLs and 17.3% of entry point samples analyzed exceed trigger levels. Mr. Edelman provided the ODW PFAS website as a resource for obtaining additional information: www.vdh.virginia.gov/drinking-water/pfas/

DEQ Updates

Dr. Robert “Max” Wheeler, PFAS Program Coordinator, reviewed legislative and regulatory requirements of Chapters 316 and 343 of the 2024 Acts of Assembly (HB1085/SB243). Dr. Wheeler described DEQ’s requirement to conduct PFAS source assessments for public water systems with PFAS exceedances, as notified by the VDH.

Dr. Wheeler reviewed the annual reporting requirements of the PFAS Expert Advisory committee along with a plan to prioritize and conduct source assessments. Dr. Wheeler provided an overview of data trends and system monitoring, noting a growth in identified systems with the number of uniquely identified systems increasing from 27 in July 2024 to 98 in July 2026. He explained that the increase is due to broad sampling due to the Unregulated Contaminates Monitoring Rule and more recently initial compliance

monitoring. In particular over that time the growth has been driven by smaller systems (serving under 5,000 customers) sampling. Dr. Wheeler then reviewed the July 2026 data transfer where data indicating 60 systems with PFAS exceedances was transferred from VDH including 31 newly identified systems.

In 2025, 46 facilities were notified to monitor their discharge for PFAS for PFAS; after review, 41 remained under monitoring requirements. Dr. Wheeler discussed facility reporting, results, and monitoring data. He noted 8 facilities were required to self-report PFAS use or manufacture; all reported no PFAS use or manufacture; 21 facilities have returned monitoring data as of August 17, 2026.

PFAS Data Management and Analysis

Gouri Mahadwar, a data scientist at DEQ, led a discussion on the data received by DEQ from the facilities sampling their discharge for PFAS including 164 online and 326 email submissions. Ms. Mahadwar provided a status update on the steps involved in data processing. As of August 2026, the initial rounds of data formatting have been completed, data QA/QC is ongoing, and data analysis / visualization will occur following that. Ms. Mahadwar showed an example of a data visualization summarizing PFAS monitoring results received from dischargers in the Occoquan watershed, with data pending QA/QC. Committee members offered feedback on the visualization to improve clarity and understanding of the data. One committee member asked which portion of data submitted in the figure related to which SIC codes. DEQ staff indicated they didn't have percentages on hand but had looked at industrial stormwater and groundwater remediation as other permit type categories. Another committee member suggested presenting the Occoquan data differently to capture flow weighting.

Introduction to Biosolids

Neil Zahradka, Manager, DEQ Office of Land Application Programs, provided an overview of the Biosolids Management and Regulation. He presented information on the permitting and regulatory framework which limits biosolid land application in Virginia under DEQ-issued permits, ensuring compliance with federal (Clean Water Act; 40 CFR Part 503) and state laws and regulations.

Mr. Zahradka explained the roles and responsibilities of both the wastewater treatment plants, who are responsible for biosolids quality and monitoring, and the land application contractors, who hold permits, contract with farmers, and manage application logistics. Mr. Zahradka explained how compliance and oversight are administered through unannounced DEQ inspections, reviewing notifications, agreements, site conditions, and compliance with over 60 specific requirements.

After the presentation, Mr. Zahradka answered questions from committee members about risk assessments of direct transfer from animal to human, setbacks and interactions with other land protections such as the Chesapeake Bay Preservation Act, the type of paperwork landowners receive, and what information farmers are given.

Break

Reader-friendly format discussion and adoption

Dr. Wheeler reviewed the legislative mandate for the PEAC to recommend a clear, accessible format for presenting compliance data for PFOS and PFOA, and other PFAS analyte concentrations to landowners by October 1, 2026. Dr. Wheeler reviewed documents with recommendations and formats for presenting PFAS compliance data to landowners, including fact sheets, dashboards, and tables.

Dr. Wheeler introduced a sample fact and data sheet for the committee to review and discuss. These documents provide factual background, Q&A, and compliance visuals and include source info, contact details, and all average concentrations for all 40 PFAS that can be measured using Method 1633. The document focuses on making PFAS compliance data transparent, accessible, and actionable for landowners. DEQ's sample fact and data sheets attempt to achieve this through clear formatting, effective data visualization, inclusion of contact information, and a commitment to continuous improvement based on stakeholder feedback.

Committee discussion included comments on the fact and data sheet for improving clarity, visual aids, and audience understanding of biosolids data sheets, emphasizing charts, simplified language, and compliance indicators. Suggestions included adding contact info, clarifying analyte details, and streamlining graphics. Some of the suggestions included preferences for bullets over paragraphs, arrows to replace the blue bar, and modifying the section in black. One committee member suggested adding CAS numbers to avoid analyte confusion. DEQ staff indicated using CAS numbers might introduce confusion because the intended audience would not be familiar with CAS numbers. A committee member liked the speedometer but requested larger numbers and labels for greater ease of reading. DEQ staff indicated next steps involve finalizing revisions, establishing comment deadlines, and possibly holding a September meeting to refine materials.

Public Forum: There were 2 comments from interested members of the public. The first public comment was a request that the fact and data sheets be streamlined while the second expressed a concern for ensuring information, specifically helpful to farmers about safe limits of PFAS, should be included.

Wrap up

The next meeting of the committee is tentatively planned for September 2026 and will focus on discussing the reader-friendly format. (Due to the pending deadline to publish the recommended reader-friendly format for presenting the compliance data for PFOS and PFOA, there will not be sufficient time for a PEAC meeting to refine materials prior to October 1, 2026.) The meeting concluded at 1:37 PM.

PFAS Expert Advisory Committee

Summer 2026 Meeting

Jaime Robb
Director of Water Operations
Virginia Department of Environmental Quality
Aug. 21, 2026

Agenda

- Welcome and overview
- VDH Office of Drinking Water updates
- DEQ updates
- Introduction to Biosolids
- Break
- Reader-friendly format discussion and adoption
- Public input (not to exceed 30 minutes, 3 minutes per speaker)
- Wrap up



If you have technical difficulties during this meeting, contact Heather Esposito at (804) 297-5329 or Heather.Esposito@deq.virginia.gov

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Committee Members

Name	Organization	Name	Organization
Michael McEvoy	Western Virginia Water Authority	JP Verheul	Enthalpy Analytical
Jen Cobb	Newport News Waterworks	Dr. Samuel Miller	US Geologic Survey
Scott Dewhirst	Fairfax Water	Chris Peot	D.C. Water
Ashley Pierce	Virginia Division of Consolidated Laboratory Services	Dr. Leigh-Anne Krometis	Virginia Polytechnic Institute & State University
Brian Stieglitz	Upper Occoquan Service Authority	Mark Romers	Industries Turn-Around Corporation
Ben Shoemaker	Fauquier County Water & Sanitation Authority	Dr. Kirin Emlet Furst	Virginia Polytechnic Institute & State University
John J. Aulbach	Aqua Virginia	Alex Mitchum	C&M Industries, Inc.
Erik Rosenfeldt	Hazen and Sawyer	Rock Vitale	Environmental Standards
Steve Barten	WM Atlantic Landfill	Lynn Gayle	Accomack County Farm Bureau
Allison Deines	AlexRenew	Joe DiNardo	Rockbridge Area Conservation Council
Jamie Mitchell	Hampton Roads Sanitation District	Bailey Davis	Virginia Department of Health
Wayne Pendleton	Virginia Department of Agriculture and Consumer Services	**Vijay Chaganti**	Virginia Polytechnic Institute & State University
Mike Gerel	Chesapeake Bay Foundation	**Bryan Berger**	University of Virginia
Tom Dunlap	James River Association	**Nicholas Moody**	Virginia Farm Bureau
John Uzupis	Synagro	**Jay Hundley**	Cloverfield Farms
Michael Lightfoot	Virginia Twin Rivers Watermen Association	**Barbara Walsh**	Rockbridge Area Conservation Council
Stacey Bradshaw	USDA Natural Resources Conservation Service		

DEQ

Purpose of the PFAS Expert Advisory Committee

- 2024 legislation – HB 1085 and SB 243 established a PFAS Expert Advisory Committee to assist DEQ and VDH in identifying:
  - PFAS sources through PFAS assessments, associated monitoring, and reporting
  - Public and private lab testing capacity issues
  - Options for reducing PFAS in surface waters causing PFAS MCL exceedances



DEQ

The PEAC or work group shall develop recommendations for…

- (i) a PFAS sampling program for industrial residuals and industrial by-products that are land applied;
- (ii) a PFAS sampling program for fields where land application of sewage sludge, industrial residuals, and industrial by-products occurs;
- (iii) a source reduction strategy for when sewage sludge is found to contain elevated levels of PFAS;
- (iv) opportunities to expand PFAS remediation and disposal options in the Commonwealth;
- (v) additional studies regarding PFAS in soils;
- (vi) any appropriate revisions to the concentration-based biosolids management tiers established by this act;
- (vii) additional studies or appropriate PFAS sampling programs for sewage sludge from routine storage facilities with a Virginia Pollution Abatement permit; and
- (viii) a PFAS sampling program for groundwater and surface water.

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FOIA

- The PFAS Expert Advisory Committee is a public body subject to the Freedom of Information of Act. As such, all business of the group must be conducted in a public forum that has been duly noticed in accordance with the Act and minutes must be prepared.
- Emails may be considered the conduct of business, so individual members of the committee should not use "reply all" when receiving emails from DEQ, and any member of the committee that wants to provide information to the PEAC should send it to the staff contact (Max Wheeler - Robert.M.Wheeler@deq.virginia.gov) for distribution.
- As a public body, committee members should not discuss matters of the group outside of the meetings. This applies to conversations of more than two members as well as emails among more than two members.

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Virtual Meeting Policy – Reminders

- Committee members cameras must be on – If your camera is off you will be assumed to be absent for purposes of quorum.
- If a committee member or member of the public is having technical difficulties during this meeting, please contact Heather Esposito at (804) 297-5329 or Heather.Esposito@deq.virginia.gov
- Members of the public will have the opportunity to comment at the end of the meeting, those who have signed up will be unmuted and are encouraged to turn on your camera. If during the meeting you decide you wish to offer comment, please add send a message through the question box and you will be added to our list.

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DEQ Updates

Max Wheeler
PFAS Program Coordinator
Virginia Department of Environmental Quality
Aug. 21, 2026

Drinking Water Source Reduction: HB1085/SB243 (2024)

DEQ is directed to conduct PFAS Source Assessments for each public water systems for which DEQ has received notification from the Virginia Department of Health that the system had a PFAS Maximum Contaminant Level exceedance in its finished water.

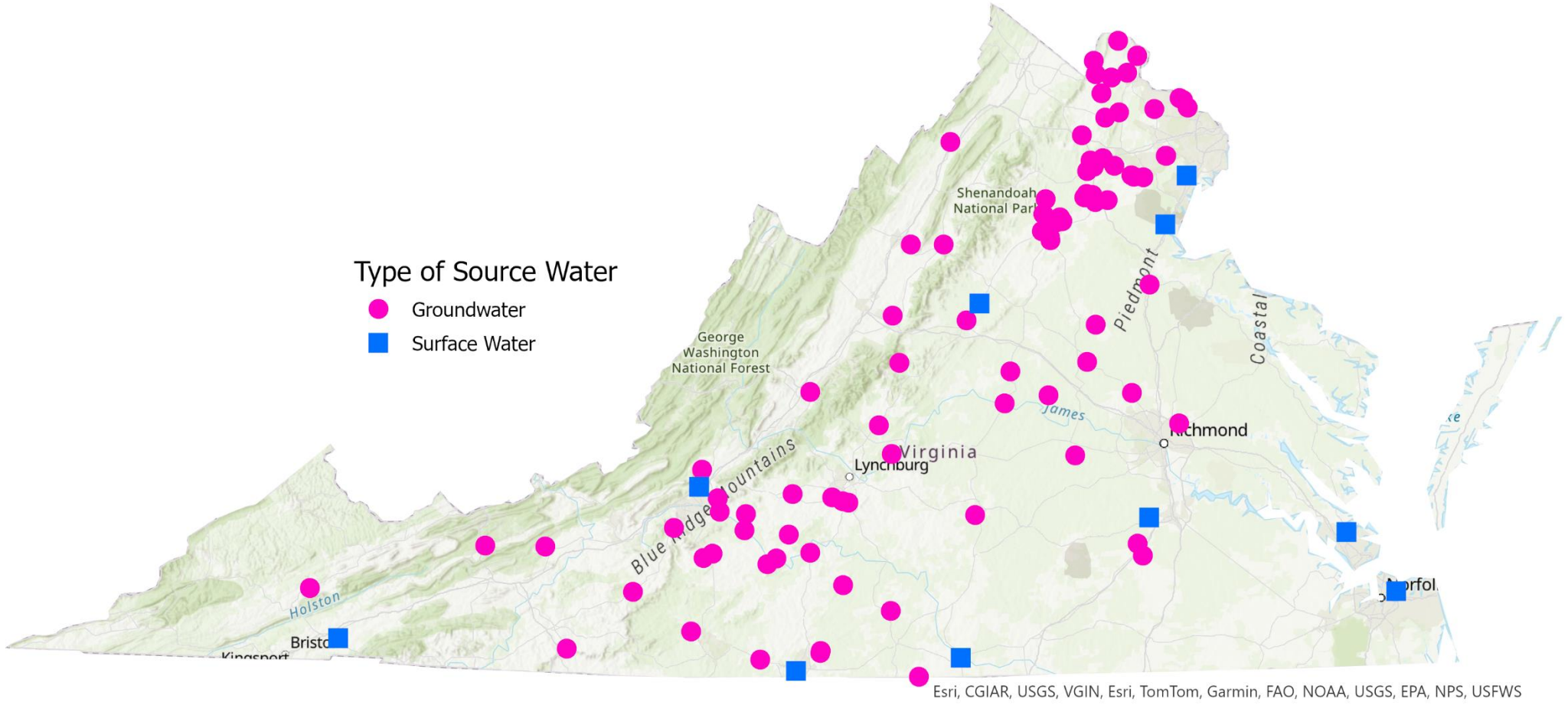
- Gives DEQ Authority to:
  - Require self-reporting of PFAS manufacture and use
  - Require representative quarterly discharge monitoring
- Directs DEQ to:
  - Form an Expert Advisory Committee
  - Write an Annual Report
  - Develop and implement a plan to prioritize and conduct PFAS source assessments
  - For public water systems for which DEQ was notified of an exceedance on or before Sep. 1, 2024, issue notice to applicable facilities to self-report or monitor for PFAS by Dec. 1

Data Transfers Summary – July 2026

Transfer Date	Total Uniquely Identified Systems	Systems with Exceedances in Transfer	Newly Identified Systems in Transfer
July 2024	27	27	27
October 2024	33	11	6
January 2025	56	27	23
April 2025	58	5	2
July 2025	59	4	1
October 2025	60	4	1
January 2026	62	5	2
April 2026	67	8	5
July 2026	98	60	31

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Drinking Water Systems with PFAS Exceedances through July 2026



July 2026 Data Transfer

System Name	City/County	Water Source	PFOA	PFOS	PFBS	PFHxS	HFPO-DA	PFNA	Service Connections	Population
ABB POWER T & D COMPANY, INC.	BLAND COUNTY	GW	2	6.7	0	4.4	0	0	2	430
BRENTSVILLE HIGH SCHOOL	PRINCE WILLIAM COUNTY	GW	2.7	4.2	1.7	1.1	0	0.7	2	1600
BYRD ELEMENTARY SCHOOL	GOOCHLAND COUNTY	GW	5.6	2.9	1.8	1	0	1.5	1	375
CLAIRMONT MANOR	CULPEPER COUNTY	GW	5.8	2	2	2	0	0	64	155
CLAIRMONT MANOR	CULPEPER COUNTY	GW	13	0.8	4.8	4.1	0	0.8	64	155
CLIFTON PRESBY. CHURCH PRESCHOOL	FAIRFAX COUNTY	GW	15	16	4.5	30	0	1.1	2	45
CORRCHOICE RIVERVILLE	AMHERST COUNTY	GW	0.66	4.4		0.51	0	0	10	324
DAN RIVER HIGH SCHOOL	PITTSYLVANIA COUNTY	GW	2.7	5.4	0.5	1.4	0	0	1	670
DAN RIVER HIGH SCHOOL	PITTSYLVANIA COUNTY	GW	4.2	4	0.59	1.6	0	0	1	670
DAN RIVER MIDDLE SCHOOL	PITTSYLVANIA COUNTY	GW	4.2	2	4.4	1.8	0	0	1	550
DAN RIVER MIDDLE SCHOOL	PITTSYLVANIA COUNTY	GW	5.3	1.2	4.6	1.5	0	0	1	550
DINWIDDIE MIDDLE SCHOOL	DINWIDDIE COUNTY	GW	14	5.8	1.1	2.5	0	1.7	2	1142
ELKTON, TOWN OF	ROCKINGHAM COUNTY	GW	1.4	9.6	1.6	7.9	0	7.9	1345	2595
FAIRVIEW ACRES	CULPEPER COUNTY	GW	4.1	1.9	3.2	0.9	0	0	139	336
FAIRVIEW ACRES	CULPEPER COUNTY	GW	4.1	1.8	3.3	0.9	0	0	139	336
FORK UNION SANITARY DISTRICT	FLUVANNA COUNTY	GW	4.5	2.6	0.9	1.4	0	0	438	2150
GLENWOOD MOBILE HOME PARK	SPOTSYLVANIA COUNTY	GW	6.9	4	7.9	2.4	0	0	77	175
GREENHOUSE CHRISTIAN LEARNING CENTER	AUGUSTA COUNTY	GW	4.66	5.03	0	0	0	0	1	50
HAMPDEN-SYDNEY COLLEGE	PRINCE EDWARD COUNTY	GW	4.3	4	2.7	3.7	0	0	129	1027
HARBOR RIDGE HOMEOWNERS ASSOCIATION, INC	BEDFORD COUNTY	GW	5	2.2	4.1	2.7	0	0	26	30
HARDY ROAD TRAILER PARK, SECTION 2	BEDFORD COUNTY	GW	7.2	5	6.2	3.9	0	0	72	200
HARRIS TRAILER COURT	HENRY COUNTY	GW	1.3	5.5	0	1.2	0	0	20	55
HERITAGE ESTATES	CULPEPER COUNTY	GW	5.62	4.56	5.69	5.19	0	0	32	80

July 2026 Data Transfer

System Name	City/County	Water Source	PFOA	PFOS	PFBS	PFHxS	HFPO-DA	PFNA	Service Connections	Population
HUBER PLANT	HALIFAX COUNTY	GW	3.1	32	9	42	0	0	1	135
HUBER PLANT	HALIFAX COUNTY	GW	3.1	34	9.5	46	0	0	1	135
HUDDLESTON ELEMENTARY SCHOOL	BEDFORD COUNTY	GW	4.4	0	0.8	2.5	0	0	2	237
JOUETT ELEMENTARY SCHOOL	LOUISA COUNTY	GW	4.8	0.5	0	0.6	0	0	1	685
KAVANAUGH MEADS	CULPEPER COUNTY	GW	8.8	7.6	8.4	4.6	0	0.8	48	120
LAKESIDE MOBILE HOME PARK	CAMPBELL COUNTY	GW	2.4	4.2	2.9	1.1	0	0	29	37
LOVETTSVILLE, TOWN OF	LOUDOUN COUNTY	GW	5.41	5.09	3.39	2.09	0	0	972	2964
LOVETTSVILLE, TOWN OF	LOUDOUN COUNTY	GW	4.1	5.9	3.6	2.1	0	0	972	2964
L`AUBERGE CHEZ FRANCOIS	FAIRFAX COUNTY	GW	4.5	1	2	1.5	0	0	1	345
MARTIN CREEK	ROANOKE COUNTY	GW	0	4.23	1.82	0	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	0	4.68	2.36	0	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	5.02	9.67	4.23	2.16	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	4.08	8.35	4.56	1.96	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	5.05	8.85	3.22		0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	6.02	9.72	4.11	2.46	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	3.74	8.71	4.42	0	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	4.35	10.9	4.69	1.73	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	8.2	10.9	12.5	3.72	0	0	156	391
MARTIN CREEK	ROANOKE COUNTY	GW	8.17	10.3	12.2	3.67	0	0	156	391
MILL QUARTER PLANTATION	POWHATAN COUNTY	GW	5.35	3.05	9.62	1.43	0	0	114	273
MOUNT AIRY ELEMENTARY SCHOOL	PITTSYLVANIA COUNTY	GW	20.2	6.2	2.5	6.6	0	0	1	250
MOUNTAIN RUN	HANOVER COUNTY	GW	11	0	4.1	0	0	0.6	98	225
NOKESVILLE CHURCH OF THE BRETHREN	PRINCE WILLIAM COUNTY	GW	3.9	7.3	2.9	1.6	0	0	2	68

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July 2026 Data Transfer

System Name	City/County	Water Source	PFOA	PFOS	PFBS	PFHxS	HFPO-DA	PFNA	Service Connections	Population
NORTH ANNA POWER STATION	LOUISA COUNTY	GW	6.35	7.56	6.43	14.3	0	0	5	1200
PALMYRA	FLUVANNA COUNTY	GW	1.81	7.56	1.95	0	0	2.23	34	90
PHILOMONT COMMUNITY CENTER	LOUDOUN COUNTY	GW	9.6	13	3.6	5.8	0	0	1	40
REDEEMER CLASSICAL SCHOOL	ROCKINGHAM COUNTY	GW	4.3	1.7	1.9	1	0	0	1	90
RIVERBEND GOLF & COUNTRY CLUB	FAIRFAX COUNTY	GW	4.1	1.8	2.4	0.9	0	0.6	4	600
ROSS INDUSTRIES - MIDLAND	FAUQUIER COUNTY	GW	4.1	4.4	1.8	1.8	0	0	1	92
RUSSELL COUNTY SHOPPING CENTER	RUSSELL COUNTY	GW	10	9.9	1.5	1.1	0	2.4	1	191
SKYLINE COURT APARTMENTS	ALBEMARLE COUNTY	GW	7.5	4.9	5.7	2.9	0	0	22	50
ST FRANCIS EPISCOPAL CHURCH	FAIRFAX COUNTY	GW	12	3.4	4	1.6	0	5	2	40
STONY SPRINGS SUBDIVISION	DINWIDDIE COUNTY	GW	5.56	1.4	1.63	2.93	0	0	56	145
TRANSPORTATION AREA (PR.WM.CO. SCHOOLS)	PRINCE WILLIAM COUNTY	GW	3.2	4.7	2.2	2.1	0	1.3	1	63
TRATTORIA VILLAGIO	FAIRFAX COUNTY	GW	5.5	3.8	5.6	2.9	0	0	1	175
TROWBRIDGE STEEL COMPANY	LOUDOUN COUNTY	GW	2.2	11	4.8	3	0	1.3	1	45
VINT HILL	FAUQUIER COUNTY	GW	6.1	5	2.4	4.8	0	0.5	366	2449
WESTERN VIRGINIA WATER AUTHORITY	ROANOKE CITY	SW	2.36	5.64	2	1.94	0	0	67598	182700
WESTERN VIRGINIA WATER AUTHORITY	ROANOKE CITY	SW	2.55	4.3	1.91	2.28	0	0	67598	182700
WESTLAKES SUBDIVISION	CULPEPER COUNTY	GW	8.8	8.9	9.5	1.9	0	1	28	70

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2025 Notification Update

- 46 facilities received notification to monitor for PFAS
  - 1 facility was removed due to outfall not being in watershed
  - 4 facilities removed due to evidence showing they were unlikely to be impacting groundwater
- Of the remaining 41 facilities
  - 8 Facilities required to self-report PFAS use or manufacture
    - All data received
    - All 8 facilities reported no PFAS use or manufacture
  - 21 facilities have returned monitoring data – as of 8/17

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General Updates

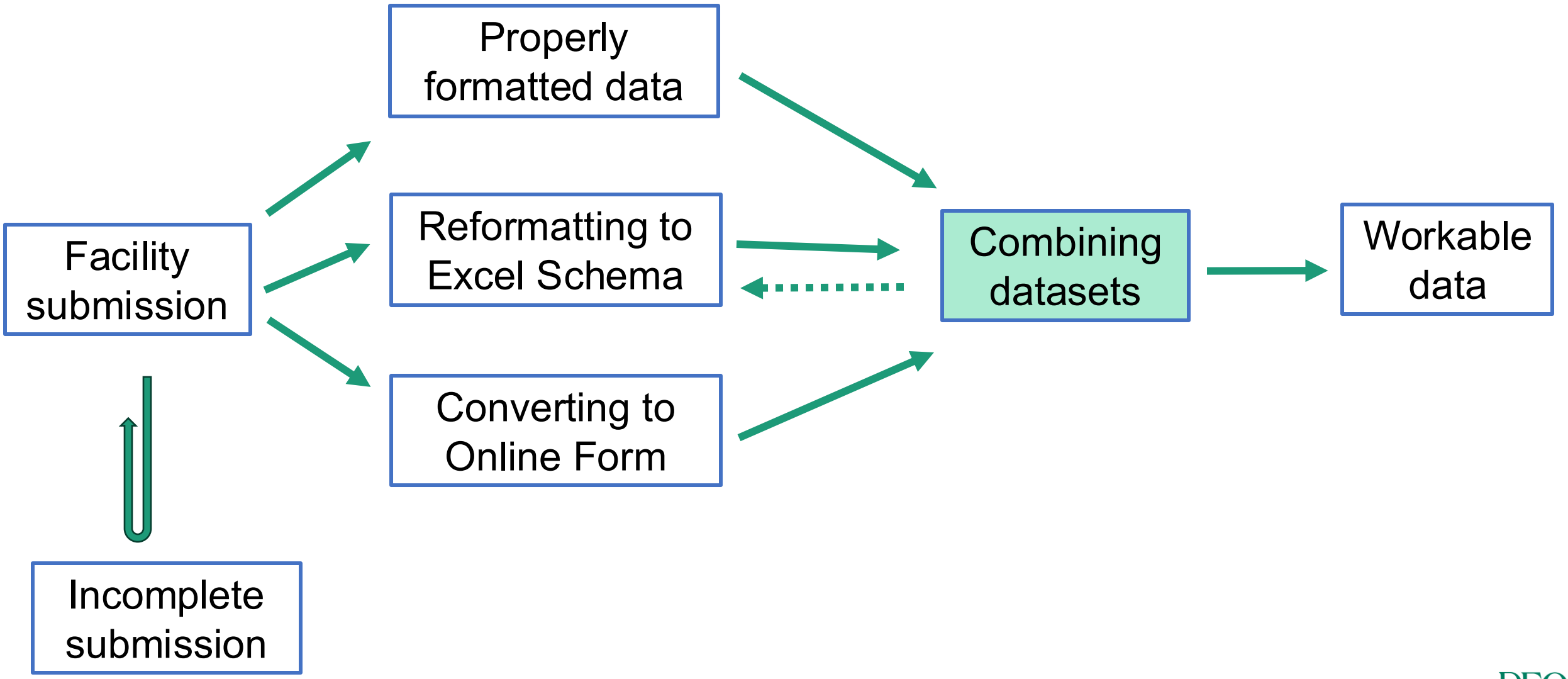
- Developing a reporting system to collect data for HB938/SB138 (Industrial users) and HB1442/SB286 (biosolids).
- Notifications for POTWs to require sampling under HB938/SB138 were sent.
- Language to modify biosolids permits pursuant to HB1442/SB286 (biosolids) adopted by the State Water Control Board. Modification process underway.


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PFAS Data Management and Analysis

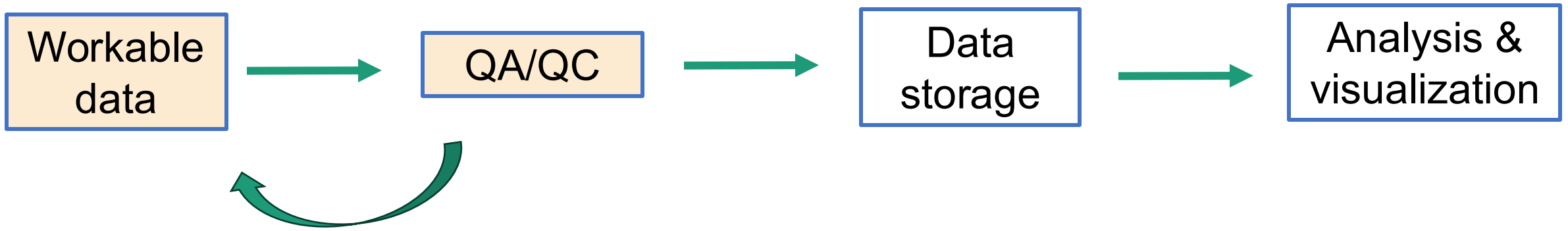
Gouri Mahadwar
Water Quality Data Scientist
Virginia Department of Environmental Quality
August 21, 2026

Completed Steps



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Current and Future Steps

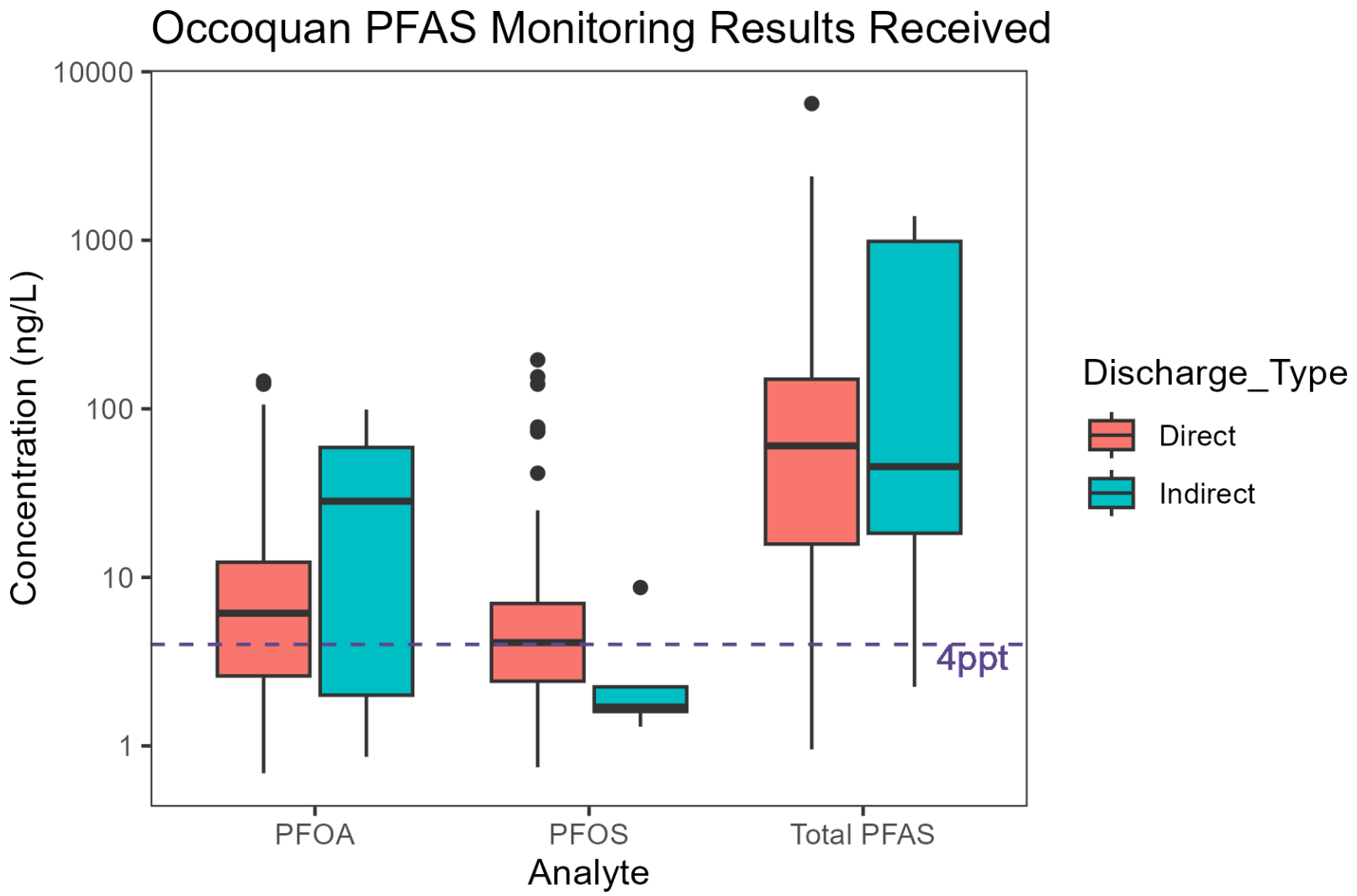


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Data Received

- 164 submissions into the PFAS online reporting form
- Approximately 326 excel or email-based submissions
- Data on this and the following slide is as of 8/13/26
- Values of zero and qualified results are not displayed
- Data has not completed QA/QC

Occoquan Watershed Data summary



Data points represent individual samples submitted by permittees ("direct") and significant industrial users ("indirect")

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Introduction to Biosolids

Neil Zahradka
Manager, Office of Land Application Programs
Virginia Department of Environmental Quality
Aug. 21, 2026


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Reader-Friendly Format

Max Wheeler
PFAS Program Coordinator
Virginia Department of Environmental Quality
Aug. 21, 2026

The PEAC shall also…

- Recommend a reader-friendly format for presenting the compliance data for PFOS and PFOA … and other target analyte concentrations to landowners. The Department shall publish such recommendation by Oct. 1, 2026.

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Reader Friendly Format

- "…The permit holder shall send the concentrations for PFOS and PFOA demonstrating compliance with this subdivision **and** *the concentrations for all other target analytes* required under subsection T in a reader-friendly format by email or mail to the landowner at every property at which the permit holder intends to land apply…"

- Suggestions from June Meeting
  - Compliance information front and center
  - Contact information for the POTW
  - Show range and average
  - Avoid merged cells in tables
  - Performance dashboard data view (speedometer type plot)
  - Don't reinvent the wheel look at other resources
    - Drinking water consumer confidence report
    - EPA's communication tools

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Approach

- Fact Sheet
  - Provides factual background on PFAS, biosolids, Virginia's biosolid legislation, and links to learn more
  - Q&A format
- Data Sheet
  - Compliance information front and center
  - A dashboard type format to visualize compliance
  - Additional information about the source and contact information
  - Table on the back with average and range for all 40 PFAS

Fact Sheet

- Are there questions that are missing?
- Are there factual inaccuracies?
- Is information easy to find? If not is there a way to improve it?
- Is there additional information that if added would improve understanding?

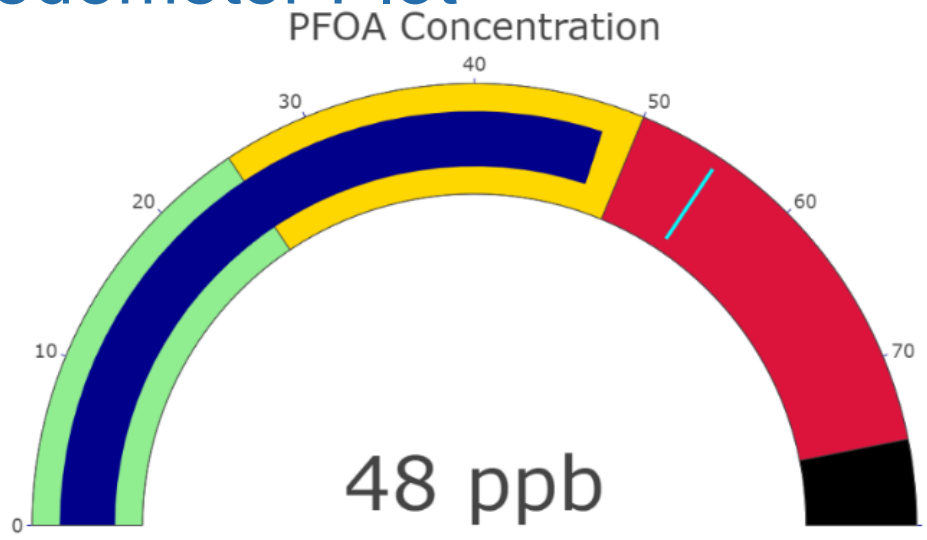
Data Sheet – Text

- Is there information missing?
- Is the information easy to find? If not is there a way to improve it?
- Is there additional information that if added would improve understanding?

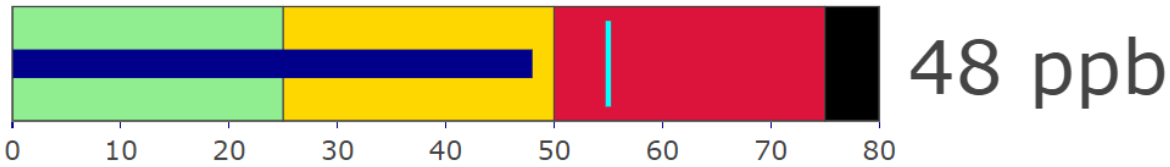
DEQ

Data Sheet – Figure

- Gauge/Speedometer Plot

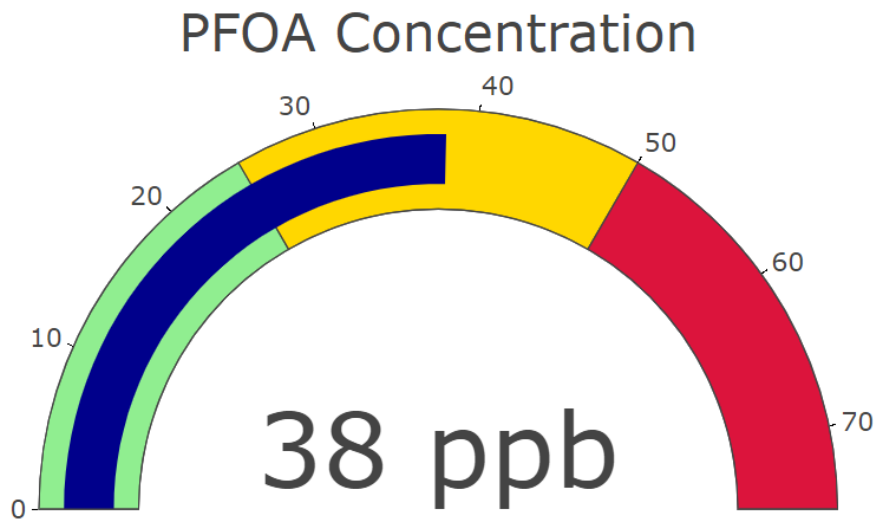


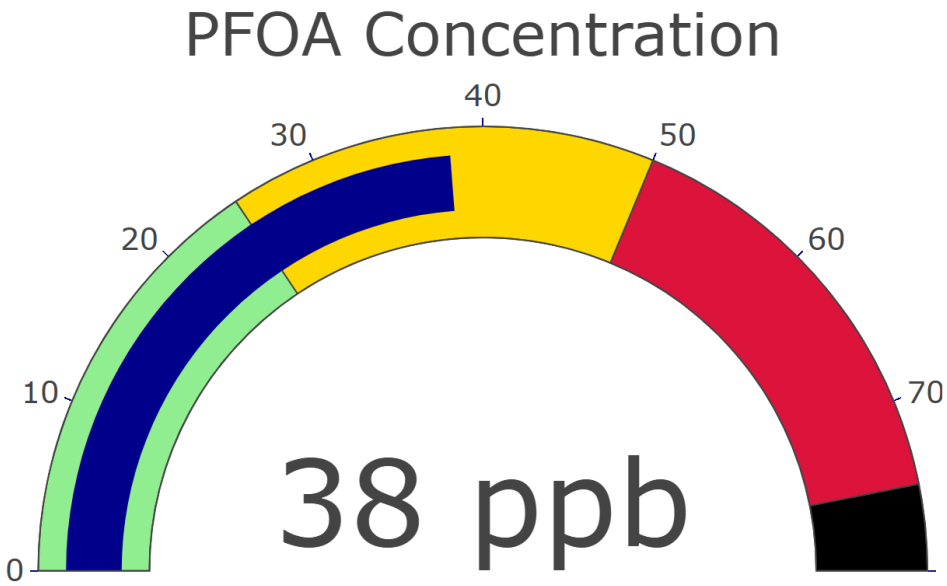
- Bullet Plot

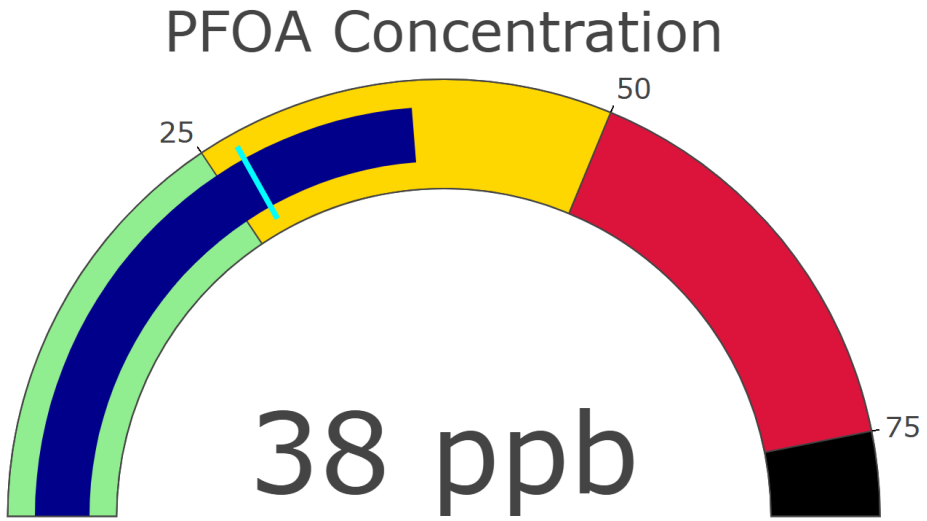


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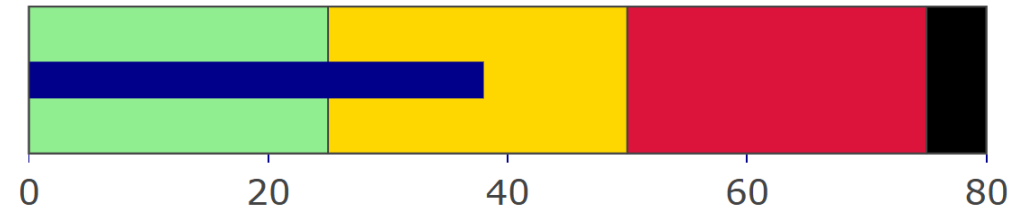
Alternate Gauge Plots



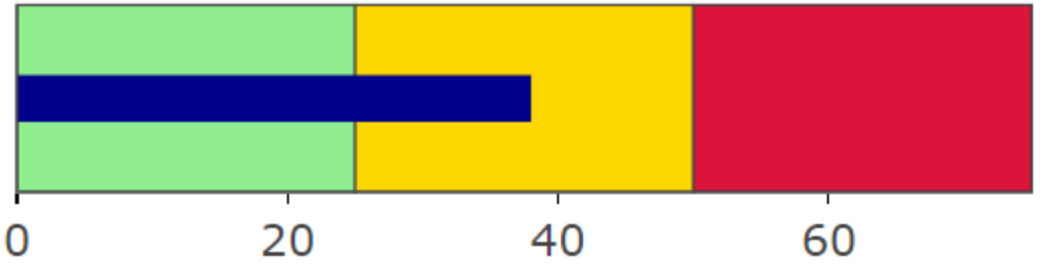




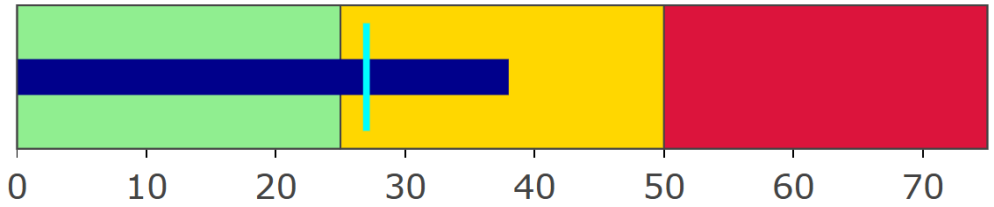
Alternate Bullet Plots



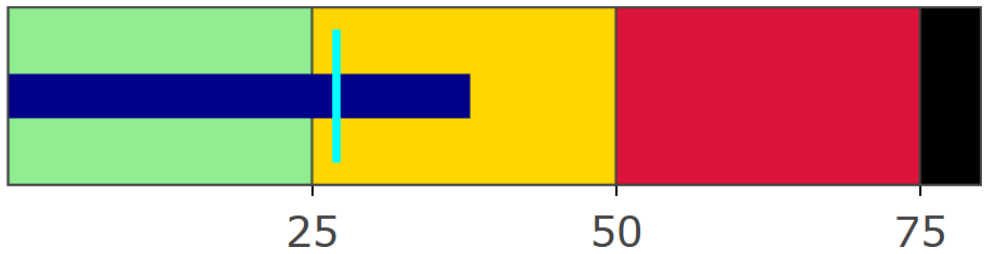
38 ppb



38 ppb



38 ppb



38 ppb

DEQ

Data Sheet – Table

- Two options side by side or single-long table
- Consistent order
  - Analyte category?
  - Alphabetical?

Analyte	Annual Average (ppb)	Range (min – max) (ppb)	Analyte	Annual Average (ppb)	Range (min – max) (ppb)
11Cl-PF3OUdS	67	53-66	PFDoA	63	30-71
3:3 FTCA	33	22-54	PFDoS	43	33-58
4:2 FTS	65	34-91	PFDS	43	28-57
5:3 FTCA	62	35-80	PFEESA	67	44-78
6:2 FTS	79	77-79	PFHpA	57	42-93
7:3 FTCA	74	55-77	PFHpS	17	20-28
8:2 FTS	42	5-90	PFHxA	60	65-75
9Cl-PF3ONS	56	51-67	PFHxS	72	90-95

Analyte	Annual Average (ppb)	Range (min – max) (ppb)
11Cl-PF3OUdS	67	53-66
3:3 FTCA	33	22-54
4:2 FTS	65	34-91
5:3 FTCA	62	35-80
6:2 FTS	79	77-79
7:3 FTCA	74	55-77
8:2 FTS	42	5-90
9Cl-PF3ONS	56	51-67
ADONA	51	4-96
HFPO-DA	34	27-27
N-EtFOSA	46	9-99
N-EtFOSAA	26	ND-70
N-EtFOSE	62	46-52
NFDHA	23	1-57
N-MEFOSA	26	13-47
N-MEFOSAA	45	27-38
N-MEFOSE	20	10-36
PFBA	41	39-43
PFBS	40	22-79
PFDA	42	46-60
PFDOA	63	30-71

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VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Public Input

Meeting Wrap-Up

DEQ

PEAC Meeting PFAS Updates

August 21, 2026

Robert Edelman, PE
Director, Division of Technical Services

Office of Drinking Water
Safe Drinking Water for a Healthy Virginia

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To protect the health and promote the well-being of all people in Virginia.

AWWA/AMWA Legal Challenge to PFAS Rule

Oral Arguments scheduled for 9/18/2026

Key Litigation Issues

Scientific Basis: Litigants argue EPA did not fully incorporate updated PFAS occurrence data or UCMR5 data.

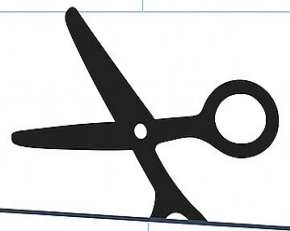
Hazard Index: Challenge to EPA's novel approach using a Hazard Index for PFAS mixtures.

Cost Impact: Concern for affordability and allocation of resources for water systems, citing potential trillion-dollar infrastructure costs over 25 years.

Polluter Pays Principle: Advocacy for directing liability to PFAS Manufacturers rather than drinking water utilities.

EPA Proposed Rules Published 5/20/26

PFAS	MCL
PFOA	4 ppt
PFOS	4 ppt



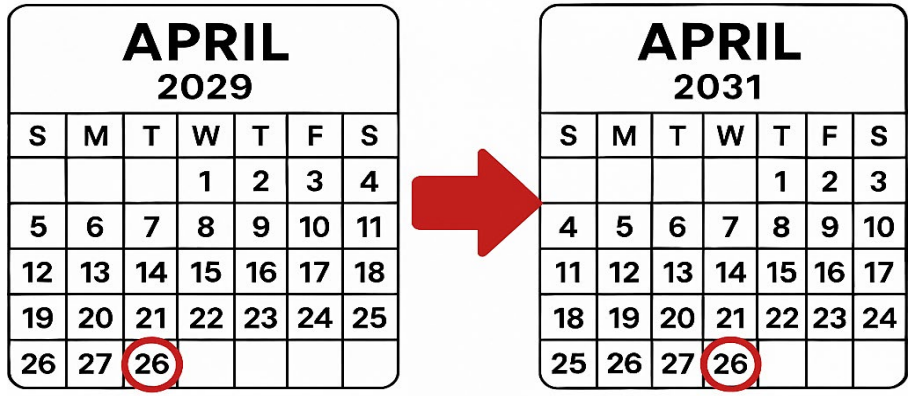
PFHxS	10 ppt
PFNA	10 ppt
GenX	10 ppt
HI	1

Proposed Rule 1 – Recission of Regulatory Determinations & 4 PFAS MCLs

EPA proposes to rescind its prior regulatory determinations and remove all associated MCLs, MCLGs, and provisions for PFHxS, PFNA, HFPO-DA (GenX), and the PFAS mixture, citing legal errors in how the 2024 PFAS drinking water rule was issued.

This action eliminates monitoring and treatment requirements for these four PFAS but leaves PFOA and PFOS standards unchanged.

EPA Proposed Rules Published 5/20/26



Proposed Rule 2 – Extending the Compliance Deadline for PFOA & PFOS MCLs

EPA proposes extending the PFOA and PFOS MCL compliance deadline from April 26, 2029 to April 26, 2031 for systems that request an exemption.

Eligible systems must apply for the extension and, if PFAS levels are ≥ 12 ppt, implement **interim control measures** during the two-year period to avoid unreasonable health risk.

Interim Control Measures for Systems with PFOA or PFOS ≥ 12 ppt

Must implement at least two measures. Available to all Customers. Cannot be education and outreach alone.

- Provide alternative water supplies (e.g., bottled water).
- Install, maintain, and operate point-of-use (POU) or point-of-entry (POE) devices.
- Provide certified pitcher filters (with two years of replacement filters).
- Develop source water controls (actions to reduce PFAS at the source).
- Provide public education (written materials meeting EPA content requirements).
- Conduct community outreach activities (meetings, events, customer notifications, etc.).

Waterworks Regulations and Primacy Package

- ODW intends to update waterworks regulations to incorporate federal PFAS rule as written
- Primacy package to be completed after completion of the regulation updates
- Update to waterworks regulations incorporates federal language “quote for quote” drafted and ready to submit
- Regulation update will be approved following the “exempt process” which can shorten timeline to as little as 6 months
- ODW will update regulations with new proposed rules once they are finalized



Waterworks Regulations and Primacy Package

ODW seeks input from the regulated community about adoption of federal rule including the HI with PFHxS, PFNA, HFPO-DA, and PFBS.

Advantages of this approach

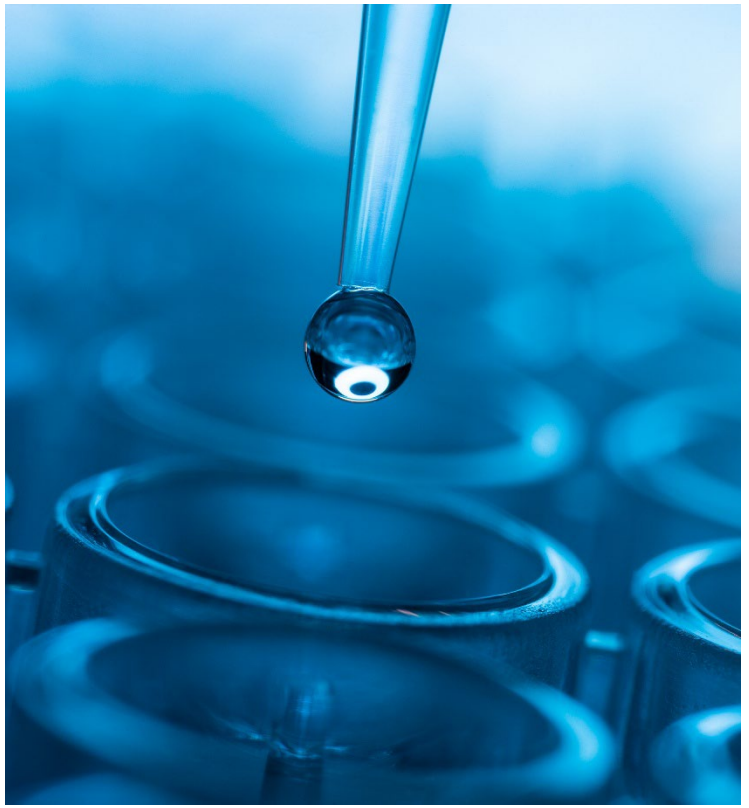
- Allows ODW to attain primacy close to initial monitoring deadline
- ODW will be able to enforce initial monitoring, PN, and compliance monitoring requirements
- Clarifies federal uncertainty of legal challenges

Disadvantages of this approach

- Multiple regulatory updates
- May cause a period of state rules being more stringent than federal rules

PFAS Monitoring for Small Systems at No Cost

- Contractor, TruePani, collecting samples
- Pace Analytical analyzing samples
- Groundwater sources
- Systems serving ≤10,000 persons
- Data can be used for initial monitoring compliance
- EPA Method 533



PFAS Monitoring for Small Systems at No Cost

Program Stats

Total Eligible Waterworks	Systems in Compliance	Enrolled Waterworks
1186	129	841

Enrollment Progress

Export to CSV

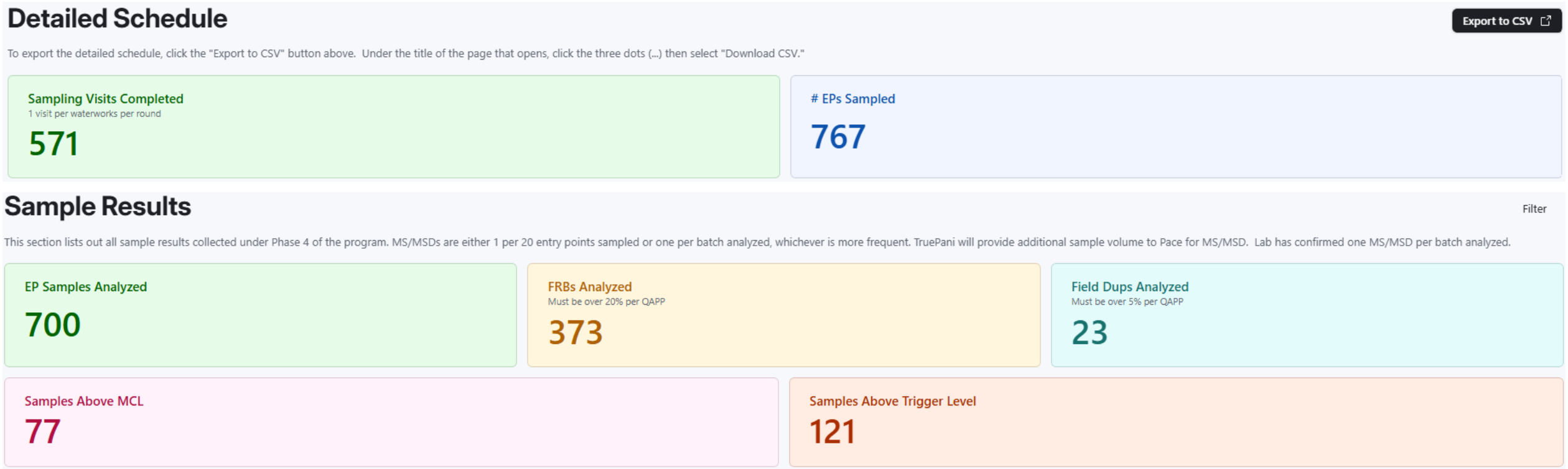
The chart below provides an overview of enrollment progress to date.

To export a list of the enrollment information submitted by waterworks, click the "Export to CSV" button above. Under the title of the page that opens, click the three dots (...) then select "Download CSV."



Data as of 8/19/26

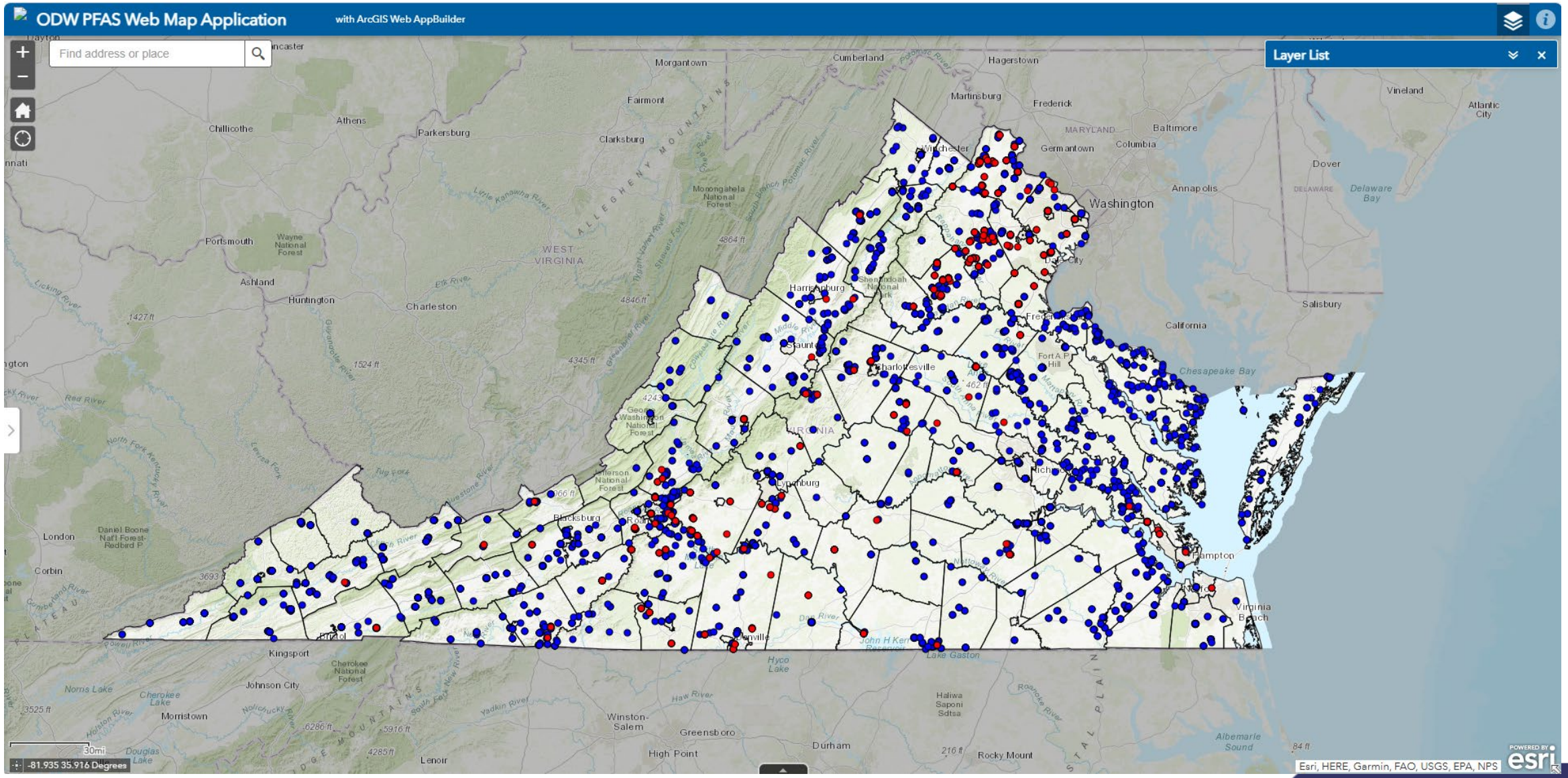
PFAS Phase 4 Data



- 11% of EP samples analyzed exceed MCL's
- 17.3% of EP samples analyzed exceed Trigger Levels

Data as of 8/19/26

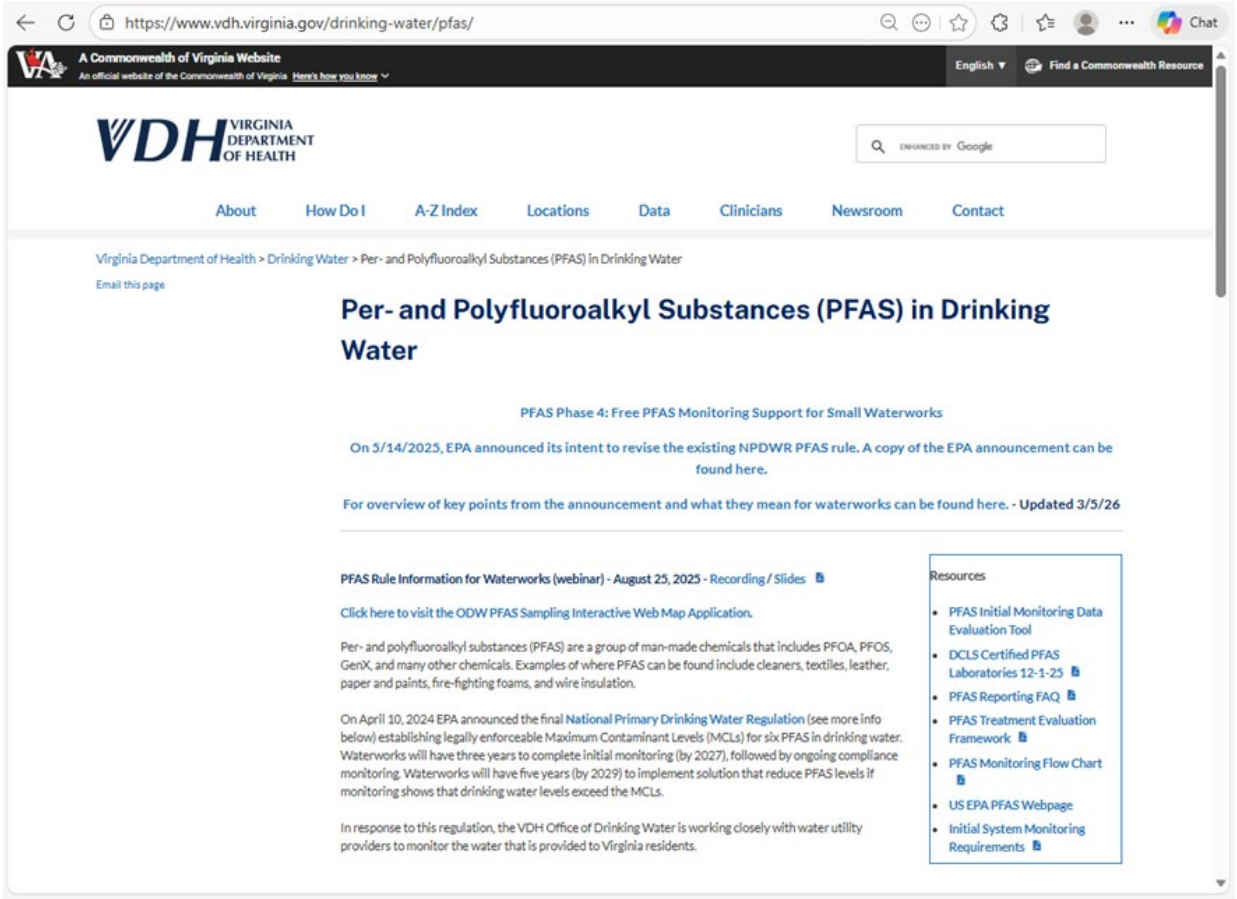
PFAS Data at www.vdh.virginia.gov/drinking-water/pfas



VDH VIRGINIA DEPARTMENT OF HEALTH
To protect the health and promote the well-being of all people in Virginia.

PFAS Resources

ODW PFAS website www.vdh.virginia.gov/drinking-water/pfas/



- Initial and Compliance Monitoring Timeline and Requirements
- PFAS Rule Updates
- Sampling Protocols
- List of Certified Labs
- Link to Webinars
- Financial Resources
- Treatment Evaluation Framework
- Sampling Results
- And many more

Questions?

For up-to-date information go to:
https://www.vdh.virginia.gov/drinking-water/pfas/

Bailey Davis
(804) 928-4811
bailey.davis@vdh.virginia.gov

Robert Edelman, PE
(804) 864-7490
Robert.edelman@vdh.virginia.gov

VDH VIRGINIA DEPARTMENT OF HEALTH
To protect the health and promote the well-being of all people in Virginia.

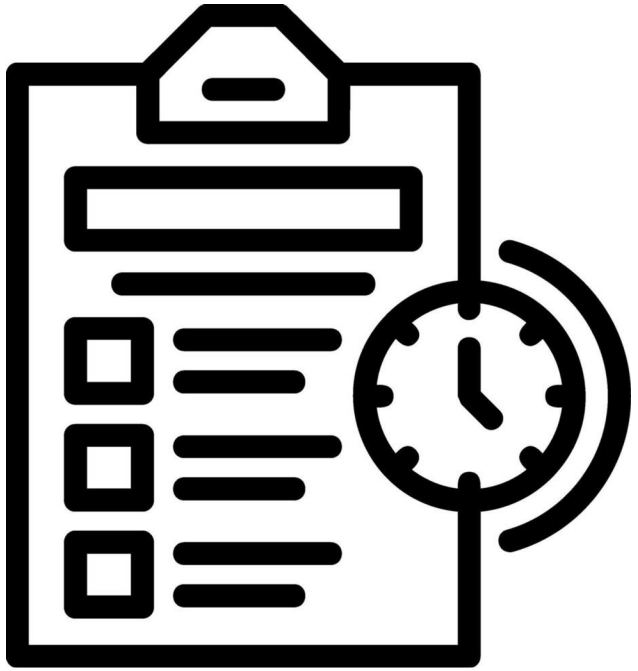
Introduction to Biosolids

PFAS Expert Advisory Committee

Neil Zahradka
Manager, Office of Land Application Programs
Virginia Department of Environmental Quality
August 21, 2026

Content

- Background on biosolids management
- Permitting process for land applying biosolids in Virginia
- Summary of land application process and existing restrictions



DEQ

Sewage Sludge and Biosolids

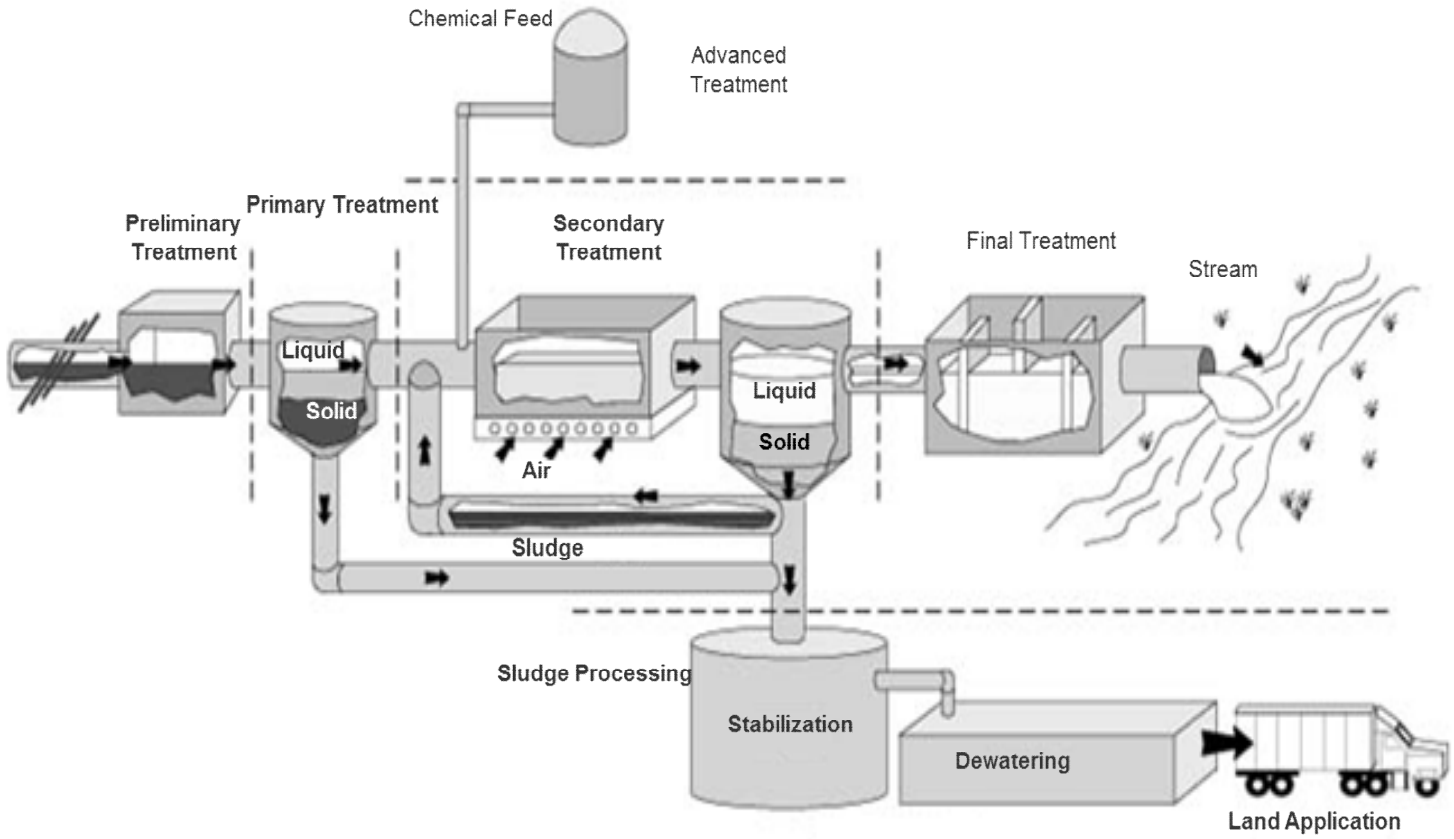
- What is sewage sludge and when does it become biosolids?
- What factors have been important in managing biosolids?



DEQ

What Are Biosolids?

"Biosolids" is sewage sludge that has received approved treatment to reduce pathogens and attractiveness to vectors (flies, mosquitos, rodents) and contains concentrations of regulated metals below the ceiling limits established in EPA and Virginia regulations



DEQ

What Are Biosolids?



- Biosolids contains organic matter and nutrients - nitrogen and phosphorous - making it valuable for use as a fertilizer.
- Biosolids may be land applied under the authority of a DEQ Permit ONLY IF:
  - Biosolids meets treatment and quality standards;
  - Specific site criteria are met; and
  - Site management practices are followed.

DEQ

Land Application of Biosolids as a Beneficial Use: Why Farmers Want to Use Biosolids…

The land application of biosolids is considered a beneficial use because while the nutrients and organic matter fertilize the soil, the amount of sewage sludge disposed in landfills is reduced. Carbon in biosolids is retained in the soil rather than lost to the atmosphere as methane.

Farmers choose to use biosolids for its benefits:

- Valuable source of essential plant nutrients
- Alternative to costly commercial fertilizer
- Organic matter improves soil structure and tilth
- Enhances moisture retention of the soil

Biosolids Law and Regulation



- Federal Law and Regulation
  - Clean Water Act – Congress
  - Code of Federal Regulations
    - Title 40, Part 503 - EPA

- Virginia Law and Regulation
  - State Water Control Law – General Assembly
  - Virginia Pollutant Discharge Elimination System Permit Regulation - DEQ
  - Virginia Pollution Abatement Permit Regulation - DEQ

DEQ

Biosolids Management and Permitting Structure

Wastewater Treatment Plants

- Virginia: VPDES permits
- Out-of-state: federal or other state req
- Biosolids quality, treatment, monitoring, reporting
- May land apply or contract with a land applier
- Pays fee to DEQ for biosolids land applied

Land Application Contractor

- Example: Synagro Central, LLC
- Holds contracts with wastewater plants
- Identifies farmers who wish to receive biosolids
- VPA Permit for land application
- One permit per county

Farmers/Landowners

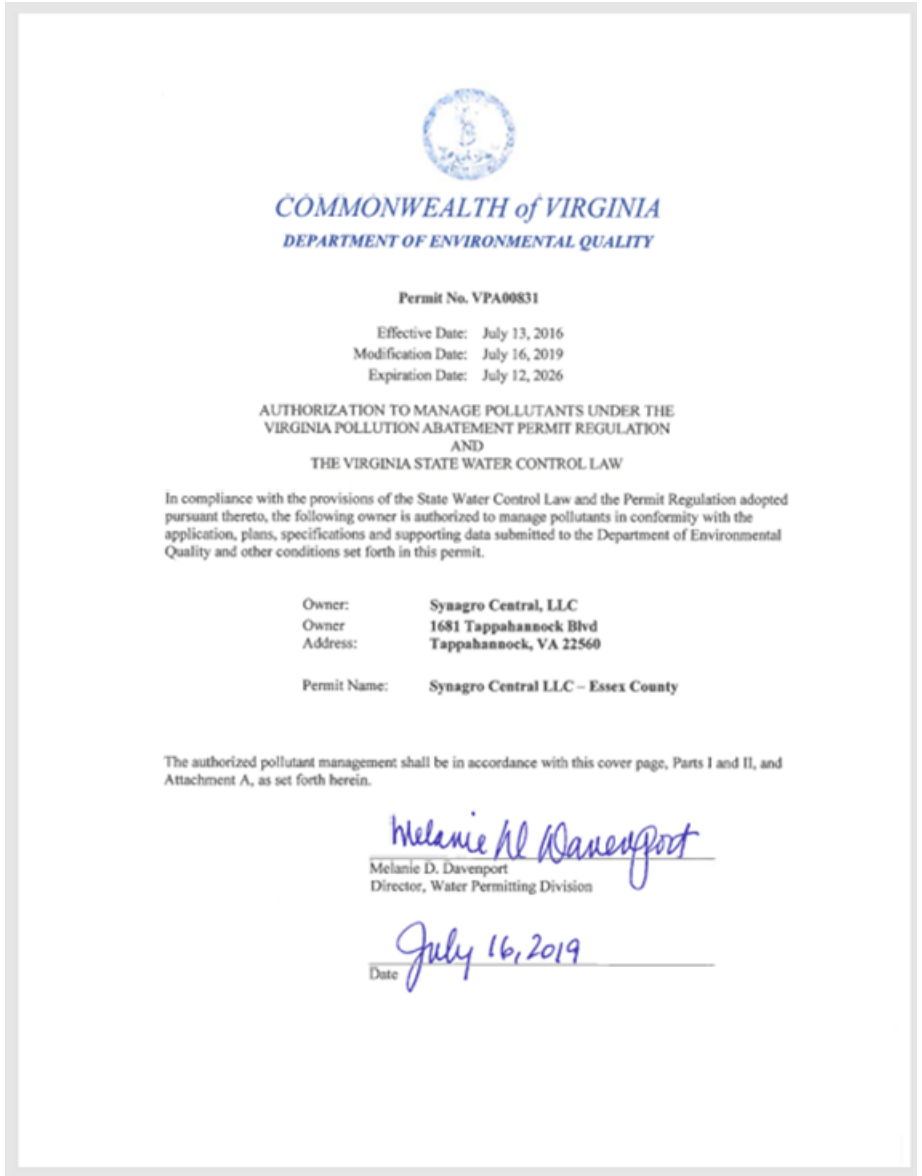
- Permits not required
- Receive a DEQ Fact Sheet from the land applier
- Landowners must provide written consent to have biosolids land applied on their property

DEQ

What do land application permits require?

Federal and Virginia regulations:
- Metals content
- Treatment specifications

Virginia also requires:
- PFAS monitoring & limits
- Additional setbacks
- Nutrient Management Plans (NMPs)
- Site and soil restrictions
- Notification to the public
- Financial assurance
- Local authority
- Compliance inspections
- Land applier training



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. VPA00831

Effective Date: July 13, 2016
Modification Date: July 16, 2019
Expiration Date: July 12, 2026

AUTHORIZATION TO MANAGE POLLUTANTS UNDER THE VIRGINIA POLLUTION ABATEMENT PERMIT REGULATION AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the State Water Control Law and the Permit Regulation adopted pursuant thereto, the following owner is authorized to manage pollutants in conformity with the application, plans, specifications and supporting data submitted to the Department of Environmental Quality and other conditions set forth in this permit.

Owner: Synagro Central, LLC
Owner Address: 1681 Tappahannock Blvd, Tappahannock, VA 22560

Permit Name: Synagro Central LLC – Essex County

The authorized pollutant management shall be in accordance with this cover page, Parts I and II, and Attachment A, as set forth herein.

Melanie D. Davenport
Director, Water Permitting Division

July 16, 2019
Date

DEQ

Permitting Process

- Permit Applicant (Synagro)
  - Site suitability
  - Contracts with farm operators
  - Landowner agreements
  - Financial assurance
  - Sitebooks
  - Proposed biosolids sources
  - Permit application fee





- Virginia DEQ
  - Application receipt
  - Notification to locality, other agencies, adjacent landowners
  - Site reviews
  - Public meeting (>50% land addition)
  - Draft permit
  - Public comment period
  - Public hearing if public response is significant
  - Permit decision

DEQ

Biosolids Source Approval

- Historic biosolids analyses
- Virginia Environmental Laboratory Accreditation Program
- DEQ reviews
  - Metals data
  - Pathogen reduction process data
  - Vector attraction reduction process data
  - Beginning January 2027: PFAS data



Same standards for biosolids from Virginia and out-of-state

DEQ

Permit Conditions – Prior to Application

- Permittee must provide notice to DEQ and local government prior to land application
  - 100-day notice
  - 14-day notice
  - 5-day notice - signs
  - 24-hour notice



Biosolids Storage







Biosolids Delivery to the Application Site





Loading Dewatered Cake Biosolids into Spreader



Biosolids Land Application





Permit Conditions – Nutrient Management

- Nutrient concentrations in biosolids vary, so biosolids are monitored to measure the amount of nutrients they contain
- Nutrient Management Plans (NMP)
  - Developed based on site-specific characteristics (soil type, crop, etc.)
  - Prescribe the amount of nutrients necessary for adequate crop growth; and
  - Limits application rates so that excess nutrients are not lost to the environment
  - Not required to be completed until just before land application
    - This ensures crops, soil tests, and fertilization match NMP

Permit Conditions – Operational Requirements

- Cannot land apply biosolids where:
  - the water table is within 18” of the ground surface.
  - the bedrock is within 18” of the ground surface.
- Soil pH and Potassium levels must be adequate to provide for optimum plant growth and nutrient uptake.
- Cannot land apply on slopes greater than 15%, unless DEQ determines site characteristics are protective of nearby surface and ground water
- Certified Land Applier on-site during operations
- Odor Control Plan

Setback Restrictions

MINIMUM SETBACK DISTANCE REQUIREMENTS	
Adjacent Feature	**Minimum Setback Distance (Feet) to Land Application Area**
Occupied dwelling	200
Odor sensitive receptors	400
Property lines	100
Property lines of publicly accessible sites	200
Water supply wells or springs	100
Public water supply reservoirs	400
All segments of streams and tributaries designated as a Public Water Supply	100
Surface waters without a vegetated buffer	100
Surface waters with a 35-foot vegetated buffer	35
Agricultural drainage ditches	10
All improved roadways	10
Rock outcrops	25
Open sinkholes	100
Limestone rock outcrops and closed sinkholes	50

DEQ

Extended Setback Requests

- Adjacent landowner or resident may request extended setbacks of up to:
  - 200 feet from their property line
  - 400 feet from an occupied dwelling
- Request must be submitted on the “Extended Setback Request Form” signed by the requestor’s physician based on medical reasons
- Do Not include your specific medical information on form
- Must be received by DEQ no later than 48 hours before land application commences
- DEQ may extend a setback distance within 48 hours of land application if requested by the VDH
- DEQ grants extended setbacks to the person identified on the request form.

DEQ

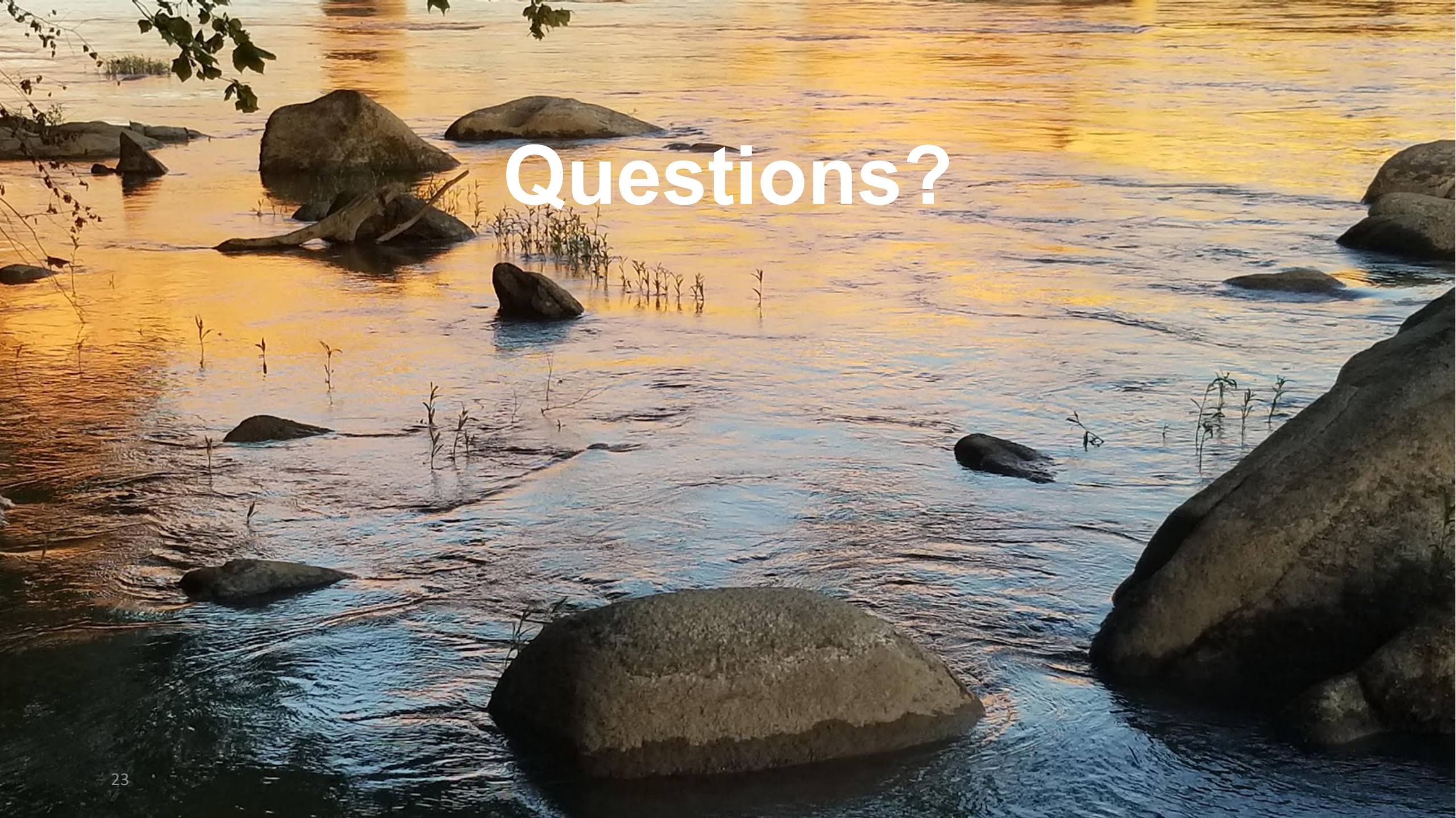
Access Restrictions

TIME RESTRICTIONS FOLLOWING COMPLETION OF BIOSOLIDS APPLICATION ASSOCIATED WITH CLASS B PATHOGEN REDUCTION	
Control of access to sites with low potential for public contact	30 days
Harvesting feed crops and fiber crops	30 days
Harvesting feed crops for lactating dairy animals	60 days
Grazing by farm animals	30 days
Grazing by lactating dairy animals	60 days

Compliance Assurance – DEQ Inspections

- DEQ conducts unannounced site inspections
- Inspections include examination of:
  - Notification (written notices, signs)
  - Landowner agreement forms
  - Site books that match actual conditions
  - Setbacks
  - Nutrient management plans – correctly written and implemented
  - Soil tests – date, methods, nutrient and pH levels
  - Soil, moisture, and crop conditions
  - Depth to groundwater
  - Depth to bedrock
  - Supplemental lime and fertilizer if necessary
- Various other conditions: Inspection checklists include more than 60 specific requirements
- Desktop Review – Monthly Report Reviews

22


Questions?