

WATERWORKS ADVISORY COMMITTEE MEETING AGENDA

ALL-VIRTUAL PUBLIC MEETING

WebEx Meeting

September 20, 2023; 10:00 AM to 12:30 PM

Subject	Time
<ul style="list-style-type: none">• Welcome message, establishment of quorum, new member welcome – Dwayne Roadcap	10:00 – 10:05 AM
<p style="text-align: center;">Waterworks Advisory Committee Administrative Matters</p> <ul style="list-style-type: none">• Introduction and review of agenda items – Chair David Van Gelder• Review and adoption of minutes from June meeting – Grant Kronenberg <p style="text-align: center;">Drinking Water Program Discussion</p> <ul style="list-style-type: none">• Introduction of Jessica Coughlin, Emergency Services Coordinator and announcement of the departure of Tony Singh, ODW Deputy Director – Dwayne Roadcap• Compliance, Enforcement & Policy update – Grant Kronenberg• PFAS Phase 2 testing – Grant Kronenberg• Lead and Copper Rule revisions and courses – Grant Kronenberg• Centralized Plan Review, Drinking Water Viewer implementation update – Aaron Moses• Sampling Verification Program – Parez Hawarry• Training Updates – Virginia Tech Short School – Barry Matthews• Waterworks Operation Fee Regulations update and change in method of application of operation fees cap – Grant Kronenberg• A Cross-Connection Case Study – Dwayne Roadcap• ODW Budget – Dwayne Roadcap	10:05 – 11:15 AM
<p style="text-align: center;">Development of Amendments to the Waterworks Regulations</p> <ul style="list-style-type: none">• Proposed amendments and discussion of WAC subcommittees – Jane Nunn	11:15 AM – 12:15 PM
<p style="text-align: center;">Public Comment Period</p>	12:15 – 12:25 PM

Other Business • Planned upcoming meeting dates: December 13, 2023 (in person)	12:25 – 12:30 PM
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The method by which the Waterworks Advisory Committee chooses to meet shall not be changed unless the Waterworks Advisory Committee provides a new meeting notice in accordance with Code of Virginia § 2.2-3707.

Information and Protocol for All-Virtual Public Meeting

Access to the meeting can be achieved via computer, phone or mobile device with the meeting link below:
<https://vdhoep.webex.com/vdhoep/j.php?MTID=m490cb16057be6440e8fb7ee9eb08be7d>

If accessing via a mobile device, you will need to download the WebEx Meet app prior to joining the meeting.

When joining the meeting, please use the meeting number and password below:

Meeting number (access code): 2632 024 5108

Meeting Password: Vn2S3zN8VPi

You can use your computer audio or join via telephone by calling [1-844-992-4726](tel:1-844-992-4726) United States Toll Free.

Please log into the meeting at least 10 minutes before the meeting begins.

If you have problems logging in or if there is any interruption in transmission, please call Grant Kronenberg at 804-629-0989.

Please sign into the meeting and identify yourself so we can verify that you are attending the meeting.

After you have identified yourself, please mute your phone to reduce any unwanted noise.

Waterworks Advisory Committee Meeting Minutes

In WebEx

10:00 am, Wednesday, June 14, 2023

Members Present: David Van Gelder (Chair), Water Operator; Jesse Royall, Jr., Sydnor Hydro, Inc.; Bailey Davis, DCLS; Skip Harper, Virginia Plumbing & Mechanical Inspectors Association; Steve Herzog, PE, VWEA; Mark Estes, VRWA; Russ Navratil, VA AWWA; Chris Pomeroy, Virginia Municipal Drinking Water Association; Ignatius Mutoti, VSPE; Joey Hiner, VA SERCAP; Tom Fauber, VA ABPA.

Members Absent: Whitney S. Katchmark, PE Principal Water Resources Engineer; Caleb Taylor, VA Municipal League; Andrea Wortzel, Mission H2O; Anthony Morris, DEQ; Geneva Hudgins, VA-AWWA; Chloe Van Zandt, Virginia Health Catalyst (listened online).

Stakeholders: John Kingsbury, Fairfax Water; Christopher Gill, Mitchell Smiley, Tanya Pettus, DPOR; Taylor Valencia, Stantec, Ivy Ozman, Charysse Hairston, Michelle Caruthers

Office of Drinking Water (ODW) Staff: Dwayne Roadcap, Tony Singh, James Reynolds, Barry Matthews, Aaron Moses, Dan Horne, Brian Blankenship, Christine Latino, Grant Kronenberg, Robert Edelman, Jane Nunn, Mark Wise

Meeting Overview

The Waterworks Advisory Committee (WAC) met in person at the Fairfield Library, 1401 N. Laburnum Avenue, Richmond, VA. Stakeholders, ODW staff, and the public also joined in person and by electronic communication means via WebEx. Dwayne Roadcap called the meeting to order at 10:03 a.m. and reviewed the agenda.

The WAC members introduced themselves and it was established that there were enough members in person to establish a quorum.

ODW staff who were present also introduced themselves.

Review and Adopt Minutes of Meeting

The WAC membership unanimously adopted the meeting minutes from the March meeting. No additions or corrections were made to the draft meeting minutes as presented.

Grant Kronenberg introduced a new member of the WAC – Anthony “Scott” Morris.

Compliance, Enforcement & Policy Update

In April, the enforcement targeting tool showed an increase in the number of serious violators to eight. The increase in the number was partially due to a lag in data entry. Since the report, three serious violators have returned to compliance.

ODW continues to work on the Enforcement Manual, and it has been sent up for review to the Office of the Commissioner. The manual will provide clearer steps and timelines and expanded guidance. The next step will be to forward it to the Office of Regulatory Management at the Governor's office. If approved, the updated manual will be posted on Town Hall for a 30-day comment period.

The Project Review and Procedures Manual now includes the Centralized Plan Review process, which had been piloted and is part of the Project Review Program. The manual has been posted on Town Hall for comment through July 5, 2023, and no public comments have been made.

PFAS Phase 2

The EPA's public comment period ended on May 29, 2023. It received thousands of comments, and ODW will keep the committee posted on the outcome. ODW did not submit comments directly, but in association with its partners, ODW has created a PFAS panel that will submit comments. Those comments are available on the ASDWA.org website.

ODW initiated PFAS Phase 2 this year, which restarted part of the sampling program and is assisted by the ODW staff with the goal of collecting about 350 samples across the state. Most samples were collected from small or medium water systems. To date, ODW has collected over 200 samples and hopes to have completed sample collection by the end of June or mid-July. VDH will share the results with the water systems and the public later this year.

ODW has another PFAS funding source program for small and disadvantaged communities. Anyone interested in the details should contact Raven Jarvis, Kelly Ward or Barry Matthews.

Lead and Copper Revisions

There have been no changes regarding the EPA's Lead and Copper rules.

ODW has been working to add a large amount of helpful information for Virginia water systems. ODW has provided a variety of templates for community water systems, including FAQs, acceptable lead services line inventories, replacement plans and lead service line guidance, templates for child daycares, and a section for customers. ODW encourages WAC members and stakeholders to go to the webpage and see how things are organized.

ODW is now providing in-person training to water systems. These sessions show how to do an inventory, how to prepare to monitor, plus information on notification and record keeping. There are several sign-up locations, and seats are available. ODW will also be providing one-on-

one technical assistance and is currently producing videos to assist. If interested in any of the in-person training, please call Bob Edelman, Director, Division of Technical Services.

Waterworks should now be compiling their lead service line inventories, developing lead service line replacement plans, compiling lists of schools and daycares, and have a list of templates. Once these things have been done, the waterworks should update their compliance tab sampling locations. ODW also has some assistance available for service lines inventories if needed. If a waterworks has not already applied for assistance, please use the LEAP application. The SRF staff will work with a waterworks to find the best funding for its needs.

There was a question regarding the flexibility of the format and if it was possible for waterworks to upload data in an Excel format. ODW staff is working with its GEC contractor regarding the service line inventories and on an offer for GEC to provide conversion services. There is a possibility to work with the water systems to get the data converted to ODW's platform. Water systems will still be able to upload their data in an Excel file. ODW's intent is to provide an online or web portal where the water systems can upload data, review the data, make changes if needed, and then submit to the website. It would be helpful for waterworks to provide data and ask for help so Mr. Edelman can understand and is aware of any problems.

ODW has not decided if it will issue guidance regarding predictive modeling. ODW will likely allow water systems to use this tool and will look at other states to see how they are handling things. The company Blue Conduit put out an article that pointed out several red flags. The article identifies some issues and is a good place for water systems to start to get an idea on the scope and information that ODW plans to use. This will also allow ODW to calibrate and check the model and confirm that the model is working. From there, ODW expects a predictive model to be able to show the likelihood of lead for each service line, and the office will pay close attention to how the materials are assigned based on the likelihood of lead.

Mr. Edelman has thought about an "unknown" result and how that may trigger a reevaluation of the sample site. ODW has a FAQ about monitoring requirements and a table that describes the five tiers. Based on the variety of variables, ODW will consider a water system's request to use predictive modeling on a case-by-case basis. ODW is available to set up a call with the lead and copper team if needed.

Centralized Plan Review Program

Back in March, ODW rolled out the Centralized Plan Review Program in the Culpeper and Lexington field offices. ODW has a hired project engineer and supervisor and are currently in the process of hiring more staff. So far, the field office staff are handling the workload well, and ODW is averaging about 24 days to issue a permit. ODW is facing a few challenges including difficulty hiring, technology issues, blocked emails, and software issues. ODW is working with GEC on creating a submittal portal and tracking software to provide a better solution, and the governor's office has created the PEEP initiative, which will allow an applicant to check the

status of a permit request. ODW’s website explains this new process, and the office is currently conducting outreach to get information on this new process to interested parties.

Sampling Verification Program

This program is in its early stages. Perez Hawarry will be leading the program and developing the policies and procedures. ODW has purchased equipment. DCLS data is being transferred electronically and goes into ODW’s program. ODW is in the process of downloading the data into CMDP, which will make the process easier.

ODW has hired six of seven positions, but before these new staff members can work independently in the field, they will need to be onboarded and trained on how to sample. ODW anticipates that it will take at least six months for the new hires to work independently. When ODW was asked to implement this program, it was determined that seven new people would be needed. ODW is working on a way to merge the sampling efforts into the sanitary surveys. In total, thirty to forty people will be involved in the program with seven people dedicated solely to the program and six new field positions to help with sanitary surveys and routine fieldwork. They will have a special focus on sampling verifications. One of the goals is to look and check data which can be part of our compliance program. The program is still in its early stages and needs to set goals, which will assist with technical assistance and regulating the community. This request comes from the Inspector General. One of the goals, which can also be part of our compliance program, is to look at the data for anomalies.

Drinking Water Viewer implementation

The vendor will have more frequent updates and will be working on recordings, instruction videos, and training for waterworks. Aaron Moses, Field Services Engineer, has recorded a video regarding the Drinking Water Viewer and how to use some of the features. If there are issues with incomplete data, please share with Mr. Moses directly.

EPA Cybersecurity Assessment Memo

ODW has formed a workgroup and targeted August to have a draft policy. ODW has met with VMCA and is seeking input regarding cybersecurity assessments being required by the EPA. A major concern expressed by ODW and some waterworks is around the security of any sensitive material collected by ODW. ODW met with our internal information technology experts who have suggested encrypted emails and other ideas. Grant Kronenberg, Director of Compliance, Policy and Enforcement, and Jane Nunn, Policy and Planning Coordinator, are researching the applicability of FOIA to cybersecurity assessments and related data held by ODW. The workgroup is planning to provide a draft policy for the WAC’s review in September. The formal draft of the policy will likely be issued in 2024.

ODW would like to provide as much flexibility as possible and is also looking to offer a variety of assessment tools that will comply with its requirements. ODW has not made any decisions on the timeframe for the assessments yet but anticipates that the assessments must be done within six months of the sanitary survey. From the VDH perspective, ODW would like to make sure that it has some policy in place that meets EPA requirements.

Emerging Contaminants in Small or Disadvantaged Communities

Raven Jarvis, with the Source Water Protection Program, reported that ODW has been given about \$50 million for small and disadvantaged communities. She informed the committee that additional information regarding this funding will be available through a PowerPoint Presentation and the website links.

Training Program

ODW has challenges regarding the Operator Certification Training program. The Virginia Tech Continuing and Professional Education Program Manager, Zach Coffren, has moved to another University position. Cary Hoge, who was the program assistant, has been named the new Program Manager. Trisha Lindsey with DPOR has resigned, and there is no additional information regarding DPOR's plans for filling that position. Jason Yetter, ODW - Operator Certification Training Coordinator, has left the agency to pursue other opportunities. ODW anticipates that the Training Coordinator position to be filled soon.

Over the last year, there were several face-to-face training courses. WAC members indicated that they would like to continue webinar-based training. Barry Matthews, Director, Training, Capacity Development and Outreach, indicated that ODW doesn't control the Short School trainings, but that he would inform Virginia Tech of the desire for more web-based training.

David Van Gelder noted a need for more operators and a concern with the DPOR testing pass rates. Mr. Van Gelder expressed interest in assisting with efforts to address these issues. Mr. Matthews said that ODW could possibly form a WAC Operator Training Committee to identify ways to assist operators with training and testing. Various groups have had discussions on the tests themselves to ensure the testing and training match. ODW and VT have rebranded some of the Virginia Tech training courses, so the tests and training are matching. Pass rates have increased over time. But there is a general feeling that the pass rates are too low. Mr. Matthews will meet with David Van Gelder to discuss further.

Waterwork Regulations

Periodic reviews are conducted to determine if any of regulations need to be amended. ODW has received some suggested changes and is currently looking at possible amendments. ODW will also be asking for suggestions and is considering all things including those that don't directly impact the waterworks. The packet is set to go up to the Commissioner on June 23,

2023, after which the Office of Regulatory Management will move if forward. Though ODW made some significant changes to some of the sections in 2021, the periodic review will look at all the sections in these regulations.

Waterworks Operations Fee

The proposed amendments will be considered by the Board of Health in June 2023. The last time the fees were adjusted was in 2012. This will make the fee structure more equitable and will mean that there will no longer be one type of waterworks that is subsidized by the other types. The transient non-community waterworks (TNCs) will be assessed an annual \$60.00 fee. Additionally, there will be a \$2,500 fee on wholesale waterworks with fewer than 15 non-waterworks customer accounts and non-transient non-community waterworks will have their annual fee raised from \$90 to \$120.

Budget Update

ODW's budget is currently being reviewed internally. ODW is holding seven positions vacant for lack of funding and anticipates that this number may increase. ODW has seen increases in the costs of salary, travel, and VITA charges. EPA has reduced its funding, from \$17.9-\$18.1 million to \$6.9 million, which is putting a strain on our budget. The only way to keep up is through the State or regulated community and the general fund dollars. The new fees will not come close to funding the program but will ensure that everyone will contribute to the Technical Assistance Fund. ODW will be asking the legislature to increase the statutory fee cap of \$160,000 (the \$160,000 cap set in 1992 is now worth \$340,000 in 2023 dollars), but ODW is not sure if this change will pass. ODW will also be asking for additional general fund dollars. The additional monies would be used to fund the seven positions currently on hold. Dwayne Roadcap, Director, can also ask for additional funding based on the VDH budget shortfall recommendations report to return a business manager and provide training on budget matters. The EPA issued a workload analysis that concludes that ODW's program is underfunded by \$9.4 million per year.

Mr. Roadcap will also be asking for significant, additional funding for rent, salaries, and other administrative costs and will let the Board of Health know of these issues after this WAC meeting. ODW will not know if the increases will be accepted until the governor offers his budget in the third week of December.

Public Comment

None

Other Business

A discussion was held on the date of the September WAC meeting. Members felt that the meeting should be held the week after Water Jam in the first half of September.

Conclusion

The next WAC meetings are scheduled for September 20, 2023, (the Wednesday after Water Jam), and December 13, 2023.

Compliance, Enforcement & Policy Update

- The July Enforcement Targeting Tool (ETT) report - 11 Serious Violators.
- Two systems had already had all or substantially all violations returned to compliance.
- Four of the systems under an administrative order.

Compliance, Enforcement & Policy Update

- The Project Review and Permit Procedures Manual went through the Town Hall public comment process. No comments were received. It became effective on July 6.
- Revised Enforcement Manual is undergoing review by the Office of Regulatory Management in the Governor's Office.
- Upon approval there, it will be posted on Town Hall for public comment.

PFAS and LCRR Briefing

September, 2023

Robert D. Edelman, PE

Director, Division of Technical Services



PFAS and UCMR 5

UCMR 5 monitoring started January 1, 2023 - runs through December 31, 2025

All waterworks 3,300+, plus a “nationally representative sample” of systems < 3,300

Must monitor for 29 different PFAS compounds, plus lithium

- 25 PFAS by Method 533
- 4 PFAS by Method 537.1

UCMR5 – Quarterly Data Release (August 2023)

	Reference Standard	Detections
Lithium	(HRL of 10 ug/L)	3 waterworks, 2 above the HRL
PFOA	(4.0 ppt)	1 waterworks
PFOS	(4.0 ppt)	3 waterworks
Hazard Index (using health based values):		
GenX	(10 ppt)	None
PFBS	(2000 ppt)	2 waterworks, none above LHA
PFNA	(10 ppt)	None
PFHxS	(9 ppt)	2 waterworks, none above LHA

EPA's PFAS regulation timeline

- The proposed regulation was published in the Federal Register on March 29, 2023
- The comment period ended on May 30, 2023
- EPA intends to issue the final regulation by the end of 2023
- Implementation of certain aspects of the final rule will start almost immediately upon publication (prior to the compliance date)
- Initial monitoring to be completed in the three years between the publication date and the compliance date

EPA's proposed PFAS Rule

First and foremost:

- A proposed MCL for PFOA = 4.0 ppt
 - A proposed MCL for PFOS = 4.0 ppt
- (these are set at the current level of practical measurement)
- A Hazard Index MCL for PFNA, PFHxS, PFBS, and GenX = 1.0 (unitless)

Also, MCLGs (zero, zero, and 1.0, respectively) and monitoring requirements, etc.

The proposed rule would require public water systems to:

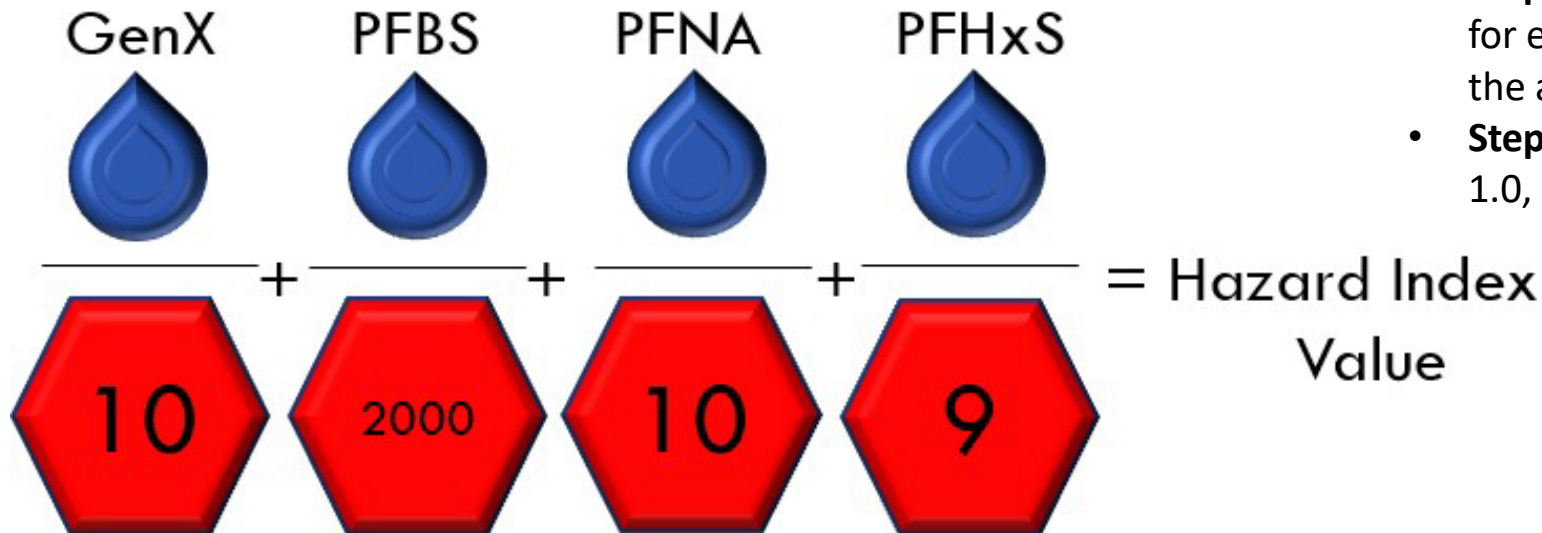
- Monitor for PFAS;
- Notify the public of the levels of PFAS; and
- Reduce the levels of PFAS in drinking water if they exceed the proposed standards

How do I calculate the HI?

The Hazard Index (HI) is used to understand health risks. For the PFAS NPDWR Proposal, the HI considers the combined toxicity of PFNA, GenX Chemicals, PFHxS, and PFBS in drinking water.

What is a Hazard Index?

The Hazard Index is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the level determined not to cause health effects.



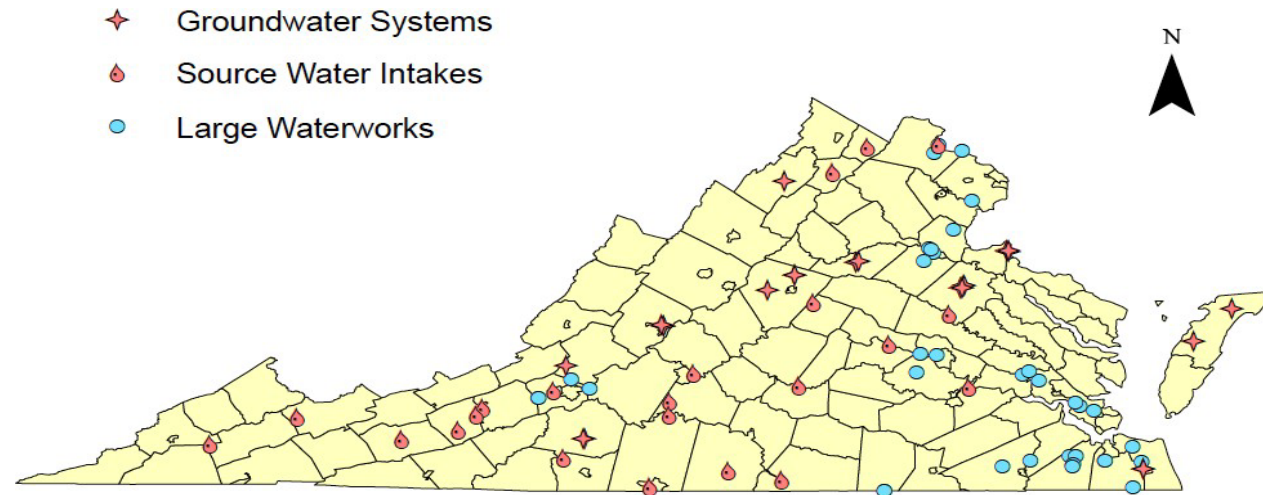
Steps:

- **Step 1:** Divide the measured concentration of **GenX** by the health-based value of **10 ppt***
- **Step 2:** Divide the measured concentration of **PFBS** by the health-based value of **2000 ppt**
- **Step 3:** Divide the measured concentration of **PFNA** by the health-based value of **10 ppt**
- **Step 4:** Divide the measured concentration of **PFHxS** by the health-based value of **9.0 ppt**
- **Step 5:** Add the ratios from steps 1, 2, 3, and 4 together
- **Step 6:** To determine HI compliance, repeat steps 1-5 for each sample collected in the past year and calculate the average HI for all the samples taken in the past year
- **Step 7:** If the running annual average HI greater than 1.0, it is a violation of the proposed HI MCL

Virginia PFAS Phase 1 Sampling

Waterworks participating: 45

Total sampling points: 63



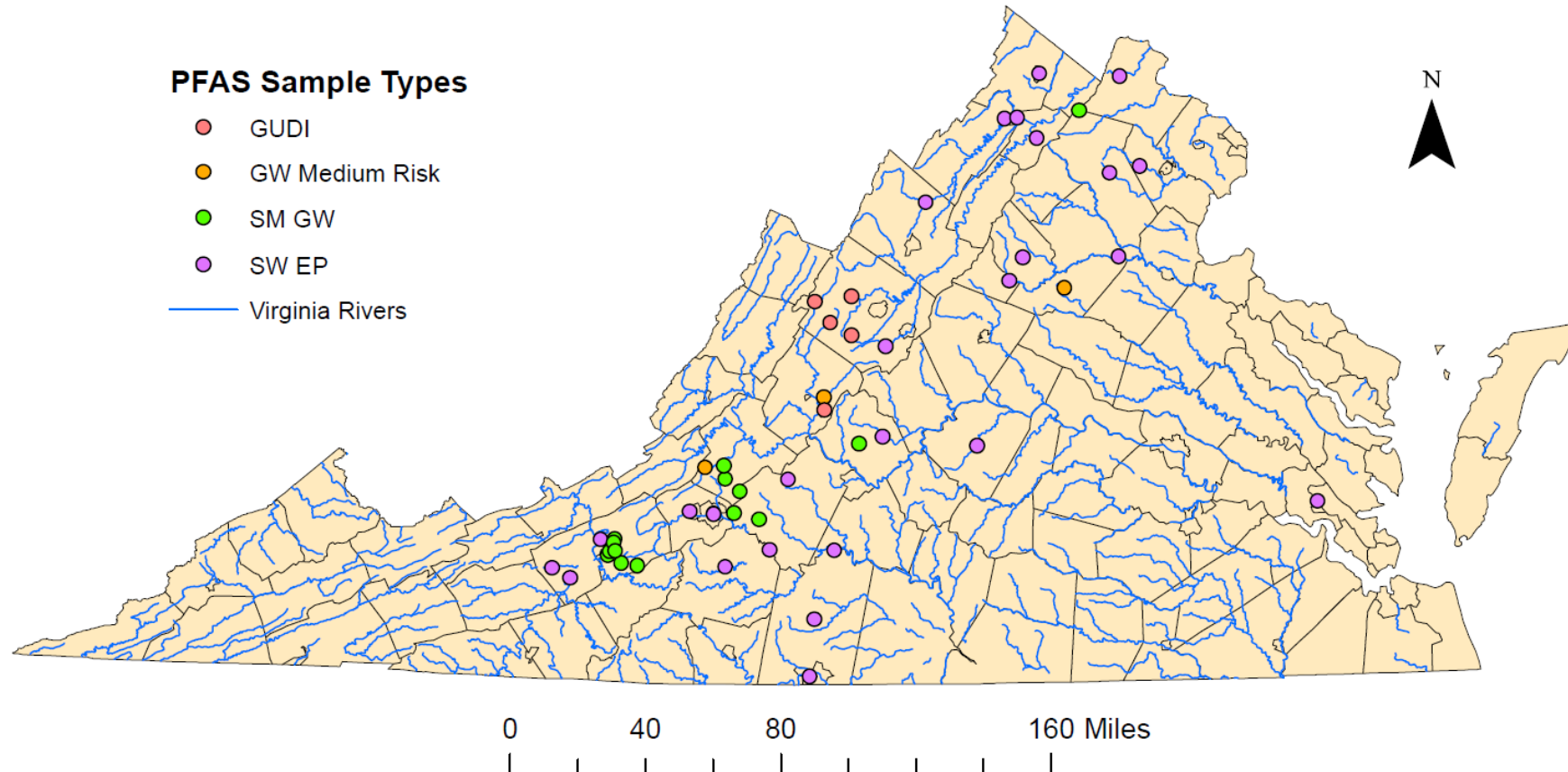
0 55 110 220 Miles



Virginia PFAS Phase 1 Sampling – Detections above proposed EPA MCLs

PFOA (above 4.0 ppt)	4 detections
PFOS (above 4.0 ppt)	6 detections
Hazard Index:	
GenX (above 10 ppt)	1 detection
PFBS (above 2000 ppt)	None
PFNA (above 10 ppt)	None
PFHxS (above 9 ppt)	None

Virginia PFAS Phase 2.1 Sampling (2022)



Virginia PFAS Phase 2.1 Sampling (2022)

In 2022 VDH completed 45 samples:

PFOA (above 4.0 ppt)	None
PFOS (above 4.0 ppt)	2 detections
Hazard Index:	
GenX (above 10 ppt)	1 detection (same as Phase 1)
PFBS (above 2000 ppt)	None
PFNA (above 10 ppt)	None
PFHxS (above 9 ppt)	None

Phase 2.2 - where are we today?

- VDH staff collected over 245 samples across Virginia in June
 - VDH staff re-collected some samples in September due to lab rejection
 - VDH completed QA/QC reviews of June samples
 - Additional samples to re-collect due to QA/QC issues
 - VDH is sharing June samples with waterworks owners now (this week)
 - VDH expects to compile and release a results summary in late October
- VDH is planning future PFAS sampling to address small or disadvantaged communities (2024)
 - VDH will have dedicated funding for PFAS and emerging contaminants under the Emerging Contaminants in Small or Disadvantaged Communities Grant - see ODW website

LCRR Update

October 16, 2024, is the compliance date - what is required then?

- Complete and submit the Service Line Inventories to the State
- Revise and submit the LCR sampling plan based on the inventory, to reflect any changed monitoring sites
- Submit a Lead Service Replacement Plan to the State (if required)
- Compile and submit a list of schools and child day centers served
- Prepare for required Public Notifications and Consumer Notifications due thereafter

Check the ODW LCRR Guidance Website for updates!

LCRR Training and Technical Assistance

ODW Contracted with TruePani to provide training and technical assistance.

- In-person training complete in June 2023
- One-on-one technical assistance (TA) is available NOW
- TA Contact information on LCRR Guidance web page:

<https://www.vdh.virginia.gov/drinking-water/lcrr-guidance/>

ODW will roll out Swift Submittals - Submittals portal for LCRR Lead Service Line Inventories and other LCRR documents in Fall 2023

- Currently undergoing User Acceptance Testing (UAT)
- ODW will provide a training webinar

LCRI – what to expect

- August 31, 2023 - EPA submitted the LCRI to the Office of Management and Budget for approval
- Review duration is unknown, but typically OMB reviews take 3 to 6 months
- EPA’s goal is publishing the draft LCRI by “Fall 2023”
- Last day of Fall is December 20, 2023
- Will we see a proposed LCRI in 2023???

Signaling from EPA - Focus on current elements of LCRR:

- LSL Inventory - Not changing
- Consumer Notification following lead tap sampling - sharing sample results
- Public Notification following action level exceedance (Tier 1)
- Consumer Notification for customers with Lead, GRR, Unknown service lines
- LSL Replacement Program

Plan Review Program

- Hired 1 project engineer
- Hiring for 1 supervisor, 1 project engineer
- Reviewers handling workload well
 - Averaging 29 days to issue a permit
- Current Challenges:
 - Different historical practices among field offices
 - Technology - blocked emails, blocked file sharing services

Drinking Water Viewer Implementation

- CCR writer feature ODW testing for 2024 rollout
- Recording instructional videos
 - Sign up video - posted
 - DWV use videos - in development

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Sampling Verification Program

- A total of 7 full-time employees have been recruited for the program.
- The program's key objectives aim to effectively identify and mitigate potential risks at the PWS that may be present with sampling processes.
 - Being executed in a 5-phase rollout.
 - In Phase 2, the field sampling process will commence in conjunction with PWS. Expected to start by the end of 2023.
- 85% of phase 1 is complete.
 - Primary focus:
 - Training, environmental laboratory procurement, data analysis-database build, setting achievable incremental goals, and identifying key metrics to track progress.

Virginia Tech Short School Examination and Test Results

Barry E. Matthews, CPG

Division Director

VDH - Office of Drinking Water

Division of Training, Capacity Development and Outreach

Department of Professional and Occupational Regulations

2023 SHORT COURSE EXAM STATISTICS

	# Candidates	# Pass	#Fail	% Pass
Waterworks Class 1	5	1	4	20%
Waterworks Class 2	5	1	4	20%
Waterworks Class 3	14	2	12	14%
Waterworks Class 4	11	7	4	64%
Waterworks Class 5	2	2	0	100%
Waterworks Class 6	6	2	4	33%
TOTAL	43	15	28	35%

Short School Testing Results

For Level A (Year 1)

29 received CEU's (Passed)

5 received contact hours

34 took the DPOR exam and received contact hours

For Level B (Year 2)

14 received CEU's (Passed)

4 received contact hours

6 took the DPOR exam and received contact hours

For Level C (Year 3)

3 received CEU's (Passed)

2 received contact hours

5 took the DPOR exam and received contact hours

Short School Test Result Averages

Level A - 72.94% Average

Level B - 71.53% Average

Level C - 67.69% Average

2021 Test Score Average - 78%

Questions

Waterworks Operation Fee Regulations & \$160,000 Cap

- The Board of Health approved proposed regulatory amendments to the Waterworks Operation Fee Regulations.
- The amendments include a \$60 fee for TNCs, a \$30 fee increase for NTNCs, and establishment of \$2,500 fee for wholesale waterworks with fewer than 15 non-waterworks customers accounts.
- The amendments are currently under executive branch review.

Waterworks Operation Fee Regulations & \$160,000 Cap

- For FY25, ODW plans to change the method by which the \$160,000 cap on waterworks operation fees is applied.
- The cap has been historically applied incorrectly - based on the owner's identity rather than the waterworks' identity.
- ODW plans to modify this so the cap is applied on a per PWSID basis.

Waterworks Regulations

September 20, 2023

Jane S. Nunn, JD, MPA
Policy and Program Coordinator



Topics

27 proposed Amendments

- 17 Substantive Changes
- 10 Technical Changes
- Determine if subcommittee(s) needed
- Expected cost increase/decrease to the regulated community included if known

Item #1 – 12VAC5-590-10

- Substantive change
- Amend the definition of "operator" to clarify it is someone who has a license "with a classification equal to or higher than the classification of the waterworks or water treatment plant being operated" found in -590-461(B) and (C)
- Proposed language: "Operator" means any individual **with a valid license as a Waterworks Operator issued by the Virginia Department of Professional and Occupational Regulation** with the requisite **classification and** skills employed or appointed by any owner, who is designated by the owner to be the person having full responsibility for the waterworks operations and any subordinate operating staff. The individual may be a supervisor, a shift operator, or a substitute in charge, and have duties including testing or evaluation to control waterworks operations. Not included in this definition are superintendents or directors of public works, city engineers, or other municipal or industrial officials whose duties do not include the actual operation or direct supervision of waterworks.
- No cost

Item #2 – 12VAC5-590-10

- Technical change
- Correct definition of Reverse osmosis in -590-10. It should read, “Reverse osmosis” or RO means a membrane technology designed to remove salts, low molecular weight solutes, and all other constituents ~~up to~~ **down to** 0.0001 micron in size...
- No cost

Item #3 – 12VAC5-590-10

- Technical change
- Change “TMF” to “**TMF capabilities**”
- Clarifies that language in -590-200 and -590-290
- No cost

Item #4 – 12VAC5-590-10

- Topic for discussion
- Substantive change
- Waterworks with seasonal components are different from seasonal waterworks and the seasonal component of their infrastructure is not currently covered by the monitoring and reporting regulations in -590-370 and -540
- Add definition for “Waterworks with seasonal components”
- Possible language: “Waterworks with seasonal components” means a waterworks that is operated as a waterworks on a year-round basis and starts up and shuts down a portion of its infrastructure at the beginning and end of each operating season.
- WAC input requested as ODW is still researching this possible amendment
- No cost

Item #5 – 12VAC5-590-115

- Technical change
- Change “informal fact-finding proceeding” to “informal fact-finding **conference**” in -590-115 and elsewhere
- Makes the language consistent with other VDH offices and other agencies
- No cost

Item #6 – 12VAC5-590-200 & 290

- Technical changes
- Following the definitional change from “TMF” to “**TMF capabilities**”
- Proposed amendments:
 - 590-200(A)(5) – replace “TMF” with “**TMF capabilities**”
 - 590-200(A)(5)(d) – “Sustainability improvements...to address **aspects of the waterworks’ business processes that need improvement with respect to TMF capabilities.**”
 - 590-290(F)(1) – replace “TMF” with “**TMF capabilities**”
- No cost

Item #7 – 12VAC5-590-200 and -260(A)

- Topic of discussion (would be substantive changes)
- Code of Virginia § 32.1-172 requires a comprehensive business plan as part of the application for a permit to “establish, construct or operate any waterworks or water supply in the Commonwealth...”
- The comprehensive business plan in ODW is the Waterworks Business Operation Plan (WBOP)
- WBOP is identified as a requirement to obtain a construction permit under -590-200(A)(5)
- WBOP is currently not required under -590-260, Issuance of the operation permit, for issuance of an operation permit
- WAC input requested as ODW is still researching to determine if or how amendments should be made with respect to the requirement for a WBOP and the circumstances in which to require it

Item #8 – 12VAC-590-370 & -530

- Topic for discussion (would be substantive changes)
- Waterworks with seasonal components are different from seasonal waterworks and the seasonal component of their infrastructure is not currently covered by the monitoring and reporting regulations
- WAC input is requested as ODW is analyzing development of a definition of “waterworks with seasonal components” and substantive regulatory requirements on such waterworks
- Minimal cost

Item #9 – 12VAC5-590-384 & 531

- Technical change
- “RAA” is defined in -590-10 as “running annual average” and is used in multiple places in the Regulations, but in -590-384 and -590-531, the term “running annual arithmetic average” is found
- The Regulations mirror the CFR, which uses “RAA” and “running annual arithmetic average” interchangeably with no apparent distinction between the two
- In ordinary language, an “average” is an “arithmetic average,” so there does not appear to be a substantive reason for not using “RAA” throughout the Regulations
- Propose replacing “running annual arithmetic average” with “RAA”
- No cost

Item #10 – 12VAC5-590-461

- Substantive change
- Add requirement to -590-461 for waterworks to notify ODW when a new “operator-in-charge” has been hired
- Proposed language: -590-461 (E), Change in owner’s designation of operator. When an owner has newly designated an operator or has designated a new operator, as defined in 12VAC5-590-10, to have responsibility for waterworks operations and any subordinate staff, the owner shall notify the department within 10 days of such designation and shall provide the operator’s name, classification, and DPOR certification number.
- WAC input requested as ODW is still researching this possible amendment
- No or minimal cost

Item #11 – 12VAC5-590-461(A)(1)(a)

- Technical change
- -590-461(A)(1)(a) has a missing comma
- Should read: A waterworks or a water treatment plant serving 50,000 or more persons, or having a water treatment plant capacity of 5.0 MGD or more, and employing conventional filtration or chemical coagulation in combination with membrane filtration.
- Without the comma, this causes consecutive waterworks serving > 50,000 people to be classified as Class 1, which is not ODW's intent
- No cost

Item #12 – 12VAC5-590-475(B)

- Substantive change
- Current language, -590-475(B) “Permanent abandonment.
 1. Well abandonment shall be supervised by a certified water well systems provider.
 2. All well abandonments shall be documented on a Uniform Water Well Completion Report, Form GW-2, and submitted to the department within 30 days of completing the physical abandonment.
 3. Groundwater wells that are abandoned shall be sealed by methods that will restore to the fullest extent possible the controlling geological conditions that existed before the wells were constructed.
 4. Casing and screen materials may be salvaged.
 5. The well shall be checked from land surface to the entire depth of the well before it is sealed to ascertain freedom from obstructions that may interfere with sealing operations. Effort shall be made to remove or clear any obstacles that may prohibit sealing by grouting the complete well depth.
 6. The well shall be thoroughly chlorinated before sealing.
 7. Bored wells and uncased wells shall be backfilled with clean fill to the water level. A two-foot-thick bentonite grout plug shall be placed immediately above the water level. Clean fill shall be placed on top of the bentonite grout plug and brought up to at least five feet from the ground surface. The top five feet of the well casing, if present, shall be removed from the bore hole. If an open annular space is present around the well casing, then the annular space shall be filled with bentonite grout to the maximum depth possible, but less than or equal to 20 feet. A one-foot-thick cement or bentonite grout plug that completely fills the bore void space shall be placed a minimum of five feet from the ground surface. As an alternative, bored wells and uncased wells may be completely filled with concrete, sand-cement, bentonite-cement, or neat cement grout to within a minimum of five feet from the ground surface by introduction through a pipe initially extending to the bottom of the well. The pipe shall be raised but remain submerged in grout or concrete as the well is filled. The remaining space shall be filled with clean fill that is mounded a minimum of one foot above the surrounding ground surface.
 8. Non-bored wells constructed in unconsolidated formations shall be completely filled with concrete, sand-cement, bentonite-cement, or neat cement grout to within a minimum of five feet from the ground surface by introduction through a pipe initially extending to the bottom of the well. The pipe shall be raised but remain submerged in grout or concrete as the well is filled. The remaining space shall be filled with clean fill that is mounded a minimum of one foot above the surrounding ground surface.
 9. Wells constructed in consolidated rock formations or that penetrate zones of consolidated rock may be filled with sand or gravel opposite the zones of consolidated rock. The top of the sand or gravel fill shall be at least five feet below the top of the consolidated rock and at least 20 feet below land surface. The remainder of the well shall be filled with concrete, sand-cement, bentonite-cement, or neat cement grout to within a minimum of five feet from the ground surface by introduction through a pipe initially extending to the bottom of the well. The pipe shall be raised but remain submerged in grout or concrete as the well is filled. The remaining space shall be filled with clean fill that is mounded a minimum of one foot above the surrounding ground surface.
 10. The location of the well shall be permanently documented for future reference.”

Item #12, continued

- Comments received that well abandonment standards are too burdensome with suggestion to amend to match OEHS requirements (for private wells, see 12VAC5-630-450)
- OEHS' response was that private well regulations are based on the cost that a homeowner could be expected to afford
- DEQ's recommendations:
 - Retain the text currently found in B.1, B.2, B.3, and B.10.
 - B.5 includes a first sentence that substantially duplicates the Private Well Regs, plus a second sentence that is absent from the Private Well Regs (both current and amended versions). We recommend retaining B.5 to preserve the requirement in the second sentence.
 - Replace the other requirements (current B.4, plus B.6 through B.9) with a single provision to the effect that, "Permanent abandonment of a well shall be in accordance with both this subsection and subsection C of 12VAC-630-420." (This would accommodate both the current requirements and the future, amended requirements of the Private Well Regs.)
- Reduced cost

Item #12, continued

12VAC5-630-450(C), "Permanent abandonment. The object of proper permanent abandonment is to prevent contamination from reaching ground water resources via the well. A permanently abandoned well shall be abandoned in the following manner:

1. All casing material may be salvaged.
2. Before the well is plugged, it shall be checked from land surface to the entire depth of the well to ascertain freedom from obstructions that may interfere with plugging (sealing) operations.
3. The well shall be thoroughly chlorinated prior to plugging (sealing).
4. Bored wells and uncased wells shall be backfilled with clean fill to the water level. A two-foot-thick bentonite plug shall be placed immediately above the water level. Clean fill shall be placed on top of the bentonite plug and brought up to at least five feet from the ground surface. The top five feet of the well casing, if present, shall be removed from the bore hole. If an open annular space is present around the well casing, the annular space shall be filled with grout to the maximum depth possible, but less than or equal to 20 feet. A one-foot-thick cement or bentonite grout plug that completely fills the bore void space shall be placed a minimum of five feet from the ground surface. The remaining space shall be filled with clean fill which is mounded a minimum of one foot above the surrounding ground surface. Bored wells or uncased wells abandoned in this manner shall be treated as wells with respect to determining the minimum separation distance to sources of contamination listed in Table 3.1. The location of these wells shall be permanently marked for future location.
5. Wells constructed in collapsing material shall be completely filled with grout or clay slurry by introduction through a pipe initially extending to the bottom of the well. Such pipe shall be raised, but remain submerged in grout, as the well is filled.
6. Wells constructed in consolidated rock formations or which penetrate zones of consolidated rock may be filled with sand or gravel opposite the zones of consolidated rock. The top of the sand or gravel fill shall be at least five feet below the top of the consolidated rock and at least 20 feet below land surface. The remainder of the well shall be filled with grout or clay slurry.
7. Other abandonment procedures may be approved by the division on a case by case basis.
8. Test and exploration wells shall be abandoned in such a manner to prevent the well from being a channel for the vertical movement of water or a source of contamination to ground water.
9. When bored wells are bored and a water source is not found, and the casing has not been placed in the bore hole, the bore hole may be abandoned by backfilling with the bore spoils to at least five feet below the ground surface. A two-foot-thick bentonite grout plug shall be placed at a minimum of five feet from the ground surface. The remainder of the bore hole shall be filled with the bore spoils.

Item #12 continued

- Proposed language, -590-475(B) “Permanent abandonment.
 1. Well abandonment shall be supervised by a certified water well systems provider.
 2. All well abandonments shall be documented on a Uniform Water Well Completion Report, Form GW-2, and submitted to the department within 30 days of completing the physical abandonment.
 3. Groundwater wells that are abandoned shall be sealed by methods that will restore to the fullest extent possible the controlling geological conditions that existed before the wells were constructed.
 4. The well shall be checked from land surface to the entire depth of the well before it is sealed to ascertain freedom from obstructions that may interfere with sealing operations. Effort shall be made to remove or clear any obstacles that may prohibit sealing by grouting the complete well depth.
 5. Permanent abandonment of a well shall be in accordance with both this subsection and 12VAC5-630-450(C).”
- Reduced cost

Item #13 – 12VAC5-590-500

- Substantive change
- Propose restoring the baffle factor of 1.0 to the Baffling Factor Table 500.15 in -590-500
- The Baffling Factor Table 500.15 in -590-500 was amended in the 2021 Regulations, removing the 0.9 and 1.0 baffle factors
- Consistent with the Guidance Manual for the Compliance with Filtration and Disinfection Requirements for Public Water Systems using Surface Water Sources (EPA, 1991), a baffle factor of 1.0 for Perfect (plug flow) conditions is justified (this reference does not have a 0.9 baffle factor)
- Recommend that ODW amend Table 500.15 to match the EPA guidance (Table C-5, Baffling Classifications)
- No cost

Item #13, continued

TABLE C-5

BAFFLING CLASSIFICATIONS

<u>Baffling Condition</u>	<u>L_0/L</u>	<u>Baffling Description</u>
Unbaffled (mixed flow)	0.1	None, agitated basin, very low length to width ratio, high inlet and outlet flow velocities
Poor	0.3	Single or multiple unbaffled inlets and outlets, no intra-basin baffles
Average	0.5	Baffled inlet <u>or</u> outlet with some intra-basin baffles
Superior	0.7	Perforated inlet baffle, serpentine or perforated intra-basin baffles, outlet weir or perforated launders
Perfect (plug flow)	1.0	Very high length to width ratio (pipeline flow), perforated inlet, outlet, and intra-basin baffles

Item #14 – 12VAC5-590-510

- Substantive change
- Return language requiring metering of total water production and add to -590-510
- Prior to 2021, the Regulations had requirements for metering of total water production in both Part II (what was then -590-520.B) and Part III (-590-700); today's Regulations only have this requirement in Part III (-590-700), which seems to allow existing waterworks to discontinue metering of total water production
- Proposed language: -590-510.
 - F. Metering total water production**
 1. All community waterworks shall provide metering of total water production
 2. All NTNCs and TNCs that provide treatment or have a design capacity of greater than 300,000 gallons per month shall provide metering of total water production.
 3. If the waterworks treatment process results in a waste flow, including filter backwash, ion exchange regenerate, or residual solids, then the waterworks shall provide metering of total source water withdrawn and finished water produced.
 4. The department may document exceptions to this requirement in Operation Permit Conditions or a Variance.
- No cost

Item #15 – 12VAC5-590-545(C)(3)

- Substantive change
- Add requirement to report "unregulated contaminants" for which monitoring is required under 40 CFR § 141.40 (UCMR) to the Consumer Confidence Report to reflect the requirement in 40 CFR § 141.153(d)(ii)
- The requirement for reporting detected contaminants monitored under the UCMR is missing from -590-545(C)(3)
- Proposed language:
 3. Information on detected contaminants.
 - a. This section specifies the requirements for information to be included in the report for contaminants subject to a PMCL, AL, MRDL, or treatment technique as specified in 12VAC5-590-340 **and contaminants for which monitoring is required by 40 CFR § 141.40 (unregulated contaminants).**
- No cost

Item #16 – 12VAC5-590-545(C)(5)(c)

- Technical change
- Missing language in -590-545(C)(5)(c)
- Current language: “For that fails to take one or more of the prescribed actions, the report shall include the applicable language of 12VAC5-590-546 for lead, copper, or both.”
- Proposed language: “For **an owner** that fails to take one or more of the prescribed actions, the report shall include the applicable language of 12VAC5-590-546 for lead, copper, or both.”
- No cost

Item #17 – 12VAC5-590-630(D)

- Technical change
- In -590-630(D), remove the references to “starting January 1, 2023...” since that date is now past
- Proposed language: “~~Starting January 1, 2023, persons~~ Persons testing and repairing backflow prevention assemblies and backflow prevention devices shall be certified by a Commonwealth of Virginia tradesman certification program (identified by DPOR as backflow prevention device workers).”
- No cost

Item #18: 12VAC5-590-830

- Substantive change
- Update -590-830 to reflect current relationship with DEQ, current requirements, and current business process
- Awaiting updated input from DEQ
- This was discussed during the process for amending the regulations back in 2021
- WAC input requested as ODW is still researching this possible amendment
- Cost unknown

Item #19 – 12VAC5-590-830

- Technical change
- Update the “Note” in -590-830(A)(2)(b) to reference DEQ
- Proposed language: Note: Local governments may request this aid from the **Department of Environmental Quality (DEQ)** by contacting either the Health Department's Office of Water Programs or **DEQ's** headquarters office in Richmond
- No cost

Item #20 – 12VAC5-590-840

- Substantive changes
- Well construction:
 - -590-840(F)(1)(c), Class 1 wells - “For wells constructed in consolidated formations, the lower end of the casing shall terminate in solid rock or other ~~impervious~~ **impermeable** formation when practical to do so.”
 - -590-840(F)(2)(c), Class 2 wells - “For wells constructed in consolidated formations, the lower end of the enlarged portion of the drill hole should terminate in solid rock or other ~~impervious~~ **impermeable** formation when practical to do so.”
- Grouting requirements:
 - -590-840(G)(5)(b)(3) “Before grouting wells, suitable fill material such as bentonite, **engineered low-permeability/high-solids bentonite and sand mix**, low-strength cement and sand mix, or similar materials that have been approved by the department shall be added to the annular opening below the grout zone to seal and stabilize these areas. Instead of this requirement, the casing may be grouted for its entire depth.”
- Cost unknown

Item #21 – 12VAC5-590-840(I)(4)

- Substantive change
- -590-1030(A)(2) required, “A properly screened vent with the end elbowed downward shall be provided for the well casing” but was repealed in 2021
- Restore language for well casing vent requirements, including screening, by adding to -590-840(I)(4)
- -590-840(I)(4) currently reads, “Provisions shall be made for venting the well casing to the atmosphere. Where vertical turbine pumps are used, vents into the side of the casing may be necessary to provide adequate venting.”
- This allows multiple interpretations of what an appropriate vent might be: 1) a screened mushroom cap; 2) a screened tube elbowed downward; 3) a tube pointed straight upwards with a screen tied around the end; 4) an unscreened pitless adapter cap; or 5) something else.
- Recent example: a plastic pipe pointed straight upward, with no screen, and with slots cut into the sides of the pipe.
- Proposed language: “Provisions shall be made for venting the well casing to the atmosphere. **The piping connecting the vent to the casing shall be of sufficient diameter to allow for rapid venting of the casing. The opening of the vent shall be covered with corrosion resistant screen, with a mesh size sufficient to prevent entrance by insects (24-mesh size recommended).** Where vertical turbine pumps are used **or the well is equipped with a pitless adapter unit,** vents into the side of the casing may be necessary to provide adequate **well** venting. **Pitless adapter caps, which have screened vents that are integral to the cap construction, are acceptable. The vent shall terminate in a downturned position, at or above the top of the casing, no less than 12 inches above the floor or grade. ”**
- **No cost**

Item #22 – 12VAC5-590-882(G)

- Substantive change
- Update -590-882(G) to reflect a requirement for inline laser-type turbidimeters
- Applicable only to membrane filtration processes.
- Requirement in WM880 so already asking waterworks to meet this standard
- WAC input requested as ODW is still researching this possible amendment
- Cost unknown

Item #23 – 12VAC5-590-1005(H)(4)

- Substantive change
- Update -590-1005(H)(4) to be consistent with new EPA UV guidance issued in 2022 that says continuous UVT monitoring is no longer necessary when the calculated dose approach is used
- WAC input requested as ODW is still researching this possible amendment
- Likely cost savings

Item #24 – 12VAC5-590-1065

- Substantive change
- Revision to -590-1065(D) as it relates to -590-700
- Current language: “A totalizing water meter to measure water production shall be provided for each well and shall be located upstream of the well blowoff.”
- Proposed language: “**If a totalizing water meter is required per 12VAC5-590-700, then a totalizing water meter shall be provided for each well and located upstream of the well blowoff.**”
- Likely reduced cost

Item #25 – New Regulation

- Substantive change
- Look at moving flood risk management standard from the DWSRF Program Guidance to our regs
- This would codify requirements already imposed on a portion of the regulated community (those receiving DWSRF funds)
- Focus on flooding prevention/mitigation
- Federal/state grant money may be available
- Still researching with proposed language to be presented at the December WAC meeting
- Increased cost for new construction not associated with DWSRF
- WAC input requested as ODW is still researching this possible amendment

Item #26 – 12VAC5-590

- Technical change that applies to the complete chapter
- Change the order of some sections if doing so would make the regulations easier to understand or reference
- One example: Regulations specific to lead and copper (-590-375, -590-385, -590-405, & -590-532) are not grouped together but are grouped per category (monitoring, compliance, technique, & reporting)
- WAC input needed by March 2024 WAC meeting

QUESTIONS ?

COMMENTS?

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