

Waterworks Advisory Committee Meeting Minutes

In Person: Fairfield Library, 1402 Laburnum Ave, Richmond VA 23223

10:00 am, Wednesday, December 13, 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; Russ Navratil, VA AWWA; Chris Pomeroy, Virginia Municipal Drinking Water Association; Ignatius Mutoti, VSPE; Andrea Wortzel, Mission H2O; Geneva Hudgins, VA-AWWA; Ben Barber, VA Health Catalyst

Members Absent: Whitney S. Katchmark, PE Principal Water Resources Engineer; Tom Fauber, VA ABPA; Caleb Taylor, VA Municipal League; Anthony Morris, DEQ; Mark Estes, VRWA; Joey Hiner, VA SERCAP (attended virtually).

Stakeholders: Christopher Gill, William J. Mann, Jr., MD, Chris Harbin, Ivy Ozman, Katherine Coffey

Office of Drinking Water (ODW) Staff: Dwayne Roadcap, James Reynolds, Barry Matthews, Aaron Moses, Dan Horne, Christine Latino, Grant Kronenberg, Robert Edelman, Jane Nunn, Steve Kvech, Jeremy Hull, Kendall Scott, Ray Weiland, Jessica Coughlin

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. Grant Kronenberg called the meeting to order at 10:03 a.m. and reviewed the agenda.

It was established that there were enough members in person to establish a quorum.

Review and Adopt Minutes of Meeting

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

Waterwork Regulations

Jane Nunn has been working on the proposed changes to the Waterworks Regulations. There are 16 substantive changes and 10 technical changes being presented for the WAC's consideration. Jane presented the proposed amendments to the WAC, noting that the WAC will determine whether to approve the proposed changes and whether it needs to establish subcommittees to discuss any of the proposed changes.

1. 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 12AVC5-590-461(B) and (C)

The WAC discussed regarding this change. An operator can be anyone, but the new definition indicates that you must have a valid license instead of the capability to have a license. They are concerned that the new definition will exclude a category of personnel. ODW staff suggested meeting with DPOR to make sure both definitions are concurrent. The WAC determined that no determination could be made without further discussion.

2. Technical change • Correct definition of “reverse osmosis” in 12VAC5-590-10. 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 opposition by the WAC members to the proposed change.

3. Technical change • Change “informal fact-finding proceeding” to “informal fact-finding conference” in 12VAC5-590-115 and elsewhere. Makes the language consistent with other VDH offices and other agencies.

No opposition by the WAC members to the proposed change.

4. Technical changes • Proposed amendments: 12VAC5-590-10 – Change the definition of “TMF” from: ““TMF” means the technical, managerial, and financial capabilities to operate and maintain a waterworks.” To: ““TMF” means technical, managerial, and financial.” 12VAC5-590-200(A)(5) – add “to operate and maintain a waterworks” after “TMF capabilities.” 12Vac5-590-290(F)(1) – add “to operate and maintain a waterworks” after “TMF capabilities.”

No opposition by the WAC members to the proposed change.

5. 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 12VAC5-590-200(A)(5). WBOP is currently not required under 12VAC5-590-260, Issuance of the operation permit, for issuance of an operation permit. WAC input requested as ODW is still analyzing the issue 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.

After some discussion, the WAC determined that more discussion is needed for better clarity. Grant Kronenberg, Jane Nunn, and Barry Matthews will update the material then forward it to Jesse Royall, Chris Pomeroy and Andrea Wortzel for

their individualized review. The updated version will be presented to the WAC in March.

6. Technical change • “RAA” is defined in 12VAC5-590-10 as “running annual average” and is used in multiple places in the Waterworks Regulations. In 12VAC5-590-384 and 12VAC5-590-531, however, the term “running annual arithmetic average” is found. The Waterworks Regulations mirror the Code of Federal Regulations, 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 Waterworks Regulations. ODW proposes replacing “running annual arithmetic average” with “RAA.” This is a technical change – “RAA” is defined as “running annual average.”

No opposition by the WAC members to the proposed change.

7. Substantive change • Add requirement to 12VAC5-590-461 for waterworks to notify ODW when a new “operator-in-charge” has been hired. Proposed language: 12VAC5-590-461(E), Change in owner’s designation of operator. When an owner has changed the operator (as defined in 12VAC5-590-10) designated as having 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.

The WAC suggested that the 10-day notification be changed to “10 to 30 days or no later than the tenth day of the previous month” Jane indicated that she would check the Code of Virginia to confirm.

The WAC suggested to strike the “subordinate staff” language.

With whose changes, the WAC did not oppose the proposed change.

8. Technical change • 12VAC5-590-461(A)(1)(a) has a misplaced 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 moving the comma, this causes consecutive waterworks serving more than 50,000 people to be classified as Class 1, which is not ODW’s intent.

The WAC has asked if bullet points could be used instead of commas. Ignatius Mutoti and Bob Edelman will meet offline to discuss an issue raised with the use of the word “coagulation.”

9. Substantive change • Current language, 12VAC5-590-475(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.”
- Comments received that well abandonment standards are too burdensome with suggestion to amend to match the Private Well Regulations’ requirements (see 12VAC5-630-450). The VDH Office of Environmental Health Services’ 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 Regulations, plus a second sentence that is absent from the Private Well Regulations (both current and amended versions). ODW recommends 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 12VAC5-630-420." This would accommodate both the current requirements and the future, amended requirements of the Private Well Regulations.

Jesse Royall would like ODW to further discuss the issue with VDH's Office of Environmental Health Services to make sure that the proposal is in line with the Private Well Regulations. ODW will do that and bring something back to the WAC at its March meeting.

10. 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 12VAC5-590-500 was amended in the 2021 amendment to the Waterworks 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).

EPA does not include the Baffling Factor of 0.9 in its table. The WAC members suggested to make the table consistent with the EPA guidance factor. ODW would add the 1.0 back into the regs to conform with EPA's standards. The WAC members recommend that ODW amend our table so that it matches. No opposition by the WAC members to the proposed change.

11. Substantive change • Return language requiring metering of total water production and add to 12VAC5-590-510. Prior to 2021, the Waterworks Regulations had requirements for metering of total water production in both Part II (what was then 12VAC5-590-520.B) and Part III (12VAC5-590-700); today's Waterworks Regulations only have this requirement in Part III (12VAC5-590-700), which seems to allow existing waterworks to discontinue metering of total water production.

Proposed language: 12VAC5-590-510. 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 Substantive Change.

The Waterworks Regulations has an issue regarding metering total water production. Would like to add the language back to part 2 that was removed in the 2021 amendments and add to section 510. Create a new subsection for 510.

No opposition by the WAC members to the proposed change.

12. 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 12VAC5-590-545(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).” Substantive change – Need to add a requirement regarding regulated contaminants. Not currently in the Waterworks Regulations – this is something that EPA has required us to do.

No opposition by the WAC members to the proposed change.

13. Technical change • Missing language in 12VAC5-590-545©(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 opposition by the WAC members to the proposed change.

14. Technical change • In 12VAC5-590-630(D), remove the references to “starting January 1, 2023...” since that date is now past. Proposed language: “Starting January 1, 2023, 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).” Technical change – addition of “an owner.”

No opposition by the WAC members to the proposed change.

15. Technical change • Update the “Note” in 12VAC5-590-830(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.” Technical change – Change reference to the Department of Environmental Quality.

No opposition by the WAC members to the proposed change.

16. Substantive changes. Well construction: 12VAC5-590-840(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.” 12VAC5-590-840(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: 12VAC5-590-840(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.” Substantive change – well constructions from “impervious” to “impermeable.” Also adding “engineered low-permeability/high-solids bentonite and sand mix.”

No opposition by the WAC members to the proposed change

17. Substantive change • Previously, 12VAC5-590-1030(A)(2) required, “A properly screened vent with the end elbowed downward shall be provided for the well casing,” but was repealed in 2021. Recommend restoring language for well casing vent requirements, including screening, by adding to 12VAC5-590-840(I)(4). 12VAC5-590-840(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 opposition by the WAC members to the proposed change.

18. Substantive change • Update 12VAC5-590-882(G) to reflect a requirement for inline laser-type turbidimeters. Applicable only to membrane filtration processes. Requirement in ODW

Working Memo 880 so already asking waterworks to meet this standard. WAC input is requested as ODW is still researching this possible amendment.

WAC members requested that ODW check on laser type turbidimeters and ODW staff said that would look at developing a performance standard.

19. Substantive change • Update 12VAC5-590-1005(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. Proposed language: “Continuous monitoring sensors shall be provided to measure UV intensity. A continuous sensor shall also be provided to measure ultraviolet transmittance (UVT) if the calculated dose approach is utilized, except if the validated calculated dose approach does not require UVT as a continuous input. For systems validated on the basis of equations not requiring UVT as a continuous input, the department may require equipment for grab-sample UVT analysis.”

No opposition by the WAC members to the proposed change.

20. Substantive change • Revision to 12VAC5-590-1065(D) as it relates to 12VAC5-590-700. 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.”

WAC members requested to clarify that this is an exception, and WAC members noted that this language is incorporating exceptions that are in another section of the Waterworks Regulations.

With clarification, no opposition by the WAC members to the proposed change.

21. Substantive change • Look at moving flood risk management standard from the Drinking Water State Revolving Fund (DWSRF) Program Guidance to the Waterworks Regulations. Jane Nunn noted that this would codify requirements already imposed on those in the regulated community that receive DWSRF funds; It focuses on flooding prevention/mitigation; federal/state grant money may be available; and increased cost for new construction not associated with DWSRF. ODW requests WAC input as ODW is still researching this possible amendment.

Jane Nunn will develop proposed language and discuss it at the WAC meeting in March after she has gotten information from the ODW DWSRF staff.

22. 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 (12VAC5-590-375, -590-385, -590-405, & -590-532) are not grouped together but are grouped per category (monitoring, compliance, technique, and reporting). WAC input needed by March 2024 WAC meeting on changing the order of the sections.

The consensus of the WAC was that no change is needed.

23. New technical item • Regulatory definition states that “boil water advisory” and “boil water notice” have the same meaning. Federal Safe Drinking Water Act and the National Primary Drinking Water Regulations do not define them, and the EPA and CDC primarily use “boil water advisory.” Consensus is that the general public does not discern between the two terms. ODW’s proposal is to amend the regulations to use “boil water advisory” instead of “boil water notice.”

It was discussed that in the Tier 1 public notification, can differentiate between the two by adding the word “precautionary” when it’s unknown if the water is contaminated. There was discussion about the use of “precautionary.”

No opposition by the WAC members to the proposed change. The WAC members recommended ODW add a new regulation for notices that uses the language “do not use.”

24. New substantive item • Confusion between this regulation and a manual/working memo. Proposed language: For each routine sample found to be total coliform positive, the owner shall collect a set of three repeat samples within 24 hours of being notified of the positive result. The department may extend the 24-hour limit on a case-by-case basis if the system has a logistical problem in collecting the repeat samples within 24 hours that is beyond its control.”

No opposition by the WAC members to the proposed change.

25. New substantive item • Current language: “Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the commissioner or department on a case-by-case basis.” Proposed language: “Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the commissioner or department on a case-by-case basis. An example would be a loss of water pressure that results in the potential for contaminants to enter the depressurized area of a distribution system, such as a water main break, loss of water supply, demand exceeding supply, or closed valve.”

WAC members did not feel that providing an example as proposed by ODW is necessary. The WAC members suggested ODW revise the section to provide greater clarity, however.”

Compliance, Enforcement & Policy Update

Thirteen serious violators identified in the October Enforcement Targeting Tool report from EPA.

To date, seven systems have returned to compliance.

The Enforcement Manual and Waterworks Operation Fee Regulations are still under executive branch review.

Staff update

ODW is currently operating at a 16% vacancy rate. ODW has other positions advertised, the issues we are having is finding engineers to fill those positions.

ODW is currently advertising for a Chief of Field Operations (formerly the Deputy Field Director).

Budget

ODW currently has 7 positions on hold awaiting the Governor's budget.

PFAS Phase 2

Robert Edelman is taking over the PFAS responsibilities. The UCMR 5 monitoring started January 1, 2023, and will run through 2025. Virginia currently has 62 water systems that have monitored for UCMR 5. The interesting thing is that there hasn't been that many detections above the MCLs. ODW is expecting the EPA to finalize the regulations within the new year.

Virginia has collected over 290 samples this year in what we are calling Phase 2.2 for PFAS monitoring program. ODW now has a PFAS dashboard on the website that is available for the public and press. Please note that the information on the website doesn't include the samples that Water systems have done independently.

Lead and Copper Revisions

The LCR improvements are currently located on the EPA webpage. Because of the number of pages of the Lead and Copper revisions, ODW will take a while to go over all of the information.

Waterworks will need to continue to focus on completing and submitting the Service Line Inventories followed by the notifications. ODW will offers technical assistance and job aids are on ODW's website. ODW will be rolling out a portal with training for the regulated community and will be providing a webinar at a later date.

Centralized Plan Review Program

ODW's staff shortage has changed the approval time. ODW is working on getting the Centralized Plan Review Program back on track. ODW is setting up a portal to submit plans.

Drinking Water Viewer implementation

Field Services Engineer Aaron Moses is working with ODW's vendor to provide more frequent updates and will be working on recordings, instruction videos, and training for waterworks.

If there are issues with incomplete data, please share with Aaron Moses directly.

EPA Cybersecurity Assessment Memo

The EPA is hosting a Cybersecurity tabletop exercise. Jessica Coughlin, Emergency Services Coordinator, encourages all operators and owners to take the course. Ms. Coughlin provided a slide for review during the meeting for those who want additional information.

Training Program

Julie Floyd is now the new Training Manager. She is working to make improvements to the operator certification, evaluation of operator training, improving internal training and Lead and Copper Rule Revisions training.

The municipal association is setting up a committee along with DPOR and AWWA. ODW is planning to monitor the committee. WPI is standing up a new initiative to attempt to provide certification for water drinking water and wastewater trainers.

Lead Testing

Please see attached slides. There are also links to recordings.

Public Comment

None

Conclusion

The 2024 WAC meetings are scheduled for March 13, 2024 (in person), June 12, 2024 (all virtual), September 18, 2024 (in person), December 11, 2024 (all virtual).

The meeting adjourned at approximately 12:45 p.m.