



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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MINUTES REGULATORY ADVISORY PANEL MEETING Triennial Review Water Quality Standards (WQS) June 30, 2021

Welcome and Introductions

Advisory Panel Members and/or Alternates Present:

- Joe Wood, Ph.D./Patrick Fanning, *Chesapeake Bay Foundation*
- Grace LeRose, *City of Richmond*
- David Brotman/Jay Eiche, *Friends of NF Shenandoah*
- Evan Branosky, *Home Builders Association of Virginia*
- Jamie Brunkow/Anna Killius, *James River Association*
- Phillip Musegaas, *Potomac Riverkeeper Network*
- Jamie S. Heisig-Mitchell/Richard Sedgley, *VA Association of Municipal Wastewater Agencies (VAMWA)*
- Martha Moore, *VA Farm Bureau Federation*
- James Taylor, *VA Manufacturers Association (VMA)*
- Leigh Mitchell, *Upper Mattaponi Indian Tribe/Regional Tribal Operations Committee*
- David Sligh, *Wild Virginia*
- Greg Voight/Denise Hakowski, *EPA Region 3*
- Rene Hypes, *Dept. of Conservation & Recreation (DCR)*
- Todd Egerton/Aaron Moses, *Virginia Dept. of Health (VDH)*
- Ernie Aschenbach, *Dept. of Wildlife Resources (DWR)*

DEQ Staff Present:

Jutta Schneider (Facilitator), Melanie Davenport, Bryant Thomas, Dr. Tish Robertson, David Whitehurst, Allan Brockenbrough, Conner Brogan, Tara Wyrick

Overview and Discussion of Triennial Review Potential Amendments

Ms. Schneider, Water Planning Division Director, opened the meeting with a brief review of Executive Order Number 51 pertaining to electronic meetings, introductions, purpose and expectations of the Regulatory Advisory Panel (RAP, or Panel), and that group is a public body subject to the Freedom of Information Act. A recording of the meeting is available at:

<https://attendee.gotowebinar.com/recording/1223773350404011782>

After Ms. Schneider reviewed the agenda, Joe Wood asked if there would be a chance for the public to address the Board on each of the issues or would it be opportunity to address proposal package as a whole. Ms. Schneider explained that when the proposal is presented to the Board for their consideration there will not be an opportunity for RAP members or the public to address the Board. Once DEQ staff receive Board approval to proceed to a Notice of Public Comment (NOPC) there will be a 60-day comment period and a public hearing. She further explained that those that provide comment during the NOPC comment period have the opportunity to address the Board during the meeting for final adoption of proposed amendments.

David Sligh asked whether it is optional for the RAP and public to speak with the Board earlier. Ms. Schneider replied that, procedurally, when a proposal goes before the Board, it is a staff presentation and does not include opportunity for the public to address the Board. Mr. Sligh stated that the earlier interested parties get to talk to the Board about different perspectives, the better it is for them and the better it is for the public to hear those perspectives. Ms. Schneider stated the Board procedures are guided by the Administrative Process Act, and that drives how issues are presented to the Board and how the public is engaged during the rulemaking process. Melanie Davenport said DEQ staff will look at statute and regulations and follow-up.

Dr. Tish Robertson then reviewed current proposed amendments to Section 9VAC25-260-140 (pollutant parameter table), Section 310 (special standards which includes filamentous algae criteria for the Shenandoah), and Section 185 (Chesapeake Bay criteria, Submerged Aquatic Vegetation acreage updates).

VAMWA raised concerns with not having the ability to maintain a Water Effects Ratio (WER) approach for copper criteria. They stated the WER provides empirical data regarding copper toxicity to local receiving waters and VAMWA members would like to maintain the ability to utilize the WER approach to determine site-specific copper criteria and, thusly, discharge permit limits. Dr. Robertson responded that we have been instructed by EPA that the Biotic Ligand Model (BLM) approach needs to be primary. EPA commented that they are comfortable with DEQ's proposal and has implementation guidance they can share. Regarding defining a dataset sufficient to run the BLM, the proposed language was left open-ended so that other DEQ water programs have the ability to define their needs appropriately. It was explained that the Water Permits and Water Quality Assessment programs would have public participation opportunity during guidance development.

Regarding dinitrophenol, Dr. Robertson explained this issue will be addressed through another process/means rather than changed in the WQS. Allan Brockenbrough stated DEQ will use the same process as Oregon is using which is to use 2, 4 dinitrophenol for test result purposes until such time as a method becomes available to test for total dinitrophenols. He stated that the permitting staff are already updating the procedures for this.

Leigh Mitchell asked if DEQ had any consideration in using any human health criteria exposure factors besides the 2011 EPA recommendations. Ms. Schneider responded that DEQ does not have any current data or information on which to base new exposure factor numbers, but would be willing to talk/explore what would be needed to move this forward on issues such as subsistence fishing. This would include targeted meetings and discussions. Ms. Mitchell stated there are data for other indigenous tribes in the US, but not specifically in Virginia and would DEQ consider outside data or does it need to be specifically targeted? Ms. Schneider said that although that is not part of this rulemaking DEQ will plan to discuss

these types of issues (outside or targeted data). Ms. Schneider asked that we reconvene separate group with Ms. Mitchell and any other tribal leaders and interested parties on this discussion. Greg Voight (EPA Region 3) offered to participate. David Sligh expressed his interest in this topic.

Mr. Sligh also commented on the assumptions in long term exposures: criteria should protect the most sensitive/vulnerable populations as well as the average person. Have other states used different assumptions on body weight and factors of this nature. Ms. Schneider responded that this is definitely a policy issue with far-reaching implications since DEQ has typically relied on EPA's recommended criteria including their underlying assumptions which are incorporated into all the human health criteria.

. Dr. Robertson stated that the nationally recommended criteria are not intended to protect only the average person, but set at the 90th percentile which protects the majority of the population. Mr. Voight stated that a couple of EPA Region 3 states are looking to establish different underlying assumptions, to include WV. EPA is having conversations with those states but nothing has been finalized. The vast majority of states use the recommended standardized values. For body weight and drinking water intake, all states use the same assumptions. However, fish consumption rates can differ and EPA has guidance on developing fish consumption rates.

Ms. Schneider asked whether there had been anything presented thus far with which the RAP members cannot support. Mr. Sedgley commented that VAMWA members may have serious concerns. VAMWA does not see a basis that the BLM is any more appropriate than a site-specific WER. The BLM is a model; a WER is site-specific. Mr. Sedgley asked why we are even pursuing this proposal. Ms. Schneider referred to EPA stating it is DEQ's understanding that EPA no longer supports the WER. EPA commented that they are no longer supporting the use of the WER as they believe the science behind the BLM is more appropriate. The hardness-based copper criteria are no longer recommended by EPA and it is likely that more metals criteria will be moving to this approach. The BLM is getting at what is happening at a site and instream. Mr. Sedgley did not agree that Virginia does not have much flexibility in determining a path forward but rather Virginia can pursue their own path which they feel is supported by the science of site-specific conditions.

Ms. Schneider asked for clarification from VAMWA: can they live with the proposal or not? Mr. Sedgely commented that while they have not consulted with their water quality committee or members, he thought they would significantly oppose the current proposed language regarding copper criteria. Ms. Schneider then asked RAP members to consider whether or not another meeting would be needed to work through language. EPA offered to have additional conversations on this topic if/as needed. We will consider this offer as we move forward through the day.

Ms. Schneider then moved on to present the proposed language of Section 9VAC25-260-310, which is the section of the WQS that contains site-specific special standards. She informed the RAP of the deletion of special standard "y" which is site-specific ammonia criteria for freshwater tidal tributaries of the Potomac River and explained the deletion is because the criterion has been overridden by more stringent statewide freshwater ammonia criteria adopted in 2020.

Ms. Schneider then presented the revised Shenandoah River filamentous algae criteria which were updated to reflect feedback from the RAP. She described the expanded area of applicability for the revised proposal and explained that DEQ staff would continue monitoring the fixed sites, would respond to complaints, and would work with outside groups who may want to collect additional data and

information. Citizen monitoring data meeting data quality requirements would be evaluated like other water quality data.

Mr. Eiche asked about how and where the criteria would be applied from monitoring data collected. Ms. Schneider described how DEQ staff establish and delineate an assessment unit (AU) and that monitoring data collected at a station would be applied to the AU associated with the monitoring station. Every monitoring station has an associated AU. Monitoring protocols would continue as currently established. Mr. Eiche asked if impairments are identified how the river clean-up is addressed. Ms. Schneider described that a Total Maximum Daily Load (TMDL) clean-up plan will consider everything in the upstream drainage. Additional data would be collected and staff would look at the entirety of the upstream watershed for pollutant loadings and all potentially contributing sources are considered in the clean-up plan.

Rene Hypes (DCR) asked whether there would be any advisories or prohibition of uses with noted impairments. The state parks division asked whether adjacent river sections by state parks would need any type of postings or advisories if criteria are exceeded. Ms. Schneider responded that exceedance of the proposed algae criteria would not necessarily pose any risk, per se, to swimmers. At this juncture there is no clear responsibility for who might post information, but DEQ water quality concerns generally point to long term water quality trends. Todd Egerton from VDH noted that any harmful algae blooms (HABs) would be considered separately from this process and any advisories associated with HABs is separate from the benthic chlorophyll criteria being considered.

Ms. Hypes noted the Virginia Scenic River program and provided a general overview of the process. There are locations within the proposed areas that have been qualified for scenic river designation. DCR does support any type of actions to reduce the benthic algae in these areas where Scenic River designations are being considered and/or apply.

Mr. Musegaas commented that his organization regularly reports to the Virginia HAB hotline based on their field work. He stated that his organization supports the updated/revised proposal and appreciates the work done to consider feedback which is incorporated into the revised proposal.

Mr. Sligh voiced his appreciation for the revision to cover a broader aerial extent. He continues to have concerns with the duration of the proposed criteria. He stated that the loss of the use during one season should reflect an impairment. He said he cannot accept the proposal requiring two years of exceedances in a three-year period. Ms. Schneider said DEQ appreciates his concerns and will note his disagreement. She explained that his position is appreciated but DEQ is focused more on nuisance and persistence and based on the information collected, staff are confident that the proposal is appropriate.

Martha Moore (VAFB) believes the spatial expansion from what was initially proposed is too broad.

Joe Wood clarified to the RAP this rule-making is not determining monitoring locations, it is about where the criteria are applied. Also, regarding the local vs Chesapeake Bay TMDL requirements, the efforts can be complementary and BMP efforts can be counted towards both. Lastly, the proposed WQS look more like standards we normally see.

Mr. Voight commented that EPA R3 has looked closely at the magnitude, duration and frequency of the proposed criteria. While sensitive to Mr. Sligh's comments, they think our proposal is solid to reflect persistent nuisance algae and they support the work we have done. He offered that they think this is

something that should be reviewed in the future based on additional data/information, and be modified as necessary to ensure the criteria remain appropriate for the purpose for which it is designed. This can be considered the start of the conversation rather than the end.

Mr. Sligh commented that he does not believe this approach is consistent with other standards, specifically comparing the bacteria criteria. He posed the question: if the use is impaired for a season or a few months, wouldn't that be interfering with the use? He stated that the need for filamentous algae criteria is not hypothetically looking at something down the road but the Shenandoah River currently has a problem. He also stated concerns that it may still take several years from completing these criteria to result in an impairment listing.

Ms. Mitchell does support the revised proposal. They noted that Tetra Tech is currently engaged in user surveys. Regarding the seasonal median, they feel 110 mg/m² is more appropriate than 100 mg/m². This is the value that Montana and Utah use. She stated she feels 110 it is appropriate for the full season. When the season is not wadeable they suggest substituting with a default chlorophyll 'a' value. She stated that some studies from New Zealand may indicate that nutrient enrichment may not necessarily be the cause of excessive benthic algae growth. Also, VAMWA supports 2 exceedances in 6 years as opposed to DEQ's 2 exceedances in 3 years proposal. Ms. Schneider responded that DEQ staff are comfortable with the proposal and the numbers (magnitude) values contained.

Mr. Musegaas stated he feels this proposal sets up a clear path for monitoring organizations to collect and submit data which would allow outside organizations to augment DEQ monitoring efforts considering DEQ resources. He stated that from a public advocacy perspective, this is very much appreciated.

After a short break, Dr. Robertson presented proposed amendments to Submerged Aquatic Vegetation (SAV) acreage criteria for the Chesapeake Bay in Section 9VAC25-260-185. Amendments are proposed to increase SAV acreage in five Chesapeake Bay Program segments along with their corresponding Water Clarity Acreage goals.

David Whitehurst then presented proposed amendments in Section 9VAC25-260-50 related to the application of pH criteria in lakes and the addition of Lake Mooney to the lakes nutrient criteria table in Section 9VAC25-260-187. Martha Moore noted a minor correction needed for Lake Anna. She noted the table lists Louisa County as the only locality within which Lake Anna resides but Lake Anna is bounded by 2 other counties: Spotsylvania and Orange Counties.

Mr. Whitehurst then covered proposed amendments to the following river basins: Potomac, Shenandoah, Lower and Middle James, Rappahannock, Chowan, and Clinch. The proposed amendments encompass a few river segment clarifications, some trout waters modifications, special standards notations (e.g. deleting special standard "y", and adding special standard "ii" to accommodate Shenandoah algae criteria), and addition of new public water supplies (PWS).

A RAP member suggested formatting the river basin tables using gridlines to enhance readability.

After lunch, Ms. Schneider shared a summary of the public comment policy for the State Water Control Board and noted we will share more details with follow-up materials after the meeting. She then polled the group to get their positions which staff can share with the Board. Below are noted comments:

Mr. Sligh gave remarks regarding his earlier concerns with proposed criteria for filamentous algae in the Shenandoah River. He had no other concerns.

Ms. Moore reiterated her concern with algae criteria and elevating the recreation use. She thinks the proposed criteria have gone too far.

Mr. Sedgley restated VAMWA's major concerns with the copper BLM. VAMWA will consider this further and get back with DEQ on any suggested changes. He stated support for the spatial extent of coverage for the Shenandoah River algae criteria but has some concerns with threshold values. Not yet certain of overall concurrence or non-concurrence.

Ms. Schneider stated that DEQ staff are comfortable with the proposal though not closing the door on possible changes and will consider any further input.

Other Issues Discussed

Mixing Zones

Melanie Davenport presented information related to DEQ's response to Governor Northam's Executive Order six which requires DEQ to re-examine how the agency handles mixing zones. This was in response to RAP member comments during a previous meeting. She stated that mixing zones will be addressed through a non-regulatory process and a non-regulatory group of stakeholders (technical in nature) will be convened to discuss the issue and development of new guidance on the issue. DEQ is considering a draft framework and is looking at other approaches. It is anticipated this will occur late this year given current staff workload.

Jamie Brunkow (JRA) followed up asking for more details on the framework. Allan Brockenbrough responded that DEQ currently uses a complicated approach that combines mixing concepts but that staff may be able to find a better approach and will want to review and discuss with stakeholders before preparing guidance.

Joe Wood asked if DEQ has a list, or can identify, where mixing zones have been applied throughout VA. Mr. Brockenbrough replied that staff does not currently have the ability to easily mine that information from fact sheets.

Jim Taylor suggested we include modelers in the discussions that DEQ is planning. Dr. Wood suggested we include someone with freshwater mussel expertise.

Mr. Brunkow has significant concerns with this concept; many relevant issues that are complex and challenging such as overlap of mixing zones and the various pollutants for which there are mixing zones. He asked that DEQ raise this issue to a high priority given it is in E06 and requested that DEQ inform the Board of DEQ's plan to address this issue. Mr. Brockenbrough agreed it would be good to inform the Board as part of the TR process. Mr. Sligh stated he is supportive of a new approach to mixing zones and would like to be part of those discussions.

James River Thermal Inputs

Mr. Brockenbrough summarized the projected changes in thermal load to the tidal freshwater James River that will result with the retirement of the Chesterfield power plant's Units 5-6 by end of 2024. He stated that 83% of the thermal load is going away in the foreseeable future. Mr. Brunkow understands and expressed concern with the persisting issue and that it will remain for 3 more years. With respect to the current triennial review rulemaking, he would like to have temperature criteria considered for recreational use protection. He noted his concerns if ambient waters exceed 104° F, which is the maximum VDH recommended temperature for hot tubs. He asked what DEQ is doing to protect human health as related to excessive heat in waters other than the James River. Mr. Brockenbrough mentioned that it is correct we don't institute thermal limits to protect human health absent a WQS. However, the situation in the tidal James was the most egregious example and there are not others like this in the state. While Virginia has temperature criteria that are intended to protect the aquatic life use, those values tend to be much lower.

Todd Egerton (VDH) mentioned that 104° F is for hot tubs. The value has been in place for decades and applies to hot tubs and spas.

Ms. Schneider summarized that DEQ staff are not aware of other instances and this particular one has a process in place to address and resolve it. DEQ is not looking to add anything further to the criteria as the upcoming actions will address and resolve this particular issue.

Climate Change

Ms. Schneider described what is being considered in TMDL development and that DEQ staff are considering this now. She also summarized the agency strategic plan in development that is prioritizing climate change and adaptation in DEQ's water quality management strategies.

Cultural / Tribal Beneficial Uses

David Whitehurst summarized information regarding cultural designated uses he had gathered from California and New Mexico. He noted the most substantial difference related to the protection of a cultural designated use was a lower fish tissue criterion for mercury. This was done to protect tribal populations that practice subsistence fishing. He also noted there are other pathways to make amendments to the WQS besides Triennial Review, including agency initiative and petitions to the Board.

He noted that federally recognized tribes are able to establish their own WQS independent of DEQ. Leigh Mitchell mentioned that DEQ should consider what that might look like if this were to proceed in VA.

Cyanotoxins

Tish Robertson presented information regarding cyanotoxins and current EPA recommendations for cyanotoxin concentration values that may either be used as WQS criteria or as values that may be used to trigger swimming advisories. She stated that DEQ is relying upon VDH swimming advisories to determine if the swimming use is impaired and this is done through DEQ's assessment process. The 2022 Integrated Report Guidance was reviewed. She further stated that DEQ is relying upon swimming advisories rather than developing or establishing WQS. Dr. Wood asked if there is a retroactive way of

considering whether older data that show an advisory would have been issued if we had the data, and asked why not adopt the swimming advisory thresholds as WQS? Ms. Schneider offered that the collected data is reviewed by VDH and we are aware of most of the universe of data. We feel the current approach is appropriate and effective and do not see the need to develop criteria. David Sligh supported Dr. Wood's position. He stated he did not see the downside of adopting them as criteria and that the goal is to identify and look ahead to prevent them from happening again. Ms. Schneider stated there is an effective reporting mechanism that drives VDH and DEQ coordinated responses, and DEQ staff are identifying impairments and looking to fix identified issues and have developed the assessment process to allow this. Dr. Wood noted that the cost of analysis/assays has significantly decreased and we will likely see more data in the future. Ms. Schneider acknowledged the comments and appreciated the feedback.

Narrative Criteria

Ms. Schneider provided DEQ's position on the narrative criteria. She indicated the criteria are applied in many ways, including the biological monitoring of upland and coastal streams, fish consumption advisories, shellfish harvesting, beach closures, and Whole Effluent Toxicity (WET) testing. She indicated that our procedures need to be verifiable, quantifiable, and repeatable to identify a problem and take action to address and resolve. The measures to support WQS include: biennial Water Quality Assessments, VPDES compliance monitoring of Water Quality Based Effluent Limits, and enforcement actions against permitted and unpermitted dischargers.

A path forward for the narrative criteria was not agreed upon at this time. Mr. Sligh noted his concerns and that he intends to provide DEQ with written suggestions for how we might address his concerns. Leigh Mitchell also supported Mr. Sligh.

Nutrient Criteria Development Plan

Ms. Schneider summarized the existing programs that address nutrients in Virginia and the work that DEQ is doing to address nutrient over-enrichment. Virginia is relying heavily on the implementation measures from existing programs to include Chesapeake Bay nutrient criteria, lakes/reservoirs nutrient criteria, and local nutrient TMDLs. She stated actions on the ground are resulting in significant improvement to nutrient control and reduction. The work done on Shenandoah River algae criteria and HAB advisories incorporated into the assessment guidance are examples of how DEQ is moving this forward. We have invested significantly in nutrient controls at point sources and nonpoint sources (NPS). It is DEQ staffs position that the existing programs are the best approach to implement nutrient controls.

She summarized the Academic Advisory Committee's work regarding nutrient criteria development efforts. The 2016 supplemental report recommends additional approaches. Field testing of potential nutrient screening levels has been put on hold due to lack of resources.

Mr. Sligh stated that numeric criteria are designed to address and prevent problems and not wait until an impairment is identified and a stressor analysis is done. He asked why not move forward with rulemaking for numeric nutrient criteria that has been in the works for many years? We are moving forward with turbidity rulemaking but not nutrients in streams. He doesn't think DEQ should wait any longer on developing criteria.

Dr. Wood stated he thinks it (nutrient criteria) should be a priority moving forward. There are nutrient issues not being addressed by the Bay program (e.g. York River Basin).

Ms. Schneider acknowledged and appreciated the comments and asked if RAP members thought another meeting was needed for further discussion. There was no specific request to hold a fifth meeting so no plans were made to hold another unless something arises that warrants scheduling another meeting.

Ms. Schneider requested any additional information and/or language be submitted within the next week. She stated that for narrative or nutrient criteria issues, DEQ is not prepared to take action in this rulemaking though staff can and will inform the Board of the items not addressed in the proposed amendments.

She said that DEQ will pull together any updates from the work today and invited RAP members to provide any additional proposed language suggestions they would like us to provide to the Board in light of the summary.

Mr. Whitehurst outlined the next steps of the rulemaking process stating that DEQ staff will take a proposal to the Board on September 28, 2021. If approved by the Board, the proposal then goes through Executive Review and then to a notice soliciting public comment. He stated that if significant issues arise, the RAP can be reconvened to work through those issues.

As follow-up, Ms. Schneider said RAP members will be sent the slide deck, an updated version of the parameter table of the WQS, and the State Water Control Board's Public Comment Policy and will ask for any comments from the RAP within one week. DEQ will also send minutes from last meeting and the current meeting.

The floor was opened for Public Forum comments. There were no comments from the general public.

Ms. Schneider thanked all for their participation. She stated that she feels like some of these topics may benefit from additional stakeholder engagement such as adaptation of water quality management to climate change and mixing zone policy, and engagement with the Tribes. She stated these issues may be best served outside of outside of the current rulemaking process.

The meeting was adjourned at approximately 3:30 p.m.