

February 18, 2021

Amanda Shaver
Virginia Department of Environmental Quality
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Re: Comments on Draft 2022 Water Quality Assessment Guidance Manual, 1/19/2021

Dear Ms. Shaver:

The undersigned are submitting these comments on behalf of Wild Virginia and Potomac Riverkeeper Network (Riverkeeper).¹ We appreciate the chance to provide our ideas. Of primary concern, as explained more fully below, are the following issues:

- that the guidance does not provide for the use of existing, readily-available information that demonstrates violations of the narrative criteria contained in the state's water quality standards regulation and
- a proposed sampling schedule for *E. coli* bacteria will not adequately characterize water pollution risks in a way that provides protection of human health and recreational users.

Based on these deficiencies, we ask that the final guidance allow for the use of additional types and sources of information to ensure that all water quality standards (WQS) are fully enforced and that sampling regimes be designed in a way that allows for a true analysis of designated use support.

Narrative Criteria and Recreational Uses

The Department of Environmental Quality (DEQ), in fulfilling its duties under Clean Water Act (CWA) section 303(d), must "evaluate all existing and readily available water quality-related data and information" concerning potential WQS violations, as required by federal regulations. 40 C.F.R. § 130.7(b)(5). Our organizations and others have supplied a large volume of "water quality-related data and information" to DEQ, in comments on the 2020 Water Quality Assessment Integrated Report (Integrated Report) and in other submittals. This information addresses the impairment of human uses of waterbodies caused by pollution that produces color, turbidity, floating and settleable solids, nuisance algal growth, and other physical and chemical changes in water and in stream channels. Much of this information describes conditions during the period of coverage for the 2022 Integrated Report, so must be assessed in that report's preparation.

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The 2022 Water Quality Assessment Guidance Manual (2022 Guidance) must describe how these kinds of information will be used to assess compliance with WQS, the appropriateness of "impaired" waterbody designations, and/or the need for additional targeted monitoring to further assess the impacts identified. In response to challenges to previous impaired waterbody listing decisions, DEQ has finally acknowledged that visual and physical conditions can interfere with designated uses in certain streams in the Shenandoah River watershed. By attempting to characterize the levels of attached filamentous algae that interfere with recreational uses, DEQ has taken an important and necessary step in the use of state WQS. However, this admission by the Department fails to go far enough in acknowledging obvious and serious negative impacts on streams caused by pollution.

The "general criteria" (also known as "narrative criteria") defined in the Virginia WQS regulations, at 9 VAC 25-260-20., provide, in pertinent part, that state waters "shall be free from substances . . . in concentrations, amounts, or combinations which interfere directly or indirectly with designated uses of such water . . ." Also, "[s]pecific substances to be controlled include . . . substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life." Id.

Thus, these general or narrative criteria are expressed in terms that can be understood and measured in human terms by those who wish to and have a right to use these waters. These criteria, because they are not expressed in quantitative terms like the numeric criteria, require interpretation. However, this factor does not justify DEQ in failing to even attempt to apply these criteria in the many instances where clear and readily-available information demonstrates that they are violated.

Because the most reliable test as to whether humans can or should use streams for recreation, including fishing, swimming, wading, boating, and aesthetic enjoyment, is based on human perceptions, these are not only valid measures to use in assessments, they are the most appropriate. We note again that the federal regulation refers to "water quality-related data and information," a very broadly-worded command that DEQ must not answer with an arbitrarily-narrow approach.

As long as the information from members of the public is adequately descriptive, specific, and credible, the Department has no basis to disregard that information. Further, photographs are certainly reliable evidence, which courts routinely allow, as long as the photographer can verify that the images are true representations of what she or he saw. If such sources are good enough in legal cases, they must be sufficient for DEQ. Finally, we have also submitted evidence from experts in the fields of water quality assessments and commercial operators whose livelihoods depend on their abilities to judge when conditions interfere with recreational uses. Again, expert observations and opinion testimony are well-established as credible and reliable.

While DEQ has begun to consider visual and physical conditions, such as those represented in the filamentous algae assessments mentioned above, the agency continues to insist that such observations can only be valid for the integrated report if they are first translated into numeric

terms. It is true that once WQS violations have been identified, through direct application of the general criteria, numerical thresholds must be established in permitting or development of Total Maximum Daily Loads. However, the need for those additional steps does not justify DEQ's approach at the assessment and listing stages. Federal regulations clearly anticipate that such a two-step process will be followed. At 40 C.F.R. § 122.44(d)(1)(vi), the regulations require that authorities develop numeric permit limits *after* it is shown that a discharge will result in violation of narrative criteria in a waterbody. The regulation then lays out three specific methods for translating the narrative criteria into numeric permit limitations. Thus, there is no basis for DEQ's position that the translation must occur at the first step, during the water quality assessment phase.

Fortunately, the U.S. EPA and other states have provided guidance and examples for the use of the public's observations and documentation of impacts and impairments of waterbody uses. The EPA discussion of these methods, with examples of the ways numerous states have used such methods is included in the document attached to this letter.²

The EPA explains that:

A State can determine whether a waterbody is attaining its applicable narrative nutrient or other relevant narrative criteria and designated uses by using results of visual assessments. For example, field observations of excessive algal growth, macrophyte proliferation, adverse impacts on native vegetation (e.g., eelgrass), presence or duration of harmful algal blooms, unsightly green slimes or water column color, and/or objectionable odors may be a basis to include a waterbody on the State's Section 303(d) list for failing to meet one or more applicable narrative criteria and designated uses.³

One type of information that Riverkeeper has supplied to DEQ is a prime example of evidence such as that EPA describes. Citizens have reported obnoxious odors caused by decaying algae in Shenandoah watershed streams on many occasions, likening the odors to raw sewage or dead animals. And these public reports were endorsed by DEQ's former field monitoring supervisor when he described his observation of nuisance algae in the North Fork Shenandoah River as "definitely nasty" and noting that these materials "are quite often mistaken for sewage, due to both appearance and odor."⁴

Virginia would be following numerous other states in using the types of information we have submitted and cited herein, as described in the EPA memo. For example:

Vermont uses public feedback and complaints in addition to field surveys of algae blooms to assess waters for attainment of the above water quality standard. For the swimming/contact recreation use in lakes, waters are considered impaired if

² U.S. EPA, *Memorandum: Information Concerning 2014 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*, Denise Keehner, September 3, 2013.

³ Id.

⁴ Kain, Donald, Virginia DEQ, email to Leslie Mitchell RE: *Cow poop dumping*, July 9, 2012.

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an ongoing record of public complaint concerning the algal conditions in the water has been established.⁵

and

Montana's assessment method to address nitrogen and phosphorus pollution for wadeable streams includes an "overwhelming evidence of nutrient impairment" provision for which photo documentation is adequate to make an impairment determination for aquatic life use.⁶

Finally, we note that, while the EPA document deals solely with ways to make and use valid observational data in relations to nutrient pollution and excessive algae, these same methods are just as valid for findings that designated uses are damaged by color, turbidity or solids concentrations, and other conditions. Virginia must incorporate these types of methods into the 2022 Guidance and acknowledge the information available to it in preparing the 2022 Integrated Report.

E. coli Monitoring Frequencies

Based on information presented in DEQ's webinar describing the draft 2022 Guidance, we understand that the Department will assess *E. coli* levels in any particular impaired stream for only one 90-day period each year and that these single 90-day periods per stream would vary for all the different streams throughout the year, to allow agency personnel to collect samples from all the streams that need assessment. We believe that this system is flawed for two primary reasons.

First, the contribution of bacteria to streams in areas such as the Shenandoah watershed is likely to be highest in periods when application of manure is most prevalent, in spring and summer. Second, the uses to be protected, human recreational uses, happen primarily in the warmer months and, therefore, any assessment of risks from exposure to pathogens in the water must be made in the same period. Sampling that is intended to protect uses must reflect conditions when those uses occur and be designed to detect the real conditions that result from activities on the land and point and nonpoint pollution sources.

Thank you for considering these comments and we would be happy to discuss our concerns further.

Sincerely,

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⁵ U.S. EPA, *Memorandum: Information Concerning 2014 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*, Denise Keehner, September 3, 2013, at page 10.

⁶ *Id.*