2022 Proposed Vermont Water Quality Standards Rule (Chapter 29A) – Response to Public Comments

The Vermont Department of Environmental Conservation (VTDEC) presented the proposed Vermont Water Quality Standards Rule (Chapter 29A) to the Interagency Committee on Administrative Rules (ICAR), the first step in the rulemaking process, in May. The rule was subsequently filed with and noticed by the Secretary of State on May 25, 2022. Public comments on the proposed rule were accepted through July 22, 2022. All comments submitted in their original form, the proposed Water Quality Standards Rule, and updates on the rulemaking process are posted on the Vermont Water Quality Standards webpage. Comments requesting specific changes to the proposed Vermont Water Quality Standards Rule are included below. These comments are excerpted and summarized and organized by the relevant subsection of the Vermont Water Quality Standards Rule, with VTDEC responses following. Similar comments are grouped together with a single response.

General Comments

Comments Requesting Additional Changes:

1. The Notice of Proposed Rulemaking does not sufficiently evaluate the economic impacts of the proposed rule changes.

   VTDEC Response: Federal and state government agencies, private enterprises, businesses, and individual citizens whose operations, development, or land-use activities require a permit or certification to ensure compliance with the WQS may be affected by the adoption of this rule.

   Updates clarifying the application of the standards to wetlands and articulating the requirements associated with Section 401 Water Quality Certifications, pursuant to Act 32, are expected to have negligible economic impact because they simply clarify existing policy with regard to wetlands and 401 Certification applications, consistent with federal requirements. Information regarding project alternatives is currently provided by most applicants for federal permits; the burden from this change will fall on Agency staff reviewing 401 applications to evaluate the sufficiency of the alternatives analysis and provide an assessment of that analysis in each Certification issued.

   Modifying the applicability language in Section 29A-101 is expected to have a negligible impact on regulated entities. Applicants for discharge permits issued pursuant to the State's delegated authority under the Clean Water Act will be required to apply the WQS in effect at the time of permitting decision rather than complete application. In the limited circumstance where the WQS are revised between the time of permit application and permit issuance, an applicant may be required to update their application to address any new applicable standard.

   Updates to the hydrology policy and hydrology criteria will have negligible economic impacts on regulated entities. The requirement that applicants conduct site-specific flow studies to determine support of aquatic habitat in Class B(1) waters will likely have an impact on permit applicants required to conduct such studies if applicants had not otherwise intended to conduct site-specific studies. Updates to the methodology for evaluating aquatic habitat will have negligible economic impact, since the revised methodologies are implicit in the current language broadly requiring habitat assessments.

   The reclassification of three streams in the Lower Otter Creek Watershed will not have a direct economic impact on landowners within the watersheds of those streams.

Updates to Appendix C toxic chemical criteria consistent with EPA criteria are required by federal regulation. The impacts of these criteria updates will be limited to the small number of wastewater treatment facilities and industrial dischargers that discharge one or more of these specific chemicals and that may need to implement additional measures under their next discharge permit to meet the revised standards.

2. In light of EPA's new Drinking Water Health advisories for PFAS, we request the public comment period and process be extended to enable the public to review ANR's updated Water Quality Standards.

   VTDEC Response: EPA's advisories for drinking water, including the one issued in June 2022, are interim advisories until a new National Primary Drinking Water Regulation is established. EPA has not yet established National Recommended Water Quality criteria for Aquatic Life and Human Health (i.e., § 304(a) criteria) for PFAS, which serve as the basis for state water quality toxics criteria. EPA was accepting public comments on draft aquatic life criteria for PFOA and PFOS through July 2022. Once finalized, Vermont will adopt these recommended criteria into water quality standards. The draft aquatic life criteria are significantly higher than the interim drinking water health advisory EPA issued in June and the observed PFAS concentrations in Vermont surface waters.

Subchapter 1. APPLICABILITY, DEFINITIONS, AND POLICIES
§ 29A-101 Applicability

Comments on Proposed Changes:

3. The current applicability standards should remain in place, those being: "(b) Concerning any application, the Water Quality Standards in effect at the time of the filing shall apply."

   VTDEC Response: As a delegated authority, the VTDEC is required to issue discharge permits that meet the minimum requirements of the Clean Water Act and associated regulations, and that are consistent with National Pollutant Discharge Elimination System (NPDES) permits issued by EPA. Any permit issued pursuant to this authority must include conditions "to provide for and ensure compliance with all applicable requirements of CWA and regulations." 40 C.F.R. § 122.43(a). Federal regulations require that for a state-issued permit, "…an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit." 40 C.F.R. § 122.43(b)(1). The proposed applicability language is necessary to comply with the requirements of the Clean Water Act.

4. EPA believes that the "final administrative disposition of a permit or certification" should be the date upon which a final permit or certification is issued as opposed to the date upon which the Agency places the proposed permit or decision on public notice. Further, once EPA approves water quality standards (WQS) under Section 301(c) of the Clean Water Act (CWA) the new or revised WQS would be in effect for CWA purposes. Thus, the applicable WQS should be those which are in place (and approved by EPA) at the time final permit or certification issuance.

VTDEC Response: The VTDEC proposes the following revisions: The applicable Water Quality Standards shall be those in effect at the time of ~~final administrative disposition of a~~ final permit or certification issuance. ~~The time of final administrative disposition shall be the date upon which the Agency places the proposed permit or decision on public notice~~. Concerning Water Quality Certification for a License, or the renewal of a License, issued by the Federal Energy Regulatory Commission (FERC), the applicable Water Quality Standards shall be those in effect at the time that the FERC issues notice of application ready for environmental analysis for a License.

Comments Requesting Additional Changes:

5. I propose the applicability language be changed in order to ensure that all of our A(1) eligible water bodies are preserved and protected in perpetuity. For example, "With the exception of all water bodies currently eligible for reclassification as A(1) water bodies, and in order to ensure their protection,"

   VTDEC Response: To convey the level of protection inherent in reclassification, the VTDEC believes it is necessary to follow the reclassification procedure, which requires interdepartmental coordination, technical review of water quality data relative to the proposed classification, and public outreach, including landowners in the affected watershed, prior to initiating rulemaking. Further, as shown in § 29A-104(b), "Existing classifications of water uses shall be maintained unless reclassified in a manner consistent with the Act and in compliance with all applicable federal requirements, including 40 C.F.R. § 131.10(g)."

§ 29A-102 Definitions

Comments on Proposed Changes:

6. Including "portion of the riparian corridor that support woody debris recruitment and temperature refuge" into the definition of Physical Habitat Structure and Stream Processes suggests the rules will govern these "portions" of the riparian corridors, yet there is no basis for that or any suggested rulemaking to do so. So why include portions of riparian corridor in the definition? Physical habitat is referenced throughout the rule in terms of management objectives and criteria for determining Water Quality Classification. While I cannot find any sort of direct regulatory requirements applied to the riparian area under the rules, it suggests expansion of criteria to out of stream characteristics. It not only conflicts but confuses/complicates the application of other definitions such as Flow Characteristics (16), which refers to physical habitat structure –where in this instance, clearly is limited to in-stream flow characteristics not riparian. Adding this to the definition of Physical Habitat Structure clearly expands the present spatial scope far outside of in-stream areas, streambanks, woody debris above the stream bed as live or dead vegetation within a riparian area that could add to instream debris or provide temperature moderating capability could encompass vegetation as far as 150 feet from the actual stream. Adding this phrase to these definitions is unnecessary, is already included within the riparian policy, creates confusion and inherently conflicts with the in-stream or jurisdictional wetlands scope of the Clean Water Act or 401 authority.

   VTDEC Response: This additional language is intended to clarify the extent of the riparian area. The riparian area will be considered to the extent it supports woody debris recruitment and temperature refuge, which directly influences both instream habitat and stream processes, and therefore affects the ability of the water to meet the aquatic biota and aquatic habitat designated uses.

Comments Requesting Additional Changes:

7. The definition of wetland includes "potholes," however a pothole itself is never defined. If the terms is meant to include both landform and road surface potholes, VLCT objects to including potholes in the definition. We are concerned that an area such as water filled ditches, depressions, or holes in the highway exchanges and rights-of-way would qualify as a pothole. The ensuing fiscal impact to municipal public works projects would be substantial. A definition of pothole needs to be included in the definition section of the rules, and the definition must exclude road surface and associated water-filled ditches, depressions, or holes in and around road and highways systems.

   VTDEC Response: The definition of wetlands included in the rule is the statutory definition found at 10 V.S.A. § 902. The VTDEC disagrees that water filled ditches, depressions, or holes in the highway exchanges and rights-of-way could be construed as jurisdictional wetlands. The Wetland Rules describe the characteristics necessary to be a jurisdictional wetland.

8. The concept of "assimilative capacity" should not be applied to bioaccumulative toxins.

   VTDEC Response: The VTDEC does not apply the concept of assimilative capacity in consideration of bioaccumulative toxins.

9. "Mixing zones" and "waste management zones" should be eliminated from the Vermont Water Quality Standards.

   VTDEC Response: Mixing zones are provided for in both the federal Clean Water Act and state statute and are limited to 200 feet from the point of discharge. Waste management zones indicate reaches where the public may be at a slightly elevated risk of exposure to pathogens when swimming because of a direct discharge upstream. However, Water Quality Standards must still be met, and all designated uses maintained in waste management zones.

10. While we acknowledge that the definition of "Wetland" under the Draft Rule corresponds with other Vermont regulations and statutes, we object to the exclusion of wetlands in agricultural lands used to "grow food or crops in connection with farming activities."

    VTDEC Response: The Wetlands definition is consistent with the definition in statute, and a rule cannot supersede or overcome the definition in statute.

§ 29A-103 General Policies

Comments on Proposed Changes:

11. VLCT objects to the deletion of existing language in the rules that allows the agency to join in voluntary agreements with municipalities and others relating to artificial streamflow regulations. These agreements can help all parties to work creatively and in a cost-effective manner to address any artificial streamflow regulations, and we believe they should be preserved.

12. By deleting the phrase, "to the extent practicable", it suggests that there is always a means of determining conditions which preserve the natural flow regime of waters. GRH acknowledges that is the goal but as a policy, it must recognize that cannot always be achieved and therefore we strongly recommend the phrase remain in the policy statement. Sometimes it is simply not possible to restore to natural flow regime; perhaps close but not absolute and therefore the phase "to the extent practicable" is necessary. Including it reflects reality and does not create any sort of loop-hole. As stated, it acknowledges the need for flexibility when addressing complex streamflow systems that, in some cases, stray from a pure natural flow regime but benefit designated uses and maintain or expand biological integrity.
13. For the same reason, GRH believes it is important to recognize there are circumstances when artificial streamflow regulation is a necessary reality that cannot be totally eliminated. The continued use of the word "cooperating" in the same sentence recognizes the need for a degree of case specific flexibility. Policy is not the same as a goal and it has to be grounded and reflect the landscape it applies to.

VTDEC Response (to comments 11-13): The proposed strikethrough of "in achieving voluntary agreements relating to artificial streamflow regulation" will not change the scope of the state's authority under §1003 or in implementing the Hydrology Policy. The Hydrology Policy is implemented through compliance with the Hydrology Criteria. The Hydrology Criteria recognize that there can be a change in the natural flow regime, but only to the extent it fully supports uses and complies with all applicable water quality criteria. Removal of the phrase "to the extent practicable" from the Hydrology Policy statement is intended to convey that the Standards provide a means for determining conditions which preserve the natural flow regime.

Comments Requesting Additional Changes:

14. Under § 29A-103(e) of the Draft Rule, the language as written indicates that the Secretary "shall" initiate rulemaking for recommendations made in the Tactical Basin Plans. However, to our knowledge, this policy has not been historically followed. This is particularly troublesome in regard to recommendations for the reclassification of State waters from B(2) to B(1) for fishing and/or for aquatic biota, and to A(2) and A(1) waters. The failure to initiate rulemaking leaves those waters without needed protections to maintain their chosen water quality classifications. The following language is proposed:
    (5) Upon adoption of a tactical basin plan, the Secretary shall promptly initiate rulemaking ~~and shall give due consideration to~~ <u>on</u> the recommendations contained in the tactical basin plan.

VTDEC Response: Tactical basin plans are meant primarily as planning documents. The level of scrutiny and community involvement specific to recommending reclassification of surface waters in a tactical basin plan is not as thorough as that afforded to pre-rulemaking review and public participation which occurs during a watershed-specific reclassification process.

15. In an effort to assist with climate resilience preparations in the State, we suggest adding a new subsection (6) to § 29A-103(e):
    (6) <u>So that tactical basin plans help to advance Vermont's goals for natural disaster-preparedness, climate resilience, and habitat management, the Secretary shall make recommendations pursuant to the State Hazard Mitigation Plan and Vermont Conservation Design, and, shall coordinate with the following: the Director of Vermont Emergency Management; the Commissioner of the Fish and Wildlife Department; and the Commissioner of the Department of Forests, Parks, and Recreation</u>.

VTDEC Response: The suggested language is beyond the scope of tactical basin planning authority in 10 V.S.A. § 1253.

§ 29A-104 Classification of Water Uses

Comments on Proposed Changes:

16. GRH would like to understand the purpose and meaning behind specifying [adding], " *the designated uses of the water, and"*. The factors which are already listed under § 29A-105(b)(1-5) appear to represent designated uses. If so, why the need to also add " *the designated uses of the water, and"* as if they were distinct and different.

    VTDEC Response: The addition of "all designated uses" clarifies that the designated uses, regardless of whether they are being attained, must be considered in determining the existing uses to be protected and maintained.

17. GRH considers a water withdrawal or hydro project that exists or previously existed on or after November 28, 1975 to meet the criteria as an Existing Use and therefore the title of (b) Protection and Determination of Existing Uses is misleading. Rather this sub-section is about determining the level or degree of protection existing uses are warranted, not determining whether they exist or not. Existence is defined by the definition and this sub-section states *"those existing uses shall be maintained and protected regardless of the water's classification"*. The changes made in subsection (b) suggest they might not be protected and therefore is counter to the first sentence.

    VTDEC Response: The title of § 29A-104(b) accurately characterizes the Agency's authority and responsibility to determine existing uses on a waterbody-specific basis. The proposed changes to subsection (b) do not undermine the Agency's obligation to protect existing uses, they simply clarify the considerations relevant to the determination of an existing use. Pursuant to the Clean Water Act, the Agency is required to maintain the water quality necessary to support designated uses. Vermont has not adopted water withdrawals or hydroelectric power production as designated uses of the state's waters (see Response to Comment 20).

18. The order of the eight designated uses at Section 29A-104(d) changed. For example, "The use of waters for enjoyment of aesthetic conditions" was previously listed as number six in the list and is now number three. Also, "The use of waters for swimming and other primary contact recreation" was previously listed number 3 in the list but is now number six. Does the order of the designated uses in the list have any significance? All designated uses should receive equal protection under Vermont's WQS.

    VTDEC Response: The order of designated uses was changed to align with order in § 29A-306 Use-specific Management Objectives and Criteria by Class. The overall order of designated uses is not intended to reflect any specific prioritization or hierarchy.

Comments Request Additional Changes:

19. VLCT requests that "aesthetic conditions" be defined in new subsection (3). Such an undefined term can be interpreted very broadly and the potential unintended consequences of every subjective "aesthetic condition" when interpreting and enforcing rules will be immense. The term should be clearly defined to eliminate any subjective interpretation and thereby better clarify the scope of potential designated uses that may fall under this new subsection.

VTDEC Response: Numeric criteria for aesthetic use for lakes have been developed and incorporated into the Vermont Water Quality Standards and are currently in development for streams.

20. Existing hydropower should be added as a Designated Use.

    VTDEC Response: The objective of the Clean Water Act is to protect and maintain the physical, chemical, and biological condition of Waters of the US, and the uses supported by high quality waters. Pursuant to this policy objective, states are required to adopt standards to protect the public health or welfare, enhance the quality of water, and serve the purposes of the Clean Water Act. VTDEC believes that adopting a designated use that could degrade water quality, such as hydroelectricity production, does not align with the objective of the Clean Water Act or the State of Vermont's Water Quality Policy articulated in 10 V.S.A. § 1250. Furthermore, adopting hydroelectric production as a designated use would not relieve the VTDEC of the obligation to impose water quality criteria stringent enough to protect other designated uses such as aquatic biota and wildlife. Through our Section 401Water Quality Certification of FERC licenses, we ensure that hydroelectric facilities are operated in a manner that does not violate the Vermont Water Quality Standards.

21. We urge the Department to remove the following under § 29A-104(d)(8): "[t]he use of water for irrigation of crops and other agricultural uses." Akin to the generation of electric power, the growing of agricultural crops and the vague catch-all "other agricultural uses," are commercial ventures. Like hydropower, irrigation does not necessarily rely on high quality water as other uses, such as aquatic biota and habitat, require it. Further, also resembling hydropower, agricultural uses can result in the degradation of water quality, in this case through the discharge of nutrient pollution. Accordingly, irrigation for agriculture should not be afforded the same level of protection as aquatic biota or other uses and § 29A-104(d)(8) should be removed from the list of designated uses.

    VTDEC Response: Per EPA policy, all designated uses must receive equal protection under the Vermont Water Quality Standards. Vermont could seek to remove a designated use through a use attainability analysis on a waterbody-by-waterbody basis, if it is shown that use has not and cannot be attained and is subject to EPA approval.

22. GRH encourages the Department to clarify the distinction between existing uses and designated uses.

    *VTDEC Response: "*Existing use" means a use which has actually occurred on or after November 28, 1975, in or on waters, whether or not the use is included in the standard for classification of the waters, and whether or not the use is presently occurring. "Designated use" means any value or use, whether presently occurring or not, for which a water has been designated as Class A(1), A(2), B(1), or B(2). Under the Clean Water Act, states are required to specify designated uses that they consider appropriate water uses to be achieved and protected. Designated uses are listed in § 29A-104(d). Existing uses are a confirmation of the set of designated uses in the Vermont Water Quality Standards regardless of the classification of the water.

23. GRH suggests the language be modified to read, *"In determining the **extent to which** existing uses **will** to be protected and maintained under this section and all other sections of these rules, the Secretary shall consider the designated uses of the water, and at least the following factors:…"* o GRH further recommends the last item proposed for **addition**, *"When existing uses are incompatible, or conflict with designated uses, conditions shall be imposed to attain the water quality necessary to support the highest and best use."* be modified to read, *"When existing uses appear are incompatible, or* appear to *conflict with designated uses, conditions shall be imposed to attain the water quality necessary to support designated use without eliminating the existing use which must also be maintained and protected of the highest and best use*." This will maintain consistency with the first sentence in sub-section (b), eliminate the confusion and undefined term highest and best use, and provide for a realistic yet flexible approach needed in conflicting situations.

    VTDEC Response: The phrase "highest and best use" is not included in the proposed rule. Existing uses are a confirmation of the set of designated uses in the Vermont Water Quality Standards regardless of the classification of the water.

§ 29A-105 Antidegradation Policy

Comments Requesting Additional Changes:

24. We recommend the Department clarify the Antidegradation Policy to ensure that no activity may degrade water quality, or aquatic habitat, without complying with Antidegradation Policy—including actions to protect existing uses.

    VTDEC Response: The Antidegradation Policy only applies to projects seeking authorization under permits that must comply with the Vermont Water Quality Standards. In the Antidegradation Policy, Tier 1, Protection of Existing Uses, ensures that existing uses of waters, and the level of water quality necessary to protect those existing uses, shall be maintained and protected.

25. Is not the purpose of an anti-degradation policy to maintain water quality now and for the future? Why doesn't this policy agree with § 29A – 206, regarding permits under the Clean Water Act?

    VTDEC Response: The antidegradation policy allows for a limited reduction in the existing higher quality of such waters only when it is shown that:

    (A) through the applicable permitting or approval process, the Secretary has provided public notice of the draft decision and an opportunity for public comment on the decision;
    (B) after an analysis of alternatives, allowing lower water quality is necessary to prevent substantial adverse economic or social impacts on the people of the State; and
    (C) there shall be achieved the highest statutory and regulatory requirements for all new or existing point sources, and all cost effective and reasonable best management practices for nonpoint source control, consistent with state law.

26. I have questions and concerns about sections of the Antidegradation Policy (29A-105) because they contain possible loopholes which will negate the main purpose of the rules. In the former, condition 105(c)(2)(B) allows for "lower water quality is necessary to prevent substantial adverse economic or social impacts on the people of the State." Yes, regulatory standards must be achieved (C) but aren't these standards potentially going to be revised?

    VTDEC Response: States are required under the federal Clean Wate Act to review and as appropriate, adopt new or revised water quality standards at least every three years. Regulations may change as a result of changes to federal or state statute or rules.

§ 29A-106 Discharge Policy

Comments Requesting Additional Changes:

27. What rules require consideration of cumulative effects of multiple discharges in surface waters? How do these regulations enable us to ascertain the accumulation of toxins in waters in order to prevent degradation of waters?

    VTDEC Response: The Interim Antidegradation Implementation Procedure requires the consideration of cumulative impacts in authorizing new or increased discharges.

Subchapter 2. APPLICATION OF STANDARDS
§ 29A-204 Special Zones

Comments Requesting Additional Changes:

28. Remove "mixing zones" from the Water Quality Standards.

    VTDEC Response: Mixing zones are provided for in both the federal Clean Water Act and state statute and are limited to 200 feet from the point of discharge.

29. Don't use mixing zones for bioaccumlative toxins.
30. DEC must carefully re-examine and curtail the practice of using mixing zones as they can no longer be universally applied in our wastewater system where PFAS are present.

    VTDEC Response (to comments 29 and 30): The VTDEC does not use mixing zones to meet Water Quality Standards for bioaccumulative toxins. In accordance with current practice, the VTDEC proposes to add the following language to the definition of mixing zones: "A mixing zone shall not be used to meet water quality criteria for bioaccumulative toxins."

31. Remove "waste management zones" from the Water Quality Standards.

    VTDEC Response: Waste management zones indicate reaches where the public may be at a slightly elevated risk of exposure to pathogens when swimming because of a direct discharge upstream. However, Water Quality Standards must still be met, and all designated uses maintained in waste management zones.

32. Have "waste management zones" been approved by EPA?

    VTDEC Response: EPA has approved Vermont's use of waste management zones.

§ 29A-206 Water Quality Certifications Issued Pursuant to § 401 of the Clean Water Act

Comments on Proposed Changes:

33. Regarding the language: *"Any certification issued by the State shall establish conditions necessary to ensure that the federally licensed or permitted activity will comply with these rules, as well as with any other appropriate requirement of state law, including:",* is this addition suggesting the provisions or permits necessary to comply with these state laws will be issued under a single WQC?

    VTDEC Response: All applicable state permits must also be acquired regardless of whether a project requires a Section 401 Water Quality Certification.

Comments Requesting Additional Changes:

34. Given the fact that some of these laws might not apply, it would make sense to also add the following identified text to the proposed addition, *"Any certification issued by the State shall establish conditions necessary to ensure that the federally licensed or permitted activity will comply with these rules, as well as with any other appropriate requirement of state law, as applicable, including:".* The WQC application should be revised so that the applicant can identify those laws and regulations that would apply, as well as those that do not.

    VTDEC Response: "as applicable," is not necessary with the current proposed language "appropriate requirement." It is assumed that inapplicable regulations will not be applied to a project. The application requires the applicant to list the applicable required state and federal authorizations. Listing authorizations that do not apply is neither practical nor of value.

Subchapter 3. WATER QUALITY CRITERIA
§ 29A-303 General Criteria Applicable to all Waters

Comments Requesting Additional Changes:

35. How can this standard, "a maximum individual lifetime risk of no adverse effect to human health" be enforced or translated to the amount of toxins encountered in the water? Why not change the measurement of toxins in water to Maximum Contaminant Level (MCL) in parts per billion?

    VTDEC Response: Appendix C. of the Vermont Water Quality Standards provides Water Quality Criteria, where appropriate, as a Maximum Allowable Concentration (i.e., acute criteria) and Average Allowable Concentration (i.e., chronic criteria) for the protection of aquatic biota. Human health criteria are provided in micrograms per liter (or parts per billion) unless indicated otherwise.

§ 29A-304 Hydrology Criteria

Comments Requesting Additional Changes:

36. In § 29A-304 Hydrology Criteria (c)(2) the existing sentence, *"The Secretary need not consider any flow study unless the study plans have obtained the Secretary's approval"* is equally problematic from a timing and process standpoint and could result in a denial long after study scope, plans and execution have taken place.

VTDEC Response: It is in the applicant's best interest to obtain the Secretary's approval (i.e., through consultation and approval of VTDEC staff) of any study plans prior to conducting the study; otherwise, the applicant could be required to conduct a new study if the application is insufficient. Agency staff provide extensive consultation with project applicants to ensure that necessary information is provided.

§ 29A-305 Numeric Biological Indices and Aquatic Habitat Assessments

Comments on Proposed Changes:

37. Adding language that requires an Applicant to obtain Secretary approval of a study in this Section is problematic. We strongly recommend not adding the sentence, "*Applicants shall obtain the Secretary's approval of study plans prior to conducting an evaluation"* as the studies would have already been performed according to a study scope developed in consultation with Department staff.

    VTDEC Response: It is in the applicant's best interest to obtain the Secretary's approval (i.e., through consultation and approval of VTDEC staff) of any study plans prior to conducting the study; otherwise, the applicant could be required to conduct a new study if the application is insufficient.

§ 29A-306 Use-specific Management Objectives and Criteria by Class

Comments on Proposed Changes:

38. Regarding the addition of new management objective for Class B(1) waters was created at Section 29(A)-306(f)(3), EPA notes that the public notice did not contain any waters that were being classified as B(1) for recreation. If any waters are proposed to be downgraded from Class A(1) or A(2) then a use attainability analysis pursuant to 40 C.F.R. 131.10(g) would need to be performed and submitted to EPA for final approval. Also, any waterbodies being upgraded to Class B(1) for recreation would also constitute a new or revised WQS and would need EPA approval.

    VTDEC Response: The addition of a new management objective and criteria for Class B(1) waters under Section 29(A)-306(f) corrects an inadvertent omission in 2017 Vermont Water Quality Standards.

Appendix C. WATER QUALITY CRITERIA FOR THE PROTECTION OF HUMAN HEALTH AND AQUATIC BIOTA

Comments on Proposed Changes:

39. In implementing a water quality standard for aluminum, would the State of Vermont have the latitude to use dissolved aluminum concentration as the basis for comparison with derived acute and chronic criteria values? As I understand it, the convention is to use total aluminum (TAl) concentration data in these comparisons, and hence in determinations related to impairment status. The TAl method used by Vermont DEC (EPA SW-846, Rev. 1 (1992) and Rev.0 (1994)), which entails digestion of unfiltered water samples, will quantitate aluminum bound in sediment that is unlikely to become bioavailable under environmental conditions. In my view, using TAl concentrations to evaluate potential aluminum toxicity in streams may not be appropriate because a preponderance of measured aluminum may be in particulate forms that are unavailable for uptake by stream biota. Since aluminum is one of the primary elements in clay minerals in Vermont's soils, I expect that fine sediment transported by Vermont streams will typically contain high concentrations of aluminum. Does DEC have an opinion regarding the potential for inorganic aluminum bound in sediment to become available (and therefore potentially toxic) to stream biota? Are there any biological data demonstrating toxicological effects of aluminum in Vermont streams?

    VTDEC Response: EPA Methods 200.7 and 200.8 for total recoverable aluminum are the only currently approved methods for measuring aluminum in natural waters for NPDES permits. VTDEC will revise its aluminum implementation procedure to clarify this. Using dissolved aluminum to develop criteria would underestimate toxicity. Additional information about bioavailability of aluminum and quantification methods is provided in the EPA Draft Technical Support Document for Implementing the 2018 Recommended Aquatic Life Criteria for Aluminum. If site-specific data are available for input parameters, site-specific criteria could be calculated, which may be more or less stringent than the criteria calculated when using the default input parameters. Vermont does not have data that demonstrates any toxicological effect of aluminum on aquatic biota.

Comments Requesting Additional Changes:

40. Appendix C must include standards for per- and polyfluoroalkyl substances (PFAS) now regulated by Vermont Statute; diquat and diuron on EPA's list of hazardous substances; atrazine, glyphosate, diquat, diuron, metolachlor, and neonicotinoid insecticides, several of which are endocrine disruptors.

41. We urge the Agency to adopt surface water standards and water quality criteria for PFAS chemicals where adequate data and scientifically defensible methods from other comparable states exist.

    VTDEC Response (to comments 40 and 41): EPA has not yet established National Recommended Water Quality criteria for Aquatic Life and Human Health (i.e., § 304(a) criteria) for PFAS, which serve as the basis for state water quality toxics criteria. EPA was accepting public comments on draft aquatic life criteria for PFOA and PFOS through July 2022. Once finalized, Vermont will adopt these recommended criteria into water quality standards. The draft aquatic life criteria are significantly higher than the interim drinking water health advisory EPA issued in June and the observed PFAS concentrations in Vermont surface waters.

    The VTDEC has adopted all pesticide criteria published in EPA updated criteria recommendations under Clean Water Act (CWA) § 304(a). Many of the pesticides included are "legacy" contaminants that are still detected in the environment. EPA provides Aquatic Life Benchmarks for evaluating pesticides detected in surface waters. These benchmarks, however, are not water quality criteria; the

values shown for pesticides are generally the lowest effect concentration reported in toxicity studies reviewed. It would not be appropriate to include or reference these benchmarks within the Vermont Water Quality Standards as they do not reflect current federal standards.

Appendix F. WATER QUALITY CLASSIFICATIONS

Comments Requesting Additional Changes:

42. The general reader who reviews the Draft Rule may not understand that the charts for Appendix F on pages 68 through 93 indicate changes in classification for specific designations. We suggest that the Department write a short explanatory paragraph before this chart to explicitly state that the waters in the chart(s) outline changes in those water bodies such that they do not neatly fall under section (b) or (c) of the Draft Rule's appendix.

    VTDEC Response: The VTDEC proposes the following in Appendix F:

    (d) <u>The waters listed in the following table are those waters classified as A(1), A(2), or B(1) for one or more designated uses.</u>