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Proposed Regulation Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	9 VAC25-260
VAC Chapter title(s)	Water Quality Standards
Action title	Rulemaking to adopt new, update or cancel existing water quality standards as required by § 62.1-44.15 of the Code of Virginia and the federal Clean Water Act, 33 U.S.C. §§ 1251

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 14 (as amended, July 16, 2018), the Regulations for Filing and Publishing Agency Regulations (1VAC7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

The subject matter of the rulemaking will include updated numerical and narrative criteria, use designations and other policies contained in the Water Quality Standards Regulation (9 VAC 25-260).

The intent of this rulemaking is to protect designated and beneficial uses of state waters by adopting regulations that are technically correct, necessary and reasonable. These standards will be used in setting Virginia Pollutant Discharge Elimination System Permit limits and for evaluating the waters of the Commonwealth for inclusion in the Clean Water Act 305(b) report and on the 303(d) list. Waters not meeting standards may require development of a Total Maximum Daily Load, effluent limitations, or further analysis of use removal or modification under the Clean Water Act at 303(e) and Code of Virginia [§ 62.1-44.19:7](#).

This rulemaking is needed because the last triennial review was completed in July 2017 and new scientific information is available to update the water quality standards. Changes to the regulation are

also needed to improve permitting, monitoring and assessment programs. In addition, the State Water Control Board (Board) must fulfill the legal mandates for a three-year review under the Code of Virginia, per §62.1-44.15(3a), and federal regulations at 40 CFR 131.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the “Definitions” section of the regulation.

BLM	Biotic Ligand Model
Board	State Water Control Board
CAS	Chemical Abstracts Service
Department	Virginia Department of Environmental Quality (or DEQ)
DWR	Virginia Department of Wildlife Resources
ESW	Exceptional State Waters
EPA	U.S. Environmental Protection Agency
PWS	Public Water Supply
RAP	Regulatory Advisory Panel
TMDL	Total Maximum Daily Load
VPDES	Virginia Pollutant Discharge Elimination System

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in Executive Order 14 (as amended, July 16, 2018), “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”

Federal and state mandates in the Clean Water Act at 303(c), 40 CFR 131 and the Code of Virginia in §62.1-44.15(3a) require that water quality standards be adopted, modified or cancelled every three years. These are the most relevant laws and regulations.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory authority.

The promulgating entity is the State Water Control Board (Board).

The Clean Water Act authorizes restoration and maintenance of the chemical, physical, and biological integrity of the Nation’s waters. The Clean Water Act at 303(c) (1) requires that the states hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards.

The Federal regulations at 40 CFR 131 authorize requirements and procedures for developing, reviewing, revising and approving water quality standards by the States as authorized by section 303(c) of the Clean Water Act. 40 CFR 131 specifically requires the states to adopt criteria to protect designated uses.

The State Water Control Law authorizes protection and restoration of the quality of state waters, safeguarding the clean waters from pollution, prevention and reduction of pollution and promotion of water conservation. The State Water Control Law (Code of Virginia) at §62.1-44.15(3a) requires the Board to establish standards of quality and to modify, amend or cancel any such standards or policies. It also requires the Board to hold public hearings from time to time for the purpose of reviewing the water quality standards, and, as appropriate, adopting, modifying or canceling such standards.

The correlation between the proposed regulatory action and the legal authority identified above is that the amendments being considered are modifications of criteria that will protect designated uses and criteria and designated uses are requirements of the Water Quality Standards.

The authority to adopt standards as provided by the provisions in the previously referenced citations is mandated, although the specific standards to be adopted or modified are discretionary to the Environmental Protection Agency and the state.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it's intended to solve.

The rulemaking is essential to the protection of health, safety or welfare of the citizens of the Commonwealth because proper water quality standards protect water quality and living resources of Virginia's waters for the designated uses of aquatic life, wildlife, recreation, public water supply, shellfish consumption, and fish consumption.

The intent of this rulemaking is to protect designated and beneficial uses of state waters by adopting a regulation that is technically correct, necessary, and reasonable. Potential issues that may need to be addressed are listed in the "Substance" section. It should be noted that all sections of the regulation are open for comment during this mandated triennial review and a revision, addition or deletion could potentially occur in any section of the regulation. However, revisions under consideration to date have been listed in the "Substance" section.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.

This rulemaking will modify, add or delete any section, criteria, use designation, standard, and policy to conform to EPA guidance, clarify state intent, implement state programs (e.g., permitting, monitoring and assessments), and improve water quality or protect beneficial uses. The proposed amendments to the Water Quality Standards are summarized below.

Section 9VAC25-260-50

Add missing "****" (quadruple asterisk) to pH column to clarify that pH criteria apply only to the epilimnion of a lake/reservoir when thermally stratified.

Section 9VAC25-260-140 (Table of Parameters):

- a) Add freshwater aluminum criteria for the protection of aquatic life according to the 2018 EPA nationally recommended criteria.

- b) Correction of identified errors:
 - i) Ammonia CAS number is formatted with dashes, all other CAS numbers do not have dashes
 - ii) Ammonia CAS number is incorrect 766414; should be 7664417
 - iii) Correct name for Bis2-Chloroisopropyl Ether (2,2'-Oxybis(1-Chloropropane))
 - iv) Chlordane CAS number 57749 is for mixed isomers; EPA Regional Screening Level (RSL) uses 12789036 for Chlordane, this is not wrong but inconsistent
 - v) Nickel CAS number is incorrect 744002; should be 7440020
 - vi) Include CAS number for Uranium (7440611)
 - vii) Tributyltin CAS number is incorrect 60105 (no such CAS number); EPA RSL uses E1790678
- c) Delete Bis (chloromethyl) Ether.
- d) Copper Biotic Ligand Model (BLM) Language – Edit language in Table 140.B to state where the Board has determined that a sufficient dataset of model input parameters is available, the BLM shall be used to determine copper criteria and that the hardness-based criteria will be used when sufficient input parameters are not available. Language in Section 140.G is amended similarly.
- e) Update 20 human health criteria for the following 10 parameters to reflect updated exposure factors recommended by EPA in 2011: antimony, 2,3,7,8-tetrachlorodibenzo-p-dioxin, nickel, n-nitrosodimethylamine, n-nitrosodiphenylamine, n-nitrosodi-n-propylamine, total PCBs, selenium, thallium, and zinc
- f) Add language to Footnotes 3 and 4 stating that human health criteria are based on the assumption of an average amount of exposure on a long-term basis.

Section 9VAC25-260-185.B – Chesapeake Bay Criteria

Submerged Aquatic Vegetation (SAV) and Water Clarity acreages for 5 Bay segments are increased to match most recent Chesapeake Bay Program recommendations.

Section 9VAC25-260-187 (Addition of Lake Mooney):

DEQ staff recommend application of lake nutrient criteria to a relatively recently constructed water supply reservoir in the Rappahannock River basin (Lake Mooney).

Section 9VAC25-260-310 (Special Standards)

Delete special standard “y” (ammonia criteria for freshwater tidal tributaries of the Potomac River) as it is superseded by freshwater ammonia criteria that became effective in 2020.

Addition of special standard “ii” which is a benthic chlorophyll-a threshold that protects the recreational use from persistent, nuisance filamentous algae in certain main-stem sections of the North Fork Shenandoah River, South Fork Shenandoah River, and Shenandoah River.

River Basin Issues (9VAC25-260-360 through 540):

- a) Add, modify or delete trout waters as appropriate.
- b) Add, modify or delete public water supplies designations as appropriate.
- c) Adjust temperature criteria or application of temperature criteria to waters stocked with trout by DWR in the winter with the intent of supplying the public with seasonal trout fishing opportunities only in the winter but not in the summer.
- d) Add or correct Class designations as appropriate.
- e) Corrections to section descriptions in river basin tables for clarity and/or accuracy.

Issues

Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.

The primary advantage to the public is that the updated numerical toxics criteria are based on better scientific information to protect aquatic life and human health. The disadvantage is that criteria that become more stringent may result in increased costs to the regulated community. However, the goal is to set realistic, protective goals in water quality management and to maintain the most scientifically defensible criteria in the Water Quality Standards regulation. EPA has also provided guidance that these criteria are "approvable" under the Clean Water Act.

The advantage to the agency or the Commonwealth that will result from the adoption of these amendments will be more accurate and scientifically defensible permit limits, assessments and clean-up plans (TMDLs). These are discussed under the "Purpose" section where the goals of the proposal, the environmental benefits, and the problems the proposal is intended to solve are discussed.

The regulated community may find that the amendments pertinent to their operations may require additional capital or operating costs for control in their discharge, particularly where the numerical criteria are more stringent (see Economic Impact).

There is no disadvantage to the agency or the Commonwealth that will result from the adoption of these amendments.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no requirements that exceed applicable federal requirements.

Agencies, Localities, and Other Entities Particularly Affected

Identify any other state agencies, localities, or other entities particularly affected by the regulatory change. "Particularly affected" are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. "Locality" can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

Other State Agencies Particularly Affected

No other state agencies are anticipated to be particularly affected by these regulations with the exception of those which operate facilities subject to VPDES permitting that may potentially be impacted by the proposed amendments as related to discharge permits. Staff does not anticipate this to impact many facilities.

Localities Particularly Affected

In general, Water Quality Standards are developed and implemented for the protection of all designated uses statewide. However, due to the site-specific nature of some amendments, the below localities may bear a disproportionate material impact not experienced by other localities due to the location of these localities relative to the proposed amended criteria for benthic chlorophyll-a criteria in the North Fork Shenandoah River, South Fork Shenandoah River, or Shenandoah River.

Counties: Augusta, Clark, Lee, Page, Rockingham, Shenandoah, Warren.
 Towns: Luray, Shenandoah.

Other Entities Particularly Affected

No other entities are anticipated to be affected.

Economic Impact

Pursuant to § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits), anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is change versus the status quo.

Impact on State Agencies

<p><i>For your agency:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including: a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources</p>	<p>There will be no additional costs to the state/agency. Existing water quality monitoring programs (and related funding sources) will continue to support the proposed changes. Correct waterbody classifications such as Class VII (swampwaters) and trout waters modifications may result in determination that the aquatic life use is not impaired due to application of criteria appropriate for the waterbody type, thus avoiding development of costly and inappropriate TMDLs.</p>
<p><i>For other state agencies:</i> projected costs, savings, fees or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>State agency wastewater treatment plants may be affected by the proposed changes to the Table of Parameters. Staff does not anticipate this to impact many facilities.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The regulatory changes produce indirect benefits through protection of water quality and living resources of Virginia's waters for the designated uses of aquatic life, wildlife, recreation, public water supply, shellfish consumption, and fish consumption. A general benefit of the proposed amendments will be scientifically correct and legally defensible water quality standards to protect the surface waters of Virginia.</p>

Impact on Localities

<p>Projected costs, savings, fees or revenues resulting from the regulatory change.</p>	<p>Some localities that operate wastewater treatment plants may be affected by the proposed changes to the Table of Parameters or the Special Standards section.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The regulatory changes produce indirect benefits through protection of water quality and living resources of Virginia's waters for the designated uses of aquatic life, wildlife, recreation, public water supply, shellfish consumption, and fish consumption. A general benefit of the proposed amendments will be scientifically correct and legally defensible water quality standards to protect the surface waters of Virginia.</p>

Impact on Other Entities

<p>Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.</p>	<p>Wastewater treatment plants and industrial facilities may be affected by the proposed changes to the Table of Parameters or the Special Standards section.</p>
<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <p>a) is independently owned and operated and;</p> <p>b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.</p>	<p>All VPDES permit holders with pollutants in their discharge that are being updated with the proposed amendments may be impacted. With regard to the copper biotic ligand model, there are 146 VPDES permittees in the Commonwealth that currently have copper effluent limits and/or copper monitoring requirements in their discharge permit. Of these 146 facilities, 135 discharge to freshwater and may be directly affected by the modified language for the copper biotic ligand model. Municipally owned wastewater treatment plants comprise 38% of these permittees, while industrial facilities make up the rest. There are other permittees that currently do not have copper limits but they may be required to have them when their permits are renewed, if this amendment is adopted.</p> <p>161 permittees may be affected by the proposed changes to the 20 human health criteria. These permittees currently have either a permit limit derived from at least one of the existing criteria or monitoring requirements. Municipally-owned wastewater treatment plants comprise 34% of these permittees, while industrial facilities make up the rest. There are other permittees that currently do not have permit limits derived from these criteria but they may be required to have them when their permits are renewed, if these amendments are adopted.</p> <p>Permittees that have aluminum in their effluent and that discharge into freshwater may be affected by the addition of the aluminum criteria. The number of potentially affected permittees is unknown.</p> <p>9 wastewater treatment plants may be affected by the removal of special standard "y".</p>
<p>All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to:</p> <p>a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses;</p>	<p>No administrative costs are projected nor are costs for real estate development or additional services.</p>

<p>b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements.</p>	
<p>Benefits the regulatory change is designed to produce.</p>	<p>The regulatory changes produce indirect benefits through protection of water quality and living resources of Virginia's waters for the designated uses of aquatic life, wildlife, recreation, public water supply, shellfish consumption, and fish consumption. A general benefit of the proposed amendments will be scientifically correct and legally defensible water quality standards to protect the surface waters of Virginia.</p>

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

One alternative is to keep the current water quality standard regulation unchanged or to delay the triennial review. The most likely alternative less costly or less intrusive for small businesses would be to not update the aquatic life and human health criteria. Those alternatives were not chosen because the proposed amendments are based upon more recent scientific information and data that provide for improved protection of the designated uses for Virginia's surface waters. Comments submitted in response to the NOIRA were considered, and an ad hoc Regulatory Advisory Panel (RAP) was established to assist the Department in developing the proposed amendments to the Water Quality Standards and to identify any less burdensome or intrusive alternatives. The proposed amendments are necessary to achieve the purpose of the regulatory change.

Regulatory Flexibility Analysis

Pursuant to § 2.2-4007.1B of the Code of Virginia, describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.

Water Quality Standards do not establish compliance or reporting requirements. The proposed changes in the Water Quality Standards Regulation are implemented through established Department programs, including the VPDES permitting program, the water quality monitoring and assessment programs, and the TMDL program. These programs have the flexibility to implement the existing and proposed amendments to the Water Quality Standards to provide for flexibility in regulatory recordkeeping and water quality monitoring efforts. Economic estimates of the same are provided above.

Periodic Review and Small Business Impact Review Report of Findings

If you are using this form to report the result of a periodic review/small business impact review that is being conducted as part of this regulatory action, and was announced during the NOIRA stage, indicate whether the regulatory change meets the criteria set out in Executive Order 14 (as amended, July 16, 2018), e.g., is necessary for the protection of public health, safety, and welfare; minimizes the economic impact on small businesses consistent with the stated objectives of applicable law; and is clearly written and easily understandable.

In addition, as required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency’s consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency’s decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

This regulatory action is necessary for the protection of public health and for the protection of the Commonwealth’s surface waters and aquatic life. The Water Quality Standards regulation forms the basis upon which effluent discharge limits are set and upon which it is determined whether or not waters are attaining applicable designated uses. Comment received during the Notice Of Intended Regulatory Action ranged from agreement that the proposed amendments are necessary to protect designated uses (i.e. aluminum criteria, human health criteria updates, SAV acreage updates, Shenandoah River filamentous algae criteria) to suggestions for changes to certain Sections to address mixing zone determinations, antidegradation policy implementation, and the need to include certain pollutant parameters in the regulation (i.e. polyfluoroalkyl substances, algal toxins). Federal and state mandates in the Clean Water Act at 303(c), 40 CFR 131 and the Code of Virginia in §62.1-44.15(3a) require that water quality standards be adopted, modified or cancelled every three years. Potential economic impacts would be the result of possibly more stringent VPDES permit limits. Impacts specific to small businesses are not anticipated.

Public Comment

Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.

See Attachment 1.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

In addition to any other comments, the Board is seeking comments on the costs and benefits of the proposal and the potential impacts of this regulatory proposal. Also, the Board is seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include:

1) projected reporting, recordkeeping and other administrative costs; 2) probable effect of the regulation on affected small businesses; and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments for the public comment file may do so by mail, email or fax to David C. Whitehurst, VA Department of Environmental Quality, P.O. Box 1105, Richmond, VA 23218; Phone: 804-774-9180; Email: David.Whitehurst@deq.virginia.gov. Comments may also be submitted through the Public Forum feature of the Virginia Regulatory Town Hall (<http://www.townhall.virginia.gov>). Written comments must include the name and address of the commenter. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

At least one public hearing will be held following the publication of this stage, and notice of the hearing(s) will be posted on the Virginia Regulatory Town Hall (<http://www.townhall.virginia.gov>) and on the Commonwealth Calendar (<https://commonwealthcalendar.virginia.gov/>). Both oral and written comments may be submitted at that time.

A formal hearing will be held on a date and time and at a place to be determined, if a request for a formal hearing is received by the contact person listed above within 30 days of publication of the notice of public comment period in the Virginia Register of Regulations.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
9VAC25-260-50. Numerical criteria for dissolved oxygen, pH, and maximum temperature.	N/A	pH column lacked the footnote "****". Footnote "****" states that dissolved oxygen and pH criteria only apply to the epilimnion when the lake/reservoir is stratified.	Specify lake pH applies only to epilimnion when stratified. Added missing quadruple asterisk (****) to pH column. Corrects the absence of the footnote when language for Footnote **** was originally adopted. No impacts expected.
9VAC25-260-140. Criteria for surface water	N/A	Currently no freshwater criteria for aluminum. Use of the Biotic Ligand Model to determine freshwater copper criteria is optional regardless of parameter data availability to run the model.	Adds nationally recommended freshwater criteria for aluminum for the protection of aquatic life. This change could have an economic impact on permittees if aluminum is present in their effluent. Amended language for Biotic Ligand Model (BLM) option for copper criteria (9VAC25-260-140.G) and amended language for Copper in 9VAC25-260-140.B. to state the freshwater criteria for copper shall be calculated using the EPA 2007 Biotic Ligand Model when a sufficient dataset of input parameters to run the BLM is available. More closely conforms to nationally recommended criteria for the protection of aquatic life. This would replace the current widespread use of the hardness-based copper criteria in waters where sufficient BLM parameter data exists. This change could have an economic

		<p>2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin Antimony Nickel N-Nitrosodimethylamine N-Nitrosodiphenylamine N-Nitrosodi-n-propylamine Total PCBs Selenium Thallium Zinc</p> <p>-----</p> <p>f</p> <p>Current parameter name: Bis2-Chloroisopropyl Ether</p> <p>Human health criteria for Bis(chloromethyl) Ether.</p> <p>Human Health criteria footnotes 3 and 4. ³Criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted and apply in all other surface waters not designated as PWS in 9VAC25-260-390 through 9VAC25-260-540. ⁴Criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted and apply in all other surface waters not designated as PWS in 9VAC25-260-390 through 9VAC25-260-540.</p>	<p>impact on permittees if copper is present in their effluent.</p> <p>Human health criteria for fish tissue and drinking water have been recalculated for these compounds using updated exposure factors based on 2011 EPA recommendations and to be consistent with the way all other human health criteria are calculated in the VA WQS. These changes could have an economic impact on permittees if these particular pollutant parameters are present in their effluent.</p> <p>Correction of several Chemical Abstracts Service (CAS) numbers. No impact.</p> <p>Corrected notation in hardness-based metal criteria equations for natural-log abbreviations. No impact.</p> <p>Name changed to "2,2'-Oxybis(1-Chloropropane)" for correctness. No impact.</p> <p>Deleted Bis(chloromethyl) Ether. Due to the 38 second half-life of this pollutant and the fact that EPA no longer considers it to be a Priority Pollutant. This change is not expected to have an economic impact on permittees that have this human health pollutant in their effluent.</p> <p>The existing Table of Parameters does not contain language specifying the duration of human health criteria. The following language is proposed to be added to the end of footnotes 3 and 4 of this section: "<u>Human health criteria are based on the assumption of average amount of exposure on a long-term basis.</u>" This change is not expected to have an economic impact on permittees that have human health pollutants in their effluent.</p>																																				
<p>9VAC25-260-185. Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries.</p>	<p>N/A</p>	<p>Current SAV and water clarity acreage criteria for 5 Bay segments.</p> <table border="1" data-bbox="573 1291 964 1465"> <thead> <tr> <th>Bay segment</th> <th>SAV acres</th> <th>Clarity</th> </tr> </thead> <tbody> <tr> <td>RPPMH</td> <td>1700</td> <td>5000</td> </tr> <tr> <td>JMSTF2</td> <td>200</td> <td>500</td> </tr> <tr> <td>JMSTF1</td> <td>1000</td> <td>2500</td> </tr> <tr> <td>JMSMH</td> <td>200</td> <td>500</td> </tr> <tr> <td>JMSPH</td> <td>300</td> <td>750</td> </tr> </tbody> </table>	Bay segment	SAV acres	Clarity	RPPMH	1700	5000	JMSTF2	200	500	JMSTF1	1000	2500	JMSMH	200	500	JMSPH	300	750	<p>Proposed amendment Increases the SAV and water clarity acreage criteria for these segments so they are consistent with the reasoning underlying the SAV criteria for other Bay segments.</p> <table border="1" data-bbox="987 1360 1386 1514"> <thead> <tr> <th>Bay segment</th> <th>SAV acres</th> <th>Clarity acres</th> </tr> </thead> <tbody> <tr> <td>RPPMH</td> <td><u>5,380</u></td> <td><u>13,450</u></td> </tr> <tr> <td>JMSTF2</td> <td><u>266</u></td> <td><u>665</u></td> </tr> <tr> <td>JMSTF1</td> <td><u>1,333</u></td> <td><u>3332</u></td> </tr> <tr> <td>JMSMH</td> <td><u>531</u></td> <td><u>1328</u></td> </tr> <tr> <td>JMSPH</td> <td><u>604</u></td> <td><u>1510</u></td> </tr> </tbody> </table> <p>These changes are not expected to have an economic impact on permittees.</p>	Bay segment	SAV acres	Clarity acres	RPPMH	<u>5,380</u>	<u>13,450</u>	JMSTF2	<u>266</u>	<u>665</u>	JMSTF1	<u>1,333</u>	<u>3332</u>	JMSMH	<u>531</u>	<u>1328</u>	JMSPH	<u>604</u>	<u>1510</u>
Bay segment	SAV acres	Clarity																																					
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JMSMH	<u>531</u>	<u>1328</u>																																					
JMSPH	<u>604</u>	<u>1510</u>																																					
<p>9VAC25-260-187. Criteria for man-made lakes and reservoirs to protect aquatic life and recreational designated uses from the impacts of nutrients.</p>	<p>N/A</p>	<p>Lake/reservoir criteria to protect against nutrient over-enrichment do not currently apply to Lake Mooney in Stafford County.</p> <p>Location for Lake Anna now includes Spotsylvania and Orange counties.</p>	<p>DEQ staff recommend that Lake Mooney in Stafford County be added to this section due to its proposed PWS designation. These changes are not expected to have an economic impact on permittees.</p> <p>Current location only identifies Louisa County.</p>																																				
<p>9VAC25-260-310. Special standards and requirements.</p>	<p>N/A</p>	<p>Special Standard "y" is a site-specific, seasonal chronic ammonia criterion that applies to the tidal freshwater Potomac River and tidal tributaries that enter the</p>	<p>Special Standard "y" is proposed for deletion. This ammonia criterion does not consider the presence of mussels, which are very sensitive to ammonia. The statewide ammonia criteria</p>																																				

		tidal freshwater Potomac River from Cockpit Point (below Occoquan Bay) to the fall line at Chain Bridge. Currently no Special Standard "ii".	adopted by the Board in 2019 which became effective in 2020 stipulates that mussels are present unless the absence of mussels has been adequately demonstrated. This special standard is being proposed for removal. This change could have an economic impact on permittees. Added Special Standard "ii" which addresses nuisance filamentous algae growth on the North Fork Shenandoah River, South Fork Shenandoah River, and mainstem Shenandoah River. This proposed special standard may have an economic impact on permittees.
9VAC25-260-390. 6 Potomac River Basin (Potomac River Subbasin).	N/A		Deletion of Special Standard "y" notation in special standards column.
9VAC25-260-400. 1 Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii".
9VAC25-260-400. 1a Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii".
9VAC25-260-400. 1c Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii".
9VAC25-260-400. 2 Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii". Deleted ESW notation "12" as in was in wrong basin section.
9VAC25-260-400. 2b Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii".
9VAC25-260-400. 3 Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii". Added notation for ESW-12 to correct basin section.
9VAC25-260-400. 3a Potomac River Basin (Shenandoah River Subbasin).	N/A	South River from the dam above Waynesboro (all waters of the impoundment).	South River from the <u>former location of the dam</u> above Waynesboro (all waters of the impoundment). Clarified segment description. No impacts expected.
9VAC25-260-400. 5c Potomac River Basin (Shenandoah River Subbasin).	N/A	Dry River (Rockingham County) from Harrisonburg's raw water intake (approximately 11.7 miles above its confluence with the North River) to a point 5 miles upstream, unless otherwise designated in this chapter.	Dry River (Rockingham County) from Harrisonburg's raw water intake (approximately 11.7 miles above its confluence with the North River) to a point 5 miles upstream <u>including Skidmore Fork upstream to the headwaters of Switzer Lake</u> , unless otherwise designated in this chapter.

			Clarified application of PWS designation. No impacts expected
9VAC25-260-400. 5d Potomac River Basin (Shenandoah River Subbasin).	N/A	5d VI Dry River and its tributaries from 5 miles above Harrisonburg's raw water intake to its headwaters. iv Skidmore Fork from its confluence with Dry River upstream including all named and unnamed tributaries.	5d VI Dry River and its tributaries from 5 miles above Harrisonburg's raw water intake to its headwaters. <u>V Stockable Trout Waters in Section 5d</u> <u>viii Switzer Lake from its dam upstream to the impoundment headwaters.</u> iv Skidmore Fork from its confluence with Dry River upstream including all named and unnamed tributaries. <u>This does not include Switzer Lake which are Class V Stockable Trout Waters.</u> Clarified application of Stockable Trout Waters application. No impacts expected
9VAC25-260-400. 5e Potomac River Basin (Shenandoah River Subbasin).	N/A	5e VI PWS North River and its tributaries from Staunton Dam to their headwaters. VI Natural Trout Waters in Section 5e iv North River from Elkhorn Dam upstream including all named and unnamed tributaries.	5e VI PWS North River and its tributaries from Staunton Dam to their headwaters <u>unless otherwise designated in this chapter.</u> <u>V Stockable Trout Waters in Section 5e</u> <u>iiie Elkhorn Lake from the dam upstream to the impoundment headwaters.</u> VI Natural Trout Waters in Section 5e iv North River from <u>the headwaters of Elkhorn Dam Lake</u> upstream including all named and unnamed tributaries. Clarified application of Stockable and Natural Trout Waters application and added seasonal Stockable Trout waters special standard "ee". No impacts expected
9VAC25-260-400. 6 Potomac River Basin (Shenandoah River Subbasin).	N/A	Currently no notation for "ii".	Added notation for Special Standard "ii".
9VAC25-260-400. 6a Potomac River Basin (Shenandoah River Subbasin).	N/A	IV PWS Little Passage Creek from the Strasburg Reservoir Dam upstream to its headwaters, unless otherwise designated in this chapter.	<u>IV V</u> PWS Little Passage Creek from the Strasburg Reservoir Dam upstream to its headwaters, unless otherwise designated in this chapter. Corrected Water body classification from Class IV to Class V waters (Stockable Trout). No impacts expected
9VAC25-260-410. 1g James River Basin (Lower).	N/A	1g III Shingle Creek from its confluence with the Nansemond River to its headwaters in the Dismal Swamp. VII Swamp waters in Section 1g Shingle Creek and its tributaries from the head of tide (approximately 500 feet downstream of Route 13/337) to their headwaters.	<u>1g III Shingle Creek from its confluence with the Nansemond River to its headwaters in the Dismal Swamp. (Deleted)</u> VII Swamp waters in Section <u>1g1f</u> Shingle Creek and its tributaries from the head of tide (approximately 500 feet downstream of Route 13/337) to their headwaters. Clarified application of Class III water body classification for Shingle Creek. This is because almost the entirety of Shingle Creek is within 1g and was designated as Class VII (Swamp waters) during last Triennial Review and no longer Class III. It is now in Section 1f. No impacts expected.
9VAC25-260-420. 11e.	N/A	11e III James River and its tributaries, excluding Blackwater Creek,	11e III James River and its tributaries, excluding Blackwater Creek, from Six Mile Bridge

James River Basin (Middle).		from Six Mile Bridge to the Business Route 29 bridge in Lynchburg.	to the Business Route 29 bridge <u>5th Street Bridge</u> in Lynchburg. Clarification of segment description. No impacts expected.
9VAC25-260-440. 3. Rappahannock River Basin	N/A	The Rappahannock River from the Route 1 Alternate Bridge at Fredericksburg upstream to the low dam water intake at Waterloo (Fauquier County).	The Rappahannock River from the Route 1 Alternate Bridge at Fredericksburg upstream to the low dam water intake at Waterloo (Fauquier County) <u>to its headwaters, unless otherwise designated in this chapter.</u> Clarification of segment description. No impacts expected.
9VAC25-260-440. 3a. Rappahannock River Basin	N/A	The Rappahannock River and its tributaries from Spotsylvania County's raw water intake near Golin Run to points 5 miles upstream (excluding Motts Run and tributaries, which is in Section 4c).	The Rappahannock River and its tributaries from Spotsylvania County's raw water intake near Golin Run to points 5 miles upstream <u>of the Rocky Pen Run Reservoir (Lake Mooney) pump and store intake</u> (excluding Motts Run and tributaries, which is in Section 4c). Expansion of PWS designation to include PWS designation for Lake Mooney intake. No impacts expected.
9VAC25-260-440. 4. Rappahannock River Basin.	N/A	4 III ESW 17,18 Free flowing tributaries of the Rappahannock from Blandfield Point to its headwaters, unless otherwise designated in this chapter.	4 III ESW 17,18, <u>28</u> Free flowing tributaries of the Rappahannock from <u>Blandfield Point from the Route 1 Alternate Bridge at Fredericksburg</u> to its headwaters, unless otherwise designated in this chapter. Clarification of segment description and placement of ESW-28 in correct basin segment. No impacts expected.
9VAC25-260-440. 4g. Rappahannock River Basin.	N/A	4g III Deep Run and its tributaries.	4g III Deep Run and its tributaries (<u>Stafford and Fauquier Counties</u>). Clarification of tributary location. No impacts expected.
9VAC25-260-470. 2b. Chowan and Dismal Swamp (Chowan River Subbasin).	N/A	Cabin Point Swamp from its confluence with the Nottoway River to its headwaters.	Cabin Point Swamp <u>and its tributaries</u> from its confluence with the Nottoway River to its headwaters. Swampwater delineation clarification for Cabin Point Swamp. No impacts expected.
9VAC25-260-500. 1. Tennessee and Big Sandy River Basins (Clinch River Subbasin).	N/A	North Fork Powell River from the confluence of Straight Creek to its headwaters.	North Fork Powell River from the confluence of Straight Creek <u>upstream to its headwaters the Keokee Lake dam.</u> Clarification of application of Stockable Trout waters (Class V) classification for North Fork Powell River. No impacts expected.

Family Impact

In accordance with § 2.2-606 of the Code of Virginia, please assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

It is not anticipated that this regulation will have a direct impact on the institution of the family and family stability.

ATTACHMENT 1

**Summary of Comments from the Triennial Review
Notice of Intended Regulatory Action
Comment period March 1, 2021 – March 31, 2021**

Commenter	Comments – General/Miscellaneous	Agency Response
Chesapeake Bay Foundation	They urge DEQ to adopt a policy for incorporating climate change policy into the water quality standards framework. This effort is fully consistent with DEQ’s stated mission, directed by recent executive orders, and recent legislation clarifies the authority to address this issue.	Discussion of incorporating climate change policy was had during RAP meetings. The RAP was informed that work is ongoing to address climate change through the agency strategic planning process.
Chesapeake Bay Foundation	They recommend that DEQ draw upon Chlorophyll-a criteria efforts in the James River to move forward with establishing numeric chlorophyll criteria for all tidal tributaries of the Chesapeake Bay.	The recommendation is noted.
Chesapeake Bay Foundation	They recommend DEQ continue and accelerate its work to establish numeric standards for turbidity for the protection of aquatic life and other designated uses, consistent with a recent State Water Control Board directive.	Turbidity criteria development is being addressed through a separate rulemaking.
James River Association	DEQ should incorporate climate change modeling and planning into TMDLs. They stated that the importance of DEQ’s role in climate change policy was underscored by 2020 legislation, which focused DEQ’s mission on addressing climate change by “...ensuring that climate impacts and climate resilience are taken into account across all programs and permitting processes.”	Discussion of incorporating climate change policy was had during RAP meetings. The RAP was informed that work is ongoing to address climate change through the agency strategic planning process.
Wild Virginia Protect Our Water Heritage Rights Waterkeepers Chesapeake	They stated the State Water Control Board should adopt numeric water quality criteria for phosphorus and nitrogen to prevent excessive or nuisance growths of algae and other aquatic plants for all state waters.	Virginia relies on implementation measures from existing programs that include Chesapeake Bay Watershed Implementation Plan, lakes/reservoirs nutrient criteria, and local TMDLs. Actions on the ground are resulting in significant improvement to nutrient control and reduction. Current work on Shenandoah River algae criteria and HAB advisories incorporated

		into the assessment guidance is also ongoing.
	Comments – Section 20: Narrative Criteria	
Potomac Riverkeeper Network and Shenandoah Riverkeeper	Wording and methods of applying the narrative criteria are insufficient to fully protect Virginia’s waters and meet legal mandates. Regulatory changes are necessary to avoid misapplication of narrative criteria provisions. DEQ should publish implementation plans for use of the narrative criteria in all their programs. Despite documented impairments in the Shenandoah River and its North and South Forks DEQ has refused to designate these waters as impaired, despite clear and abundant evidence that the pollution problems interfere with designated and existing uses. DEQ has not limited nutrient pollution from discharges that contribute to the degraded conditions. It is urgent that DEQ develop reliable and well-supported procedures for developing limits and pollution control measures based on narrative criteria. This procedure must be broad enough to guide actions in VPDES permitting, CWA section 401 certifications or any other process where the State is obligated to carry out the mandates of their WQS. Narrative criteria must be fully applied to address historic and existing impairments and losses of designated and existing uses.	The comments are noted. Narrative 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. The measures to support WQS narrative criteria include: biennial Water Quality Assessments, VPDES compliance monitoring of Water Quality Based Effluent Limits, and enforcement actions against permitted and unpermitted dischargers.
Wild Virginia Protect Our Water Heritage Rights Waterkeepers Chesapeake	They recommended that the State Water Control Board (Board) should adopt guidelines for implementation of the state's narrative water quality criteria as part of the water quality standards regulations. They asserted that it is necessary and appropriate for the state to incorporate policies or guidelines into the regulations to ensure the narrative criteria are applied consistently. The approach they proposed would be consistent with other implementation in the standards such as the policy for mixing zones. They also provided DEQ’s use of the Stream Condition Index as applied through the biological monitoring program for assessment purposes. They stated that the fact that applying regulations such as narrative criteria is difficult is not a valid or acceptable excuse for failing to do so. They stated the Mountain Valley Pipeline (MVP) has caused serious problems in dozens of waterbodies but DEQ has refused to acknowledge WQS violations due to resistance to the use of narrative criteria to control solids or turbidity.	Currently, DEQ water quality programs maintain these guidelines in program-specific implementation guidance manuals, which are revised periodically through the public participation procedures stipulated by §2.2-4002.1 of the Administrative Process Act. DEQ staff believe that there are more benefits to keeping implementation policies outside of the water quality standards regulation than there are downsides. Regarding turbidity controls, a separate rulemaking to address numeric turbidity criteria is currently under way.
Commenter	Comments – Section 20: Mixing Zones	
Chesapeake Bay Foundation	Evaluate the appropriate process and use of mixing zones specifically in context of discharges from coal ash ponds.	This issue was discussed with the RAP. Mixing zones will be addressed through a non-regulatory process; a non-regulatory

		group of stakeholders 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. Changes to the WQS mixing zone language are not being considered during this rulemaking.
James River Association	DEQ should review and consider revisions to the mixing zone policy and evaluate the appropriate process and use of mixing zones specifically in context of discharges from coal ash ponds. They requested that DEQ conduct a review of the extent to which mixing zones are currently relied upon in permitting assumptions and compile data on potentially overlapping mixing zones. As a part of the triennial review DEQ should assess the appropriateness of regulatory updates to ensure mixing zone policy is not a barrier to achieving designated uses and is protective of all aquatic life, including passing, drifting, and resident organisms.	See above response.
Commenter	Comments – Section 30: Antidegradation	
Potomac Riverkeeper Network and Shenandoah Riverkeeper	Procedures for applying the antidegradation policy must be changed. <i>De minimis</i> provisions are not justified by any technical rationale and are not allowable under Clean Water Act or State Water Control Law. The practice of allowing waters to be degraded for all other parameters because one or more criteria are violated and tier analysis assigns Tier 1 status dooms high quality features of thousands of waters across the state to degradation.	The comment has been noted. Changes to the WQS antidegradation policy are not being considered during this rulemaking.
Commenter	Comments – Section 140: Criteria	
Potomac Riverkeeper Network and Shenandoah Riverkeeper	VA must promulgate numeric criteria in this regulatory action to address water quality problems caused by sediment and nutrient pollution. Enforcement of narrative criteria is generally reactive. The ability to act proactively through numeric criteria is practically and legally required to protect State waters.	See responses above which address the topic of turbidity rulemaking and how DEQ ensures protection of the water quality standards with regard to nutrients.
U.S. Environmental Protection Agency	They encourage Virginia to adopt updated Aluminum criteria for the protection of aquatic life. In 2018, EPA published <i>Aquatic Life Ambient Water Quality Criteria – Aluminum</i> (EPA 822-R-18-001), which provides updated criteria and recommendations for the protection of freshwater aquatic life uses. They also encourage Virginia to delete the current hardness-based aquatic life criteria for copper and adopt the nationally recommended Biotic Ligand Model-based (BLM) criteria for copper statewide as well as adopting aquatic life criteria for selenium. Also recommend consideration of adopting human health criteria for the algal toxins Mycrocystin and Cylindrospermopsin. These	The comment has been noted. The proposal includes aluminum criteria and changes to language related to the copper BLM-derived criteria to increase its usage when sufficient model parameter data is available. As noted in the comment, states have the discretion to adopt the EPA recommended thresholds as swimming advisory

	<p>recommendations are intended as guidance to states to consider when developing water quality standards. Alternatively, these recommendations can be used as the basis of swimming advisories for notification purposes in recreational waters to protect the public.</p>	<p>levels or as water quality criteria. It is DEQ staff position that water quality assessments regarding HABs should rest on swimming advisories issued by the Department of Health (VDH). VDH may use the EPA thresholds for the basis of their advisories, but may also base advisories on other lines of evidence, such as cyanobacterial cell counts.</p>
<p>Fairfax County Water Authority</p>	<p>They expressed concerns with rising concentrations of sodium in the Fairfax County public water supply sources — the Occoquan Reservoir and Potomac River. They state that sometimes the concentrations surpass EPA advisory levels for sensitive populations and that establishing a sodium water quality standard for freshwater public water supply (PWS) designated waters is an important part of a comprehensive approach to address this issue.</p> <p>Virginia also needs to establish water quality criteria for polyfluoroalkyl substances (PFAS) for PWS designated waters. As with sodium, the Commonwealth needs an approach focused on source reduction and management to address the emerging PFAS challenge. They state that establishing water quality standards for PFAS compounds in freshwater PWS designated waters is an important strategy to prevent these chemicals from getting into drinking water supplies.</p>	<p>The comments have been noted. Sodium and PFAS criteria are not being addressed during this rulemaking. The Agency recently coordinated the development of a Salt Management Strategy to address excess salts in surface waters in Northern Virginia. Regarding PFAS, during one of the RAP meetings, DEQ shared Virginia’s PFAS approach. DEQ is involved in a PFAS workgroup convened by the Virginia Department of Health. The VDH Office of Drinking Water is conducting research that may lead to recommended maximum contaminant levels for inclusion in the regulations of the Board of Health..</p>
<p>Chesapeake Bay Foundation, James River Association, Potomac Riverkeeper Network</p>	<p>DEQ should adopt criteria for the cyanotoxins Mycrocystin and Cylindrospermopsis to protect recreational designated uses and minimize human health impacts from cyanobacteria blooms and algal toxins.</p>	<p>The comment is noted. Please refer to the above response regarding cyanobacteria.</p>
<p>Chesapeake Bay Foundation, James River Association, Southern Environmental Law Center</p>	<p>Encourage DEQ to interpret the narrative criteria and/or establish a plan to assess and develop water quality standards for Per- and polyfluoroalkyl substances (PFAS).</p>	<p>The comments are noted. Please refer to the above response regarding PFAS management strategies.</p>
<p>James River Association</p>	<p>DEQ should evaluate human health-based temperature standards. During the 2004 reissuance of the Chesterfield Power Station VPDES permit, JRA raised concerns regarding the temperature of the cooling water discharge entering Farrar Gut and its effect on primary</p>	<p>The comments are noted. This issue was discussed at one of the RAP meeting. DEQ permitting staff noted that operational changes at</p>

	<p>contact use. They stated that temperatures in Farrar Gut can exceed 104°F, and the Gut is a heavily used recreational area. Temperatures above 104°F exceed VDH’s Swimming Pool Regulations Governing the Posting of Water Quality Results which restricts temperatures to a maximum of 104°F in pools and spas. They provided a DEQ water permits staff response that agreed that the Virginia Water Quality Standards should be revised to incorporate numeric temperature standards relating to human health (primary contact use) and also stated this issue will be raised during the next triennial review of the standards.</p>	<p>the Chesterfield Power Station are anticipated to eliminate excessive thermal loads to Farrar Gut by the end of 2024.</p>
City of Richmond	<p>They stated their interest in the proposed addition of aluminum criteria for the protection of aquatic life as these water quality standards form the basis for the inclusion of effluent permit limits which is of particular interest to Richmond Dept. of Public Utilities.</p>	<p>The comments are noted.</p>
Southern Environmental Law Center	<p>They urged the Board and DEQ to explicitly interpret existing narrative water quality standards to cover PFAS and to assess the development of numeric water quality standards for PFAS as part of the triennial review. They stated that it is well established that PFAS are a threat to the health and safety of the public and to aquatic life.</p>	<p>The comment is noted. Please refer to the previous response regarding PFAS management strategies.</p>
Virginia Association of Municipal Wastewater Agencies	<p>They asked that statistically valid methods to determine design flows be considered as an alternative to use of specified design flows (9VAC25-260-140.B footnote 6). They stated that this provision and EPA guidance have been used successfully in some instances to address permitting issues and they believe there should be consideration of a broader provision applicable to permitting and other program uses. They also requested a deeper review of EPA’s revised human health criteria as to the suitability of EPA’s default exposure assumptions (exposure factors) to Virginia.</p>	<p>The comment is noted. Changes to specified design flows in the WQS are not anticipated during this rulemaking. Exposure factors for the calculation of human health are appropriate for the compounds and included in the proposal.</p>
Virginia Manufacturers Association	<p>They stated there is no avenue to monitor bis(chloromethyl) ether (CAS Number 542881) and that laboratories are not able to analyze for this compound. EPA removed it from the priority pollutant list under 40 CFR Part 423 and VMA would like DEQ annotate this criterion in the water quality standards to reflect the fact that laboratories are not capable of analyzing it. Similarly, for dinitrophenols, only one of the six isomers (2,4-dinitrophenol (CAS Number 51285) is currently certified for analysis under the VELAP accreditation program. They stated that the other dinitrophenol should be removed from the water quality standards, or a statement should be added that 2,4-dinitrophenol results can be used for all six dinitrophenol isomers.</p>	<p>The comments are noted. Bis(chloromethyl) ether is proposed for deletion. Methodology for analysis of dinitrophenol will be addressed through permitting guidance.</p>
Commenter	Comments – Section 185: Chesapeake Bay Criteria	
Chesapeake Bay Foundation	<p>They recommend that Virginia adopt recently recommended increases for Submerged Aquatic</p>	<p>The comment is noted. Updated SAV acreages and</p>

	Vegetation (SAV) acreages in a recent Chesapeake Bay Program technical addendum.	corresponding water clarity acreages are being proposed.
Friends of the Rappahannock	They stated that there is a substantial discrepancy between the actual mapped SAV acreages and the current water quality standards as defined in Virginia’s regulations. They think the current SAV acreage criteria are too low and this lower bar is inappropriate. Since adoption of the current criteria, SAVs in the mesohaline Rappahannock have rebounded substantively. FOR believes DEQ should raise the standard consistent with the approach used in all other Chesapeake Bay waters.	The comment is noted. Please see above response regarding SAV.
James River Association	JRA supports DEQ’s proposed action to revise Virginia’s submerged aquatic vegetation (SAV) acreages contained in 9VAC25-260-185 to be consistent with the EPA’s most recent assessment recommendations.	The comment is noted. Please see above response regarding SAV.
City of Richmond	They stated their interest in the potential revision of submerged aquatic vegetation acreages for the Chesapeake Bay and its tributaries (9 VAC 25-260-185.B) as these water quality standards form the basis for the inclusion of effluent permit limits which is of particular interest to Richmond Dept. of Public Utilities.	The comment is noted. Please see above response regarding SAV.
Commenter	Comments – Section 310: Special Standards	
Chesapeake Bay Foundation	Recommended that Virginia adopt criteria that protect the Shenandoah and other Virginia nontidal waters from filamentous algal blooms and their impacts upon designated uses. They urge DEQ to develop plans to adopt standards across all non-tidal waters where filamentous algae has the potential to degrade designated uses. They also recommend the adoption of EPA-recommended criteria for the algal toxins Microcystin and Cylindrospermopsin.	The comments are noted. Proposed criteria for filamentous algae have been developed and are proposed for the North Fork Shenandoah, South Fork Shenandoah, and mainstem Shenandoah River. Regarding EPA recommended criteria for cyanobacteria, please see above response.
Potomac Riverkeeper Network and Shenandoah Riverkeeper	Stated that the Shenandoah Riverkeeper and PRKN have documented recurring and chronic problems of widespread excessive algal blooms in the North Fork, South Fork and mainstem Shenandoah River that occur spring through the fall due to uncontrolled or poorly controlled nitrogen, phosphorus and sediment entering the river. A benthic chlorophyll-a standard may be insufficient as the sole tool to determine whether the recreational uses of the Shenandoah are being impaired and should be one element of a multi-pronged approach to assessing algae impairment of the Shenandoah River. This should include visual assessment of the spatial degree of algal growth and use of the narrative water quality standards. DEQ should also include an assessment of planktonic algae in the overall approach when making impairment determinations for the river. DEQ should either revise the water quality assessment guidance or develop stand-alone guidance applicable to monitoring for chlorophyll-a in the Shenandoah and	The comments are noted. Please refer to previous responses regarding filamentous algae criteria for the Shenandoah River basin.

	<p>other Virginia Rivers to ensure that the water quality assessment methodology is adequate and tailored to assessing algal growth and impairment. The Shenandoah Riverkeeper stated that the North Fork Shenandoah River should be included as an assessed waterway and included in the Clean Water Act Report and on the 303(d) list and have a TMDL developed. They also state that Virginia should adopt criteria for algal toxins such as Mycrocystin and Cylindrospermopsin.</p>	
<p>Friends of the North Fork of the Shenandoah River</p>	<p>Stated that the North Fork Shenandoah River should be included as an assessed waterway and included in the Clean Water Act Report and on the 303(d) list and have a TMDL developed.</p>	<p>The comment has been noted.</p>
<p>Wild Virginia Protect Our Water Heritage Rights Waterkeepers Chesapeake</p>	<p>They commented that DEQ has so far refused to make impairment findings based on violations of narrative criteria related to excessive algae growth. They stated that DEQ’s proposed adoption of a benthic chlorophyll-a criterion to protect the Shenandoah River from excessive filamentous algae growth is appropriate but insufficient to address other types of impairments caused by excessive nutrients. They said that DEQ has failed to honor the public's written statements, photographs, citizen-collected data, and DEQ staff as well as input of other state agencies by not addressing problems with color, turbidity, and odor caused by excessive amounts of nutrients. Also, There is evidence that visual impacts from stream pollution directly affect recreational users and economic interests. They stated there is historical precedent for DEQ to use visual evidence to declare WQS to be violated and to develop regulatory requirements to meet the narrative criteria. They cited an instance from the 1990s when municipal water plants in Eden, North Carolina and Danville, Virginia were forced to stop withdrawing water from the stream and interrupt supplies to homes and businesses due to highly colored water in the stream which resulted from upstream wastewater plant discharges that had received large amounts of process wastewater from textile plants. Based on color and its visual impacts on the PWS designated use, DEQ developed VPDES permit limits on color for the contributing wastewater discharges. They stated there is no excuse for continued delay in adopting numeric criteria for both turbidity and nutrients.</p>	<p>The comments are noted. Please refer to previous responses regarding Shenandoah River basin filamentous algae criteria.</p>
<p>Commenter</p>	<p>Comments – Section 450: Roanoke River Basin</p>	
<p>Town of South Hill</p>	<p>They requested the removal of the PWS (Public Water Supply) designation for Flat Creek (a tributary to Lake Gaston) stating the designation is incorrect and unnecessary. They stated the PWS designation causes unnecessary VPDES permitting difficulties for the Town.</p>	<p>The comment is noted. DEQ staff have determined that the PWS designation for Flat Creek is not in error and is part of an extensive PWS designation for the lower Roanoke that serves as a mechanism to protect drinking water</p>

		supplies for Virginia and North Carolina.
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