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Final Regulation Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) citation(s)	9 VAC 25-260
Regulation title(s)	Water Quality Standards
Action title	Triennial Review 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.

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 17 (2014) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

Please provide a brief summary of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.

The water quality standards are the cornerstone for water programs at the Virginia Department of Environmental Quality. For example, these standards are used to set pollution limits in discharge permits and to evaluate the health of waters statewide. Amendments are proposed to the state's Water Quality Standards Regulation at 9 VAC 25-260 to revise sections 5, 50, 140, 160, 170, 185, 187, 310, 390, 400, 410, 415, 420, 440, 450, 460, 470, 510, 520, 530, and 540.

There are also amendments modifying aquatic life criteria for 3 toxic parameters, addition of aquatic life criteria for 2 new parameters, and deletion of a public water supply parameter for taste and odor (manganese). The following substantive changes have been made since the proposed action was published:

- The aquatic life water quality criteria concentrations for lead in saltwater were corrected to show the criteria as "dissolved" concentrations by multiplying the old criteria by the saltwater conversion

factor of 0.951. The acute saltwater criterion was converted from 240 µg/L to 230 µg/l and the chronic criterion was converted from 9.3 to 8.8 µg/L.

- The proposed updates to 8 water quality criteria designed to protect human health have been removed and will be addressed in a separate rulemaking which will include consideration for adoption of human health water quality criteria for these 8, as well as an additional 86 toxic substances based on new recommended criteria finalized by EPA in June 2015.
- The proposed adoption of the new water quality criteria for ammonia to protect aquatic life in freshwater has been removed and will be proposed as a separate rulemaking in order to further evaluate implementation issues.
- The proposed designation for four Class VII Swamp Water designations have been withdrawn in order to gather additional information to better support any classification change.

Statement of final agency action

Please provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

The State Water Control adopted the amendments to the Water Quality Standards regulation (9 VAC 25-260) at their January 14, 2016 quarterly meeting.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including: 1) the most relevant citations to the Code of Virginia or General Assembly chapter number(s), if applicable; and 2) promulgating entity, i.e., agency, board, or person. Your citation should include a specific provision authorizing the promulgating entity to regulate this specific subject or program, as well as a reference to the agency/board/person’s overall regulatory authority.

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. The promulgating entity is the State Water Control 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 (Virginia Code Title 62.1 – Waters of the State, Ports and Harbors) 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 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 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.

The Office of the Attorney General has certified that the agency has the statutory authority to promulgate final text of the regulation.

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Describe the specific reasons the regulation is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

The rulemaking is essential to the protection of the 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 consumption of fish and shellfish, recreational uses and conservation in general. These standards will be used in setting Virginia Pollutant Discharge Elimination System Permits 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 will require development of a total Maximum Daily Load under the Clean Water Act at 303(e).

The justification for the proposed regulatory action is via the Clean Water Act and State Water Control Law requirements that the State conduct a review every three years of the surface water quality standards regulation for the purposes of revising and updating the standards to reflect changes in law, technology and information. This rulemaking is needed because the last triennial review was completed in February 2010 and new scientific information is available to update the water quality standards. The goal is to provide the citizens of the Commonwealth with a technical regulation that is protective of water quality in surface waters, reflects recent scientific information, reflects agency procedures and is reasonable and practical.

Substance

Please briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both.

Definitions § 9 VAC 25-260-5

This section now includes a definition for “wetlands”.

Application of pH Criteria in Lakes/Reservoirs § 9 VAC 25-260-50

This section was amended so that the pH criteria only apply to the epilimnion of thermally stratified lakes when they are stratified.

Table of Parameters (Toxics) § 9 VAC 25-260-140

An amendment was proposed to the cadmium criteria for the protection of freshwater aquatic life, based on EPA guidance issued in 2001 and updated with additional revisions included in a report published by the U.S Geological Survey in 2010. However, subsequent to the public comment period, in a November 2015 notification from EPA, DEQ staff became aware of a pending update to EPA’s national recommended ambient water quality criteria for cadmium in order to reflect the latest scientific information. To avoid confusion and the potential for adoption of freshwater aquatic life criteria that are

more restrictive than the pending federal recommendations without justification, staff recommended removing the cadmium amendments from the rulemaking. Updates to the cadmium criteria will be addressed through a future rulemaking.

Freshwater and saltwater aquatic life criteria for lead were amended to include a conversion factor to convert the “old” criteria concentrations from “total” lead to “dissolved” concentrations (as measured in a water sample that has been filtered through a 0.45 micron filter). All current Virginia aquatic life criteria for metals except for lead include a conversion factor that allow for the criteria to be expressed as the dissolved fraction of the metal. The dissolved fraction is the most biologically available portion that contributes to potential toxicity. Staff recommended applying conversion factors recommended by EPA as being applicable to the Virginia criteria for lead. This will make the criteria more stringent by approximately 5%-22% because it is expressed as dissolved lead without the inclusion of any particulate lead that may be present. The saltwater conversion factor of 0.951 was inadvertently left out of proposed language and subsequently added since proposal. Inclusion of the conversion factor is scientifically correct and applicable in Virginia.

Amendments were proposed to update 8 human health criteria parameters due to changes in either oral slope factors for carcinogens or reference doses for non-carcinogens, which are utilized in risk assessment calculations from which the criteria are derived. The updates (based on EPA recommendations available at the time that Triennial Review commenced) to the methodology for calculating human health criteria would have made new criteria concentrations for carbon tetrachloride, methylene chloride, nitrobenzene and tetrachloroethylene increase between 88 and 1779%. Updates for cyanide, hexachloroethane, pentachlorophenol, and trichloroethylene decrease between 64 and 97% compared to the current criteria. During the Notice of Public Comment period EPA released an update for 94 human health parameters that included the above compounds. Staff recommended removing these 8 parameters from the rulemaking because to change the criteria to match EPA’s most recent information would be a substantial change from the proposal without opportunity for public input and comment.

Acrolein and carbaryl are new criteria to protect the aquatic life use. Acrolein is a biocide frequently used in recirculating process water systems for slime control and carbaryl is the active ingredient in the commonly available pesticide Sevin®.

A ‘Biotic Ligand Model’ for copper intended to be used on a site specific basis was included. The model accounts for waterbody site specific physiochemical characteristics for organic carbon, pH, temperature, alkalinity, calcium, chloride, magnesium, potassium, sodium, sulfate instead of just hardness as the current criteria does. Potentially it could be used in lieu of a water effects ratio study.

The manganese criterion for waters designated as public water supply was deleted. The manganese criterion is based on a federally recommended Secondary Maximum Contaminant Level (SMCL) that is intended to be applied to finished drinking water as supplied to the consumers to prevent laundry staining. As such, the current criterion is inappropriate for application to natural surface waters.

Ammonia Criteria § 9 VAC 25-260-155

Amendments were postponed to include new nationally recommended aquatic life criteria for ammonia in freshwater. Like the current criteria, the proposed criteria are calculated as a function of temperature and pH and accounts for the presence/absence of trout and early life stages of fish. The recalculated ammonia criteria incorporate toxicity data for freshwater mussels in the family Unionidae which are the most sensitive organisms in the recalculation data base. The new criteria are more restrictive primarily because more recent toxicity data show that mussels and snails (including endangered species) are very sensitive to ammonia and the current ammonia criteria do not provide sufficient protection for these species. Site specific options to use alternate criteria calculated by omitting mussel toxicity data were proposed to be used in waters where a demonstration has been made that mussels are absent; however, consultation with USFWS and DGIF indicate freshwater mussels should be considered ubiquitous in Virginia and likely to be present in any perennial waterbody. Agency staff have recommended postponing this amendment for a future rulemaking.

Chesapeake Bay Dissolved Oxygen Criteria in § 9VAC25-260-185.

Proposed language now clarifies that the dissolved oxygen criteria in section 9VAC25-260-50 are superseded by the dissolved oxygen criteria listed in 9VAC25-260-185 for Class II waters within the Chesapeake Bay basin.

Nutrient Criteria for man-made lakes and reservoirs § 9VAC25-260-187.

Three impoundments have been added to the list of reservoirs to which chlorophyll-a and total phosphorus criteria are applied. 1) Lake Orange, a DGIF owned and managed warm water fishery in Orange County that is fertilized; and, 2) Powhatan Lakes, two DGIF warm water fisheries in close proximity to each other in Powhatan County.

Special Standards § 9 VAC 25-260-310

Special standard ‘m’ includes language to clarify that the effluent limitations applicable to all wastewater treatment facilities in the Chickahominy River basin above Walker’s Dam only apply to treatment facilities treating an organic nutrient source.

Two new special standards (‘ee’ and ‘ff’) set a recommended maximum temperature of 26°C for Tinker Creek and 28°C for sections of the Roanoke River from May 1 – Oct 31 that are stocked with trout only during the winter months. Current maximum temperature criteria for stockable trout waters of 21°C apply year-round.

River Basin Section Tables § 9 VAC 25-260-390 – 540

The public water supply designation for an old raw water intake on the James River in Chesterfield County, previously utilized by the American Tobacco Company, was deleted. Consultation with the Virginia Department of Health indicate no known active intake for potable water has been there in the past 35 years and VDH could not find any records about a domestic water intake at that location in years prior to 1978.

There are proposed minor clarifications/corrections to delineations for trout stream designations, basin section description clarifications, additions of new Class VII Swamp Waters, water authority name changes, and other miscellaneous corrections.

Issues

Please identify the issues associated with the proposed regulatory action, 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, please indicate.

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- 1) The primary advantages to the public are that the updated numerical toxics criteria are based on better scientific information to protect water quality. The disadvantage is that entities currently discharging to state waters may have to incur the costs of increased treatment to meet the new or revised water quality criteria.
 - 2) 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. For example, the adoption of two special standards and amendment of another in section 310 and the recognition that certain waters (Class VII swamp waters) have naturally low pH and dissolved oxygen will allow for more appropriate water quality assessments.

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

Requirements more restrictive than federal

Please identify and describe any requirement of the proposal which is more restrictive than applicable federal requirements. Include 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 statement to that effect.

There are no requirements that exceed applicable federal requirements.

Localities particularly affected

Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.

Where amendments are proposed that affect specific waterbodies or locations, the localities particularly affected are: the Counties of Botetourt, Caroline, Carroll, Charles City, Chesterfield, Essex, Gloucester, Greensville, Hanover, Henrico, King George, King and Queen, King William, Middlesex, New Kent, Northumberland, Orange, Powhatan, Westmoreland and the Cities of Roanoke and Suffolk.

Where amendments are made to parameters or pollutants with statewide application, localities across the State are potentially and equally affected; however, no known disproportionate material impacts have been identified.

Changes made since the proposed stage

*Please list all changes that made to the text of the proposed regulation and the rationale for the changes; explain the new requirements and what they mean rather than merely quoting the proposed text of the regulation. *Please put an asterisk next to any substantive changes.*

Section number	Requirement at proposed stage	What has changed	Rationale for change
9VAC25-260-140. Criteria for surface water	Proposed adding conversion factors to the lead water quality criteria to express the criteria concentrations as a dissolved measurement as required by EPA. The proposed language showed the conversion factors applied to the freshwater criteria but the saltwater criteria values in	The old criteria concentrations for lead in saltwater have been multiplied by the saltwater conversion factor 0.951 and have been converted to a dissolved concentration. The acute saltwater criterion was converted from 240 µg/L to 230 µg/l and the chronic criterion was converted from 9.3 to 8.8 µg/L.	In all presentations to the Regulatory Advisory Panel, the public and the Board on this issue it was clearly stated that a conversion factor would be applied to both the freshwater (a formula is used to adjust the conversion factor depending on hardness) and saltwater (conversion factor is 0.951) lead criteria.

	<p>the published proposal inadvertently had not been modified to include the conversion factors.</p> <p>The original proposal included modifications of eight criteria designed to protect human health.</p>	<p>The modifications for these eight human health criteria have been withdrawn.</p>	<p>However, in the published proposal, the criteria concentrations for the saltwater lead criteria were inadvertently shown as the old, unadjusted concentrations. Applying the conversion factor of 0.951, the lead saltwater acute criterion was converted from 240 µg/L to 230 µg/l and the chronic criterion was converted from 9.3 to 8.8 µg/L. This was considered correcting a typographical omission in the original publication.</p> <p>Postpone adoption of the eight human health criteria originally proposed based on changes to toxicity information updated after 2008. DEQ intends to initiate a separate rulemaking, proposing updates to 94 human health criteria based on EPA's recently updated human health criteria which were presented as draft in May 2014 and finalized on June 29, 2015.</p> <p>Rationale: The original proposed updates to the eight human health criteria were based on updated information on the toxicity of these eight toxic chemicals using information available during the time period (September 2013-January 2014) when DEQ was determining what amendments to propose in this Triennial Review. The State Water Control Board approved the Triennial Review proposal, including updating eight water quality criteria designed to protect human health at their Board meeting in March 2014 and</p>
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			<p>authorized DEQ to begin the public participation process for the Triennial Review. Between 2013, when DEQ updated these eight human health criteria, and the beginning of the Virginia Triennial Review public comment period in 2015, EPA issued revised recommended criteria for 94 human health criteria (including the eight Virginia updated). In addition to using the updated toxicological values (as DEQ did) to calculate the revised human health water quality criteria concentrations, EPA also changed the values for the assumptions about average body weight, average daily fish and water consumption rates, bioaccumulation potential and added a "relative source contribution" to account for potential additional sources of exposure to the toxic pollutants in the calculation of the revised criteria. These additional adjustments to the calculation of human health criteria result in EPA recommending entirely different criteria values for these toxic chemicals. EPA has indicated that because their recently issued final human health criteria for these chemicals differ substantially from those originally proposed by DEQ, EPA will probably not approve the proposed criteria if they were adopted. Therefore, DEQ decided to postpone recommending adoption of these eight human health criteria at this time, and initiate a new proposal for amending the human health</p>
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			<p>criteria based on EPA's June 2015 recommended human health criteria. This will allow a DEQ Regulatory Technical Advisory Panel and the public to have the opportunity to consider and comment on the additional changes to the assumptions about average body weight, average daily fish and water consumption, changes to the manner of estimating bioaccumulation potential and the addition of a relative source contribution as well as updated toxicological information, in revising Virginia's water quality criteria designed to protect human health.</p>
<p>9VAC25-260-155. Ammonia surface water quality criteria</p>	<p>The original proposal included adopting EPA's recently revised (2013) recommended water quality criteria for ammonia in freshwater.</p>	<p>Postponing the adoption of these ammonia criteria from this Triennial Review and addressing the adoption of these updated criteria in a separate rulemaking.</p>	<p>Significant public comments and concerns were raised regarding the potential costs for upgrading treatment plants to meet the lowered criteria or the limited ability of some small treatment plants to add and operate additional treatment technology to meet the lower ammonia limits. Significant issues were raised about the need to more fully identify all available implementation options. Temporally postponing adoption of this controversial issue by removing it from this Triennial Review process and proposing adoption of the updated ammonia criteria in a separate rulemaking process will allow DEQ to hold additional public meetings to more fully investigate and evaluate implementation issues so that that when amendments to the ammonia criteria are proposed for adoption, more detailed implementation guidance</p>

			can be available at the same time.
9VAC25-260-390 through 540. River basin tables	Proposed adding several new Class VII Swamp Waters use designations.	Removed proposed Class VII designations for Lodge Creek, Thompson Branch, Mason Mill, and Mehixen Creek. Corrected a number in the Special Standards column in the Middle James river basin referencing an Exceptional State Water designation.	Postponed adoption of these four classification changes in order to gather more information to better document the proper classification for these four water bodies. Corrected a typographic error so that the Special Standard ESW number "2" was changed to "22" to correctly identify the correct Exceptional State Waters Designation 22 as described in 9VAC25-260-30.A.3.a.22.

Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

Commenter	Comment	Agency response
See Attachment 1	See Attachment 1	See Attachment 1

All changes made in this regulatory action

Please list all changes that are being proposed and the consequences of the proposed changes. Describe new provisions and/or all changes to existing sections. Explain the new requirements and what they mean rather than merely quoting the proposed text of the regulation

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
Definitions §9 VAC 25-260-5		No existing definition.	Added a definition for "wetlands"; "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a

			<p>prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.</p> <p>Rationale: Current regulation uses the term 'wetlands' in 9VAC25-260-10 (Designation of uses) and 9VAC25-260-20 (General criteria). Providing a definition notifies citizens of the agency's expectation of what is considered a wetland and, therefore, waters of the state to which WQS criteria are applicable. This definition is identical to language in the State Water Control Law at § 62.1-44.3.</p>
<p>9VAC25-260-50. Numerical criteria for dissolved oxygen, pH, and maximum temperature.</p>		<p>Currently, footnote **** does not mention "pH".</p>	<p>Added language to footnote **** to indicate that pH criteria for man-made lakes and reservoirs only applies in the epilimnion (upper layer) when they are thermally stratified.</p> <p>Rationale: Current lake and reservoir pH criteria apply throughout the water column. During late winter and summer months, thermal boundaries can form that prevent mixing of water at the bottom with upper layers of water. Natural decay processes in the sediment result in acidic conditions in the lower water level. This change will recognize these natural circumstances and will allow for more appropriate assessments of reservoirs under these environmental conditions.</p>

<p>9VAC25-260-140. Criteria for surface water</p>		<p>Currently, no water quality criteria for acrolein or carbaryl.</p> <p>Current criteria for lead do not include a conversion factor to express the criteria concentrations as a dissolved measurement.</p> <p>Current freshwater aquatic life copper criteria are only adjusted based on different water hardness.</p> <p>Insert missing units (µg/l) for 3 parameters. Correct a few Chemical Abstracts Service (CAS) numbers and typographical correction of fish tissue criteria value for N-Nitrosodiphenylamine and for chrysene in a public water supply.</p> <p>Public water supply criterion for manganese is</p>	<p>Adopted new aquatic life water quality criteria for acrolein and carbaryl.</p> <p>Rationale: Acrolein and carbaryl aquatic life criteria are based on new, nationally recommended criteria from EPA.</p> <p>Added conversion factors for lead acute and chronic criteria. Note, in all presentations to the public and the Board on this issue it was clearly stated that a conversion factor would be applied to both the freshwater (a formula is used to adjust the conversion factor depending on hardness) and saltwater (conversion factor is 0.951) lead criteria. However, in the published proposal, the criteria concentrations for the saltwater lead criteria were inadvertently shown as the old, unadjusted concentrations. Applying the conversion factor of 0.951, the acute saltwater criterion is converted from 240 µg/L to 230 µg/l and the chronic criterion is converted from 9.3 to 8.8 µg/L.</p> <p>Rational: Lead criteria are now expressed as dissolved concentrations as are most all metals criteria concentrations.</p> <p>The water quality criteria now include allowing use of an EPA copper biotic ligand model (BLM) to calculate alternate copper criteria in freshwater because this BLM is EPA's current recommended freshwater copper criteria. The BLM allows for site specific determination of more appropriate acute and chronic criteria values, if sufficient data are available to run the BLM.</p> <p>The added missing units, CAS number, and criteria value typographical corrections were adopted.</p> <p>Rational: These adjustments were made to provide correct, accurate information.</p> <p>The criterion for manganese in public water supplies was deleted.</p>
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		50 ug/L.	<p>Rationale: The old manganese criterion was based on a Secondary Maximum Contaminant Level recommended for application to finished drinking water as supplied to the consumer. It was intended to prevent laundry staining and is unrelated to protection of human health. This Secondary Maximum Contaminant Level is an EPA recommendation only and it is not a federally required criterion even for finished drinking water. Manganese is commonly found at elevated levels in many soils in Virginia and river waters often carry suspended soil particles which include manganese. These suspended soil particles (including any manganese) are removed in the initial stages of drinking water treatment. If a recommend concentration of manganese that is designed to prevent staining of laundry and intended to apply to finished drinking water is applied as a surface water criterion, that is essentially expecting the natural, untreated river water to be suitable for washing laundry without any treatment at all, which is inappropriate. This change will eliminate the potential for inappropriately assessing surface waters as impaired due to normally occurring suspended soil particles and eliminate unnecessary TMDLs.</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>Section 9VAC25-260-185. A does not specify that the dissolved oxygen criteria in that section take precedence over the dissolved oxygen criteria for Class II waters in section 9VAC25-260-50 that is within the Chesapeake Bay basin.</p>	<p>Proposed language in 9VAC25-260-185 now indicates that the dissolved oxygen criteria in section 9VAC25-260-50 that are within the Chesapeake Bay basin are superseded by the dissolved oxygen criteria listed in 9VAC25-260-185.</p> <p>Rational: This amendment clarifies which dissolved oxygen criteria are applicable to the estuarine portions of Bay tributaries and mainstem Bay waters.</p>
<p>9VAC25-260-187. Criteria for manmade lakes and reservoirs to protect</p>		<p>One name correction (Able Lake).</p>	<p>One lake name correction (“Able” corrected to “Abel” Lake). Addition of three impoundments (Lake Orange, Powhatan Lakes, Upper and Lower) to which reservoir nutrient criteria apply.</p> <p>Rationale: Correcting a typographic error</p>

<p>aquatic life and recreational designated uses from the impacts of nutrients.</p>			<p>and adding names and criteria concentrations for three lakes that have been refilled and have become established reservoirs after the original section 9VAC25-260-187 was adopted.</p>
<p>9VAC25-260-310. Special standards and requirements.</p>		<p>Chickahominy special standard 'm' is an effluent limitation that applies to all wastewater treatment facilities in the Chickahominy River basin above Walker's Dam.</p> <p>All waters classed as 'Stockable Trout Waters' (Class V) have a year-round maximum temperature criterion of 21°C.</p>	<p>Special standard 'm' was amended to indicate it applies to wastewater facilities treating an organic nutrient source.</p> <p>Rationale: The effluent limits in this special standard are based on expectations for a well run wastewater treatment facility treating organic waste and thus protect against nutrient over-enrichment in Chickahominy Lake. Permittees with no wastewater source containing organic waste (i.e., BOD, ammonia, phosphorus) still have discharge monitoring requirements for these parameters. Clarification of the special standard eliminates unnecessary expense for permittees not treating organic wastewater.</p> <p>Adopted two new special standards ('ee' and 'ff') to set recommended maximum temperatures of 26°C for Tinker Creek and 28°C for sections of the Roanoke River (9VAC25-260-450) from May 1 – Oct 31 that are stocked with trout only during the winter months.</p> <p>Rationale: DGIF stocks trout during the winter in some warm water rivers and streams which are not expected to survive the following summer. Application of a 21°C maximum temperature year-round to protect trout is inappropriate in these non-trout habitat waters and does not reflect the natural thermal regime. The new special standards represent the normal expected temperatures of these waters during the warmer seasons.</p>
<p>9VAC25-260-390 through 540. River basin tables.</p>		<p>Revised in the River Basin Section Tables; two trout stream delineations, corrected several typographical errors, added new Class VII Swamp Waters,</p>	<p>Trout stream segment delineation updates were adopted; typographical and miscellaneous corrections were made for accuracy and clarity.</p> <p>Changes from Class III non-tidal waters to identify Class VII Swamp Water designations for: Mattox Creek, Monroe Creek, Popes Creek in the Potomac</p>

		<p>Deleted one Public Water Supply (PWS) designation, and made miscellaneous corrections.</p> <p>Corrected an incorrect ESW number in the Special Standards column in the Middle James River basin referencing an Exceptional State Water designation.</p> <p>Replaced a public water supply (PWS) notation in section 5a of the Roanoke River basin table and a nutrient enriched water (NEW-1) notation in section 6i of the Roanoke River basin table.</p>	<p>Basin; Rumley Marsh, Shingle Creek, Stony Run in the Lower James Basin; Winticomack Creek in the Appomattox Basin; Golden Vale Creek, Hoskins Creek in the Rappahannock Basin; Garnetts Creek, Hornquarter Creek, Jacks Creek, Mehixen Creek, Monquin Creek, Totopotomoy Creek in the York Basin; and, Cattail Creek in the Chowan Basin.</p> <p>Rationale: Classified waters identified as Swamp Waters to eliminate incorrect impairment listings for these unique waters and allow for more appropriate water quality assessments.</p> <p>PWS deletion for 5 mile segment in the lower James River.</p> <p>Rationale: Collaboration with VDH indicates no known active intake for potable water has been at the subject location in the past 35 years. Even if an intake was present more than 35 years ago, no information is available to indicate it was ever used for a potable water supply. The consequence of deletion is removal of the misapplication of human health criteria for PWS and any related permit limits for dischargers within the segment.</p> <p>Corrected a typographic error in section 11i of the Middle James River so that the Special Standard ESW number '2' was changed to '22' to identify the correct Exceptional State Waters Designation 22 as described in 9VAC25-260-30.A.3.a.22.</p> <p>The PWS special standard in the Roanoke River basin table was adopted years ago and had been included in the table up until 2007; the notation was accidentally omitted from the official text due to a formatting error when the water quality standards regulation was reprinted in 2008.</p> <p>The designated nutrient enriched waters (NEW) are in section 9VAC25-260-350.A. and the NEW-1 designation is for Smith Mountain Lake and its tributaries, which is section 6i of the Roanoke River basin table. These errors have been</p>
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		discovered and the PWS and NEW-1 notations have been replaced in the official text to correct those typographical errors.
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Family impact

Please assess the impact of this 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.

The direct impact resulting from the development of water quality standards is for the protection of public health and safety and the protection of water quality in surface waters, which has only an indirect impact on families.

Regulatory flexibility analysis

Please 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) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of 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 proposed regulation.

Of the numerous amendments proposed, the following were determined to have potentially substantive impact to Virginia Pollutant Discharge Elimination System (VPDES) permitted facilities: addition of criteria for acrolein and carbaryl. As the criteria for acrolein and carbaryl are newly established, it is unclear what impacts they may have to permits, permit limits, and related costs.

There is no apparent alternative method that minimizes adverse impact while still accomplishing the intended positive policy goals. The proposal will have no impact regarding simplification or consolidation of reporting requirements. The Water Quality Standards regulation is applicable statewide through Virginia Pollutant Discharge Elimination System (VPDES) permitted discharge limits for all businesses and entities that require such a permit. There are no clear alternative methods that would both comply with the Clean Water Act and cost less.

ATTACHMENT 1

Summary of Comment

**Received during Notice of Public Comment Period
(July 29 – August 28, 2015)**

**Triennial Review of the Water Quality Standards
Regulation (9 VAC 25-260)**

9VAC25-260-5**Definitions**

No comments received.

9VAC25-260-50**Numerical Criteria for Dissolved Oxygen pH and Maximum Temperature**

Commenter: EPA

Regarding proposed application of pH criteria only to the epilimnion when a lake is stratified - VA must document how the aquatic life use below the epilimnion is protected by the water quality standards, as revised, particularly as the lake turns over.

Agency Response: *VA DEQ intends to include documentation and rationale with the approval submission package.*

9VAC 25-260-140**Criteria for surface water**

Commenter: Dominion Power

MANGANESE: Supports the proposed deletion of the manganese criterion as it is inappropriate to apply a guideline for finished drinking water to untreated, natural surface waters. Their current multi-year study evaluating the sources of manganese and the distribution of concentrations in river systems indicates the vast majority of the manganese is natural in origin and that surface water concentrations may be substantially influenced by storm events, tributary loads and reservoir dynamics as opposed to anthropogenic influences. They state that deletion is consistent with decisions made by other states (Missouri, Oregon, North Carolina).

Agency Response: *The support is noted.*

Commenter: EPA

COPPER BIOTIC LIGAND MODEL (BLM): They are pleased to see the proposal for adding the BLM as optional, alternate copper criteria for freshwater though they state VA should clarify what it considers to be sufficient data for application of the model. They also recommend VA consider applying the BLM for derivation of site specific criteria and not just on a permit specific basis.

Agency Response: *The Department does not routinely analyze samples for all parameters necessary to run the BLM though this situation does not negate the possibility of a special study if deemed necessary.*

HUMAN HEALTH CRITERIA: VA is proposing to adopt several criteria that either does not match the national recommendations, or for which there are no national recommendations. EPA reminds VADEQ that in order to support a CWA 303(c) approval, EPA will need to document that Virginia has met the requirements of 40 CFR 131.11. When VA started this triennial in 2013, VA considered EPA's IRIS updates available at that time and proposed updated human health criteria concentrations for 8 pollutants. In June 2015, EPA published final updated ambient water quality criteria for the protection of human health for 94 chemical pollutants and includes all 8 of those in VA's proposal.

EPA requests that VA consider revising the 8 proposed criteria in particular, but also other human health water quality criteria currently applicable in VA during this triennial review to

make them consistent with EPA's 2015 updated human health water quality criteria. Note that EPA's regulations at 40 CFR 131.20 require states to submit not only the revisions resulting from a review, but also the review itself, even if revisions are not adopted.

Agency Response: The recently updated human health criteria for 94 pollutants were published in the Federal Register the same day that Virginia Register published public notice for this triennial review's proposed amendments. Due to the lack of opportunity for sufficient public comment, the Department intends to recommend to the State Water Control Board to not adopt the 8 proposed human health parameters. Criteria updates to the 94 updated pollutants will be addressed through a future rulemaking.

CADMIUM: The revision to the existing aquatic life criteria for cadmium based on EPA guidance issued in 2001 with additional revisions based on a report published by the U.S Geological Survey in 2010. Please document how the report supports revision of the criteria and how the revision results in levels that are protective of aquatic life in Virginia.

Agency Response: An amendment was proposed to the cadmium criteria for the protection of freshwater aquatic life, based on EPA guidance issued in 2001 and updated with additional revisions included in a report published by the U.S Geological Survey in 2010. However, subsequent to the public comment period, in a November 2015 notification from EPA, DEQ staff became aware of a pending update to EPA's national recommended ambient water quality criteria for cadmium in order to reflect the latest scientific information. To avoid confusion and the potential for adoption of freshwater aquatic life criteria that are more restrictive than the pending federal recommendations without justification, staff will recommend removing the cadmium amendments from the rulemaking. Updates to the cadmium criteria will be addressed through a future rulemaking.

MANGANESE: VA proposal includes deletion of the manganese criterion which applies at public water supply intakes to maintain acceptable taste, odor, and aesthetic quality. VA's approval submission to EPA must include a rationale that explains how designated uses will be protected without this criterion. It is recommended that VA consider EPA's lifetime drinking water health advisory (EPA-822-R-04-003) of 0.3 mg/L when setting criteria for manganese to protect the relevant designated uses.

Agency Response: VA DEQ intends to include rationale with the approval submission package. It should be noted that the referenced document states: "A Drinking Water Health Advisory is not an enforceable standard for action. This Health Advisory describes non-regulatory concentrations of the contaminant in water that are expected to be without adverse effects on both health and aesthetics. Health Advisories serve as technical guidance to assist Federal, State, and local officials responsible for protecting public health when emergency spills or contamination situations occur. They are not to be construed as legally enforceable Federal standards. They are subject to change as new information becomes available. This draft supersedes any previous draft advisories for this chemical."

The regulatory determination in the EPA document (EPA-822-R-03-003) which forms a portion of the basis for the Drinking Water Health Advisory for Manganese states, "Do not regulate."

Commenter: Hampton Roads Sanitation District (HRSD)

COPPER: HRSD supports the adoption of the Biotic Ligand Model (BLM) copper criteria for the protection of freshwater aquatic life as an alternative to the current hardness-based numeric criteria

modified by a site-specific Water Effects Ratio (WER). They recommend maintaining both options in the calculation of copper criteria.

Agency Response: The support is noted.

CADMIUM: HRSD supports the proposed update to the freshwater aquatic life cadmium criteria.

Agency Response: The support is noted. Please refer to the response to EPA on the issue of cadmium.

Commenter: City of Richmond

Richmond supports adoption of the biotic ligand model. Adoption of the cadmium and lead criteria should include the ability to control hardness in order to manage the bioavailability of these metals to aquatic life.

Agency Response: The support for the BLM is noted. Manipulation of effluent hardness to manage bioavailability of metals is an operational issue for permitted dischargers and not directly related to the water quality criteria or the Water Quality Standards Regulation.

Commenter: Virginia Association of Municipal Wastewater Agencies (VAMWA)

VAMWA supports the retention of the current freshwater copper criteria as the principal approach, with the BLM criteria as an alternative approach at the option of the permittee.

Agency Response: The support is noted.

They also support adoption of freshwater aquatic life proposed cadmium criteria that differ from EPA's 2001 criteria. The most widely accepted alternate freshwater cadmium criteria are those reported by U. S. Geological Survey, and have been applied or modified by others. The USGS criteria, as further modified in the current proposal, are shown to be fully protective of aquatic life uses.

Agency Response: The support is noted. Please refer to the response to EPA on the issue of cadmium.

Commenter: Virginia Manufacturers Association (VMA)

VMA supports adoption of the BLM for alternate copper criteria as proposed. Regarding cadmium and lead criteria, they suggest that DEQ include provisions explaining that dischargers can manage the effluent hardness level in order to regulate the bioavailability of these metals.

Agency Response: The support is noted. On the second comment, please refer to response for City of Richmond.

Commenter: Virginia Coal and Energy Alliance (VCEA)

VCEA states that VA's existing selenium criteria are outdated and overly conservative. VCEA commissioned GEI Consultants to prepare a recalculation study using the latest science and data on selenium toxicity and presented it to DEQ as part of triennial review with a request to amend the WATER QUALITY STANDARDS according to the study findings. DEQ opted to not include the recalculated selenium criteria and instead wait for EPA to finalize long delayed revisions to the national criteria. VCEA anticipates it will be mid-to late-2016 before EPA completes this process, possibly followed by litigation. They recommend that DEQ carefully review EPA's calculations and assumptions, and then work with interested stakeholders — like

VCEA — to gather Virginia-specific data and information that will be useful in translating EPA's eventual national recommendations for actual conditions in the Commonwealth.

Agency Response: The agency will give consideration to EPA's soon-to-be-released nationally recommended selenium criteria as well as the commenter's suggestions in a future rulemaking.

9VAC 25-260-155

Ammonia surface water criteria

Commenters: Amherst, Buena Vista, Christiansburg, Culpeper, Danville Water and Wastewater Treatment Division, Dinwiddie Co. Water Authority, Goochland Co., Halifax Co. Service Authority, Hanover Co. Dept. of Public Works, Harrisonburg-Rockingham Regional Service Authority, Hampton Roads Sanitation District (HRSD), Hopewell Regional Wastewater Treatment Facility, Loudoun Water, Louisa Co. Water Authority, Peppers Ferry Regional Wastewater Treatment Authority, Richmond, Rivanna Water and Sewer Authority, Virginia Association of Municipal Wastewater Authorities (VAMWA), Virginia Manufacturers Association (VMA), Western Virginia Water Authority, Wise Co. Public Service Authority

Most commenters state that the proposed criteria change appears to have a major statewide impact. Although they understand that the purpose of the criteria change is to increase protection for snails and mussels, they have significant questions about the impact to treatment facilities, compliance costs, relationship to other current or future nutrient criteria, state grant availability, sewer rate increases, and uncertainties over implementation methods.

All opposing commenters requested the proposed ammonia criteria update be removed from the Triennial Review rulemaking and pursued in a separate rulemaking once permitting and compliance implementation concerns have been evaluated. All commenters voiced concerns about the facilities' ability to fund new improvements and the necessity to raise user rates.

Most comments reiterated the recommendation that VPDES permit compliance schedule requirements, as they affect water quality standards implementation issues, come in line with EPA's regulations to avoid the current and unnecessary artificial limitations on compliance schedules of the VPDES Permit Regulation.

Most commenters stated the need for careful implementation of a process that allows the maximum opportunity to coordinate the issues of compliance with current (or future) nutrient limits and more stringent ammonia limits. If an upgrade is warranted, it is more sensible to do so once, rather than repeatedly.

An economic impact analysis submitted by VAMWA provides the following key findings:

- The estimated costs for all affected facilities are substantial - estimated at more than one-half billion dollars (\$512,000,000) in capital and \$34 million in annual operations and maintenance, with the capital and O&M costs for very small sewage facilities (those less than 0.1 MGD) being of specific concern.
- The analysis indicates that approximately 80 schools would require upgrades or new plants costing \$200,000 to \$300,000 each in capital plus substantial increases in operating costs.

- In addition, the DEQ data base shows 19 facilities with design ≤ 5000 GPD, and an additional 28 $\leq 10,000$ GPD. These very small facilities typically serve VDOT rest areas and (in addition to small schools) other facilities not on a central sewer system that would face similar costs to those facing the 80 schools.
- Estimates were only provided for municipal sewage treatment facilities; the cost impact on industrial dischargers has not been evaluated.
- Costs could be reduced if revised permit implementation provisions accompany the new standards, but such revisions have not yet been considered or proposed by the agency.

The analysis notes that for those Chesapeake Bay watershed dischargers that already employ nitrification and denitrification processes, the stringency of the new criteria and their year-round application (in contrast to application of Bay requirements as an annual mass limit) will require additional upgrades even for those facilities. VAMWA suggests several implementation options they recommend be considered before the current ammonia criteria are changed:

- Develop and pursue a Basis-of- Design/Preliminary Engineering Report evaluation step similar to that employed for the Bay nutrient criteria to determine compliance capability and options.
- Existing permit calculation protocols use the upper 90th percentile pH and temperature values in determining criteria and waste load allocations and thereby permit requirements. Consider using a less extreme pH value. Also consider an expanded mixing zone approach for ammonia.
- Consider an update to the Water Quality Improvement Fund grants program to incorporate ammonia removal.
- No need to rush adoption... No other EPA Region 3 states have adopted or currently propose the new EPA ammonia criteria. Virginia is already first and by far the most active among Region 3 states in its freshwater Nutrient Water Quality Criteria program (including both nitrogen and phosphorus issues).

VAMWA and other commenters also recommend that the Water Quality Standards Regulation be amended by adding a VPDES permit schedule of compliance provision addressing water quality standards. The current VPDES permit regulation includes compliance provisions which are limited to the term of a five-year permit and are more restrictive than the comparable EPA regulation. VAMWA provided suggested compliance schedule language for potential inclusion to the Water Quality Standards Regulation.

VMA states the Department of Planning and Budget (DPB) economic impact analysis does not include the impact to manufacturers. The analysis notes the economic impact to municipal facilities with estimated costs but fails to provide estimated costs to industrial facilities. Some costs will be passed through to industries with pretreatment permits.

Richmond states millions of dollars have been invested to meet Bay nutrient standards. Meeting ammonia limits based on criteria that are 50% more stringent will render that investment obsolete, requiring additional projects costing millions of dollars. It is premature to adopt the ammonia criteria without evaluating the cumulative effect of competing regulatory programs and measures that can be implemented to integrate those requirements. DEQ has not provided sufficient options for its implementation. EPA has recognized the need for flexibility in

implementing the criteria, and encouraged states to incorporate such flexibilities into their regulatory program but DEQ has not done so. Richmond requests that DEQ include in the standard a provision allowing for site-specific variances and multi-discharger variances, provisions allowing for appropriate pH and temperature determinations for applying the criteria on a site specific basis, and incorporate by reference the availability of Mixing Zones. They request removal of the language from 9 VAC 25-31-250.A.3 limiting compliance schedules to the term of the permit.

Comment Specific to Hanover: They are in the middle of implementing a multiyear long range plan to comply with Chesapeake Bay TMDL nutrient allocation given to their plants and have already devoted considerable resources to this plan. They recently completed a \$6 million upgrade to the Totopotomoy Wastewater Treatment Plant as part of this plan. They are now uncertain whether they should continue with the plan or wait to see how currently uncoordinated but related regulatory changes will impact them. Hanover requests the following:

1. Sever the ammonia-nitrogen standards from this round of Triennial Review.
2. Conduct an ammonia-nitrogen study to develop implementation guidance and inform a separate rulemaking process.
3. Identify those stream segments where specific mussel habitat aquatic use exists or where as a practical matter can be restored.
4. Craft a process so that multiple program issues are coordinated so that if a POTW upgrade is warranted it is consolidated into a single project.
5. Bring VPDES Schedule requirements in line with EPA's regulations.

Comment Specific to Southwest Virginia: Given the higher cost of providing water and sewer service in the Southwest Virginia region, the resultant higher than average rates already seen in this area, the relatively lower median household incomes compared to the rest of the state, and that many of the facilities in this region are smaller and would realize a greater cost per gallon for capital and operating improvements for compliance, it is believed the proposed criteria change will have a significant impact in that region.

Halifax Co. states that impact of the proposed ammonia discharge reduction requirements will be extremely difficult for small systems to meet with current infrastructure and with discharges to relatively small streams. They ask that VA proceed cautiously with a fair, affordable, and holistic approach and to provide for an implementation process and funding mechanism to allow small community wastewater systems to remain viable.

Agency Response: The agency realizes there is potential for widespread impact to treatment facilities. Although the updated ammonia criteria for freshwater appear technically and scientifically sound, DEQ staff agrees additional time is needed to identify and fully understand the implications of implementing the revised criteria. It is the agency's opinion that the updated criteria and related implementation issues will be better addressed in a separate rulemaking that is not expected to require a protracted time frame and should commence in early 2016.

Commenter: EPA

They are pleased VA is updating its Ammonia surface water quality criteria. They recommend including an explanation of how DEQ plans to conduct freshwater mussel surveys and that historical record of mussel presence should be used in those waters where current or recent

conditions have eliminated or reduced mussel populations. They also state detailed protocols should be developed on assessment methods.

Agency Response: Determination of the absence of freshwater mussels requires special field survey methods. This determination must be made after an adequate survey of the waterbody is conducted by an individual certified by the Virginia Department of Game and Inland Fisheries (DGIF) for freshwater mussel identification and surveys. Determination of absence of freshwater mussels will be done in consultation with the DGIF. Also, please note the response provided above on addressing the ammonia criteria issue through a separate rulemaking.

Commenter: CBF

They are supportive of the proposed update to the freshwater ammonia criteria.

Agency Response: The support is noted.

9VAC25-260-185

Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries

Commenter: CBF

They support the clarification regarding application of Bay dissolved oxygen criteria.

Agency Response: The support is noted.

9VAC25-260-187

Nutrient Criteria for Lakes and Reservoirs

Commenter: EPA

VA is proposing to add lakes to the list of lakes to which nutrient criteria apply. Submission of the adopted amendments to EPA must include documentation showing that these lakes have been appropriately designated for the purpose of the application of the nutrient criteria.

Agency Response: VA DEQ intends to include documentation and rationale with the approval submission package.

Commenter: CBF

They support the addition of 2 impoundments for the application of nutrient criteria.

Agency Response: The support is noted.

9VAC25-260-310.m

Chickahominy watershed effluent limitation special standard

Commenter: EPA

EPA understands that the intent of this special standard is to protect the Chickahominy River from excessive nutrient inputs and to protect Chickahominy Lake from eutrophication. As this provision does not specify the use or the condition of the water, it does not appear to be a water quality standard.

Agency Response: The agency agrees with the comment.

Commenter: CBF

They support the proposed amendment to special standard 'm'.

Agency Response: The support is noted.

9VAC25-260-310.ee and ff**Temperature special standard for winter-only stocked trout waters**

Commenter: EPA

VA's submission for approval to EPA for site specific maximum temperature criteria ('ee' and 'ff) must include documentation of that rationale.

Agency Response: VA DEQ intends to include documentation and rationale with the approval submission package.

9VAC25-260-390 through 540. River basin tables**New swamp (Class VII) additions**

Commenter: EPA

VA's submission to EPA for approval should include a use attainability analysis (UAA) for each waterbody reclassified as Class VII. DEQ informed EPA that the reclassification of these waters as swamp waters is based on natural conditions that cause low pH and dissolved oxygen and reports supporting the reclassification must have information necessary to support Class VII classification.

Agency Response: VA DEQ intends to include documentation and rationale with the approval submission package.

9VAC25-260-390 through 540. River basin tables.**Other**

Commenter: EPA

Several proposed modifications in these sections are not well explained. Therefore, it was unclear if the deletions/insertions are substantive or just editorial corrections/changes. VA's submission for approval to EPA must include a discussion and rationale for the changes.

Agency Response: VA DEQ intends to include documentation and rationale with the approval submission package explaining the nature of the changes.

9VAC25-260-410. 1o**James River Basin (Lower)**

Commenter: Sustainability Park, LLC

The commenter states that they have invested several million dollars during development of the site and want to maintain assets associated with the property. Deletion of the Public Water Supply (PWS) designation would remove one of the important features for an industrial sites and market potential. They have had several interested parties consider the site and there is a company requiring heavy water uses in their process on site. They state that if the PWS is deleted from the section of the James River upon which the facility is located, it will impair or limit their long term strategy for development of this industrial site.

Agency Response: The location was previously owned by the American Tobacco Company, and VDH has reported that there may have been a raw water intake there in early days of the tobacco processing plant. No known intake has been there for domestic water in the past 35 years and VDH could not find any records about a domestic water intake at that location in years prior to 1978. The property where the intake is located has changed hands several times over the years and is now owned by Sustainability Park, LLC. This issue has been discussed with EPA and it is likely they will agree that the "existing use" as a potable water supply has never really been present at this location, thus allowing for the removal of this designation.

Therefore, DEQ staff will recommend removal of the PWS designation. The PWS designation in this portion of the James River has no relevance to any water withdrawal permit that might be applied for; water withdrawal applications are judged on their own merit and applicable regulations. A PWS designation is not a pre-requisite for a withdrawal permit; should the facility establish an active permitted drinking water intake, the agency may be petitioned to reestablish the PWS designation.

Commenter: EPA

VA's submission for approval to EPA for its PWS deletion should include relevant descriptive information, attainability information and, documentation that public water supply is not an existing use.

Agency Response: *VA DEQ intends to include documentation and rationale with the approval submission package.*

Other

Commenter: CBF

CBF believes that several new criteria should be considered prior to the next Triennial Review to ensure effective implementation of stormwater and Total Maximum Daily Load (TMDL) programs including the Chesapeake Bay TMDL:

- Establish official criteria for Total Dissolved Solids (TDS).
- Establish a numeric turbidity criterion.
- Complete development of numeric nutrient criteria for waterbodies other than the Chesapeake Bay and reservoirs.

Agency Response: *The agency will give consideration to the suggestions.*

Commenter: Virginia Coal and Energy Alliance (VCEA)

The VA Stream Condition Index ("VSCI") is part of DEQ's monitoring and assessment program, and serves as a valuable screening tool for the biological health of flowing surface waters. During the triennial review process, VCEA asked DEQ to clarify in its water quality standards that the VSCI must only be used for monitoring and assessment purposes. VCEA appreciates receiving that confirmation.

VCEA supports DEQ's current application of Virginia's narrative criteria. As DEQ noted in response to comments on the NOIRA, narrative criteria are often used as a trigger for additional studies of waterbodies to determine stressors and from there to identify quantifiable and enforceable criteria. It is not appropriate to use narrative criteria as limits in VPDES permits. VCEA appreciates receiving DEQ's confirmation.

Agency Response: *DEQ appreciates the support for the Water Quality Standard regulation's narrative aquatic life criteria and the methodology applied for assessment purposes. Staff still considers guidance to be the most appropriate location for mention of the VSCI and its use as an assessment tool which provides for more flexibility than if it (the VSCI) were in regulation.*

Commenter: Richmond

The City supports DEQ's decision to defer action on the adoption of the 2012 recreation bacteria criteria due to uncertainty related to field monitoring data assessment and the high potential for false positives associated with EPA's recommended calculation methodology.

Agency Response: *The support is noted.*

Commenters and List of Acronyms Used for the Organizations:

Amherst = Town of Amherst, Gary Williams, Lead Operator, Rutledge Creek WWTP

Buena Vista = City of Buena Vista, Trina Mastran, Wastewater Treatment Facility, Director

CBF = Chesapeake Bay Foundation, Chris Moore, Virginia Senior Scientist

Christiansburg = Town of Christiansburg, Ryan Hendrix, Wastewater Operations, Superintendent

Culpeper = Town of Culpeper, Jim Hoy, Director of Public Services

Danville = City of Danville, Division of Water and Wastewater Treatment, Barry Dunkley, Division Director

Dinwiddie County Water Authority = Ben Jones, Operations Manager

Dominion Power = Pamela Faggert, Chief Environmental Officer

EPA = U.S. Environmental Protection Agency

Goochland County Public Utilities = Todd Kilduff, Director

Hanover County Department of Public Works = J. Michael Flagg, PE, Director

Halifax County Service Authority = Mark Estes, Executive Director

Harrisonburg-Rockingham Regional Sewer Authority = Sharon Foley, Executive Director

HRSD = Hampton Roads Sanitation District, Jamie S. Heisig-Mitchell, Chief of Technical Services

Hopewell Regional Wastewater Treatment Facility = Jeanie Grandstaff, Director

Loudoun Water = Charles Logue, Executive Director, Operations & Maintenance

Louisa County Water Authority = Pam Bachman, General Manager

Peppers Ferry Regional Wastewater Treatment Authority = Clarke Wallcraft, Executive Director

City of Richmond = Department of Public Utilities, Robert Steidel, Director

Rivanna Water and Sewer Authority = Richard Gullick, Director of Operations

Sustainability Park, LLC = Brenda Robinson, President

VAMWA = Virginia Association of Municipal Wastewater Agencies, Inc., Chris Pomeroy,
General Counsel

VMA = Virginia Manufacturers Association, Andrea Wortzel and Brooks Smith, Counsels

VCEA = Virginia Coal and Energy Alliance, Brooks, Smith, Counsel

Wise County Public Service Authority = L. Alan Harrison, P.E., Executive Director

Western Virginia Water Authority = Michael T. McEvoy, Executive Director, Wastewater
Services