



Virginia
Regulatory
Town Hall

Final Regulation Agency Background Document

Agency Name:	Department of Environmental Quality
VAC Chapter Number:	9 VAC 25-260
Regulation Title:	Water Quality Standards
Action Title:	State Water Control Board Adoption of Amendments to the Water Quality Criteria for Ammonia
Date:	August 12, 2002

Please refer to the Administrative Process Act (§ 9-6.14:9.1 *et seq.* of the *Code of Virginia*), Executive Order Twenty-Five (98), Executive Order Fifty-Eight (99) , and the *Virginia Register Form, Style and Procedure Manual* for more information and other materials required to be submitted in the final regulatory action package.

Summary

Please provide a brief summary of the new regulation, amendments to an existing regulation, or the regulation being repealed. There is no need to state each provision or amendment; instead give a summary of the regulatory action. If applicable, generally describe the existing regulation. Do not restate the regulation or the purpose and intent of the regulation in the summary. Rather, alert the reader to all substantive matters or changes contained in the proposed new regulation, amendments to an existing regulation, or the regulation being repealed. Please briefly and generally summarize any substantive changes made since the proposed action was published.

Water Quality Standards consist of designated uses of the water body and narrative and numeric criteria that protect those uses by describing water quality in general terms and specifically as numerical limits for physical, chemical and biological characteristics of water.

The State Water Control Board is proposing amendments to the State's Water Quality Standards Regulation at 9 VAC 25-260-5, 140 and 155. The amendments will update the statewide ammonia criteria to match updates published by the Environmental Protection Agency (EPA). The criteria adopted are designed to protect aquatic life in all state waters. These amendments will be used in calculating Virginia Pollutant Discharge Elimination System permit limits where appropriate and for water quality assessments per the Clean Water Act 305(b) and 303(d) reports.

Statement of Final Agency Action

Please provide a statement of the final action taken by the agency: including the date the action was taken, the name of the agency taking the action, and the title of the regulation.

The State Water Control Board adopted the amendments to the Water Quality Standards regulation in 9 VAC 25-260-140 and 155 at their July 9, 2002 meeting.

Basis

Please identify the state and/or federal source of legal authority to promulgate the regulation. The discussion of this statutory authority should: 1) describe its scope and the extent to which it is mandatory or discretionary; and 2) include a brief statement relating the content of the statutory authority to the specific regulation. In addition, where applicable, please describe the extent to which proposed changes exceed federal minimum requirements. Full citations of legal authority and, if available, web site addresses for locating the text of the cited authority, shall be provided. If the final text differs from that of the proposed, please state that the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the final regulation and that it comports with applicable state and/or federal law.

§ 62.1-44.15(3a) of the Code of Virginia, as amended, mandates and authorizes the Board to establish water quality standards and policies for any State waters consistent with the purpose and general policy of the State Water Control Law, and to modify, amend or cancel any such standards or policies established. The federal Clean Water Act at 303(c) mandates the State Water Control Board to review and, as appropriate, modify and adopt water quality standards. The corresponding federal water quality standards regulation at 40 CFR 131.6 describes the minimum requirements for water quality standards. The minimum requirements are use designations, water quality criteria to protect the designated uses and an antidegradation policy. All of the citations mentioned describe mandates for water quality standards.

Web Address sites where citations can be found:

Federal Regulation web site

<http://www.epa.gov/epahome/cfr40.htm>

Clean Water Act web site

<http://www4.law.cornell.edu/uscode/33/1313.html>

State Water Control Law (Code of Virginia) web site

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+62.1-44.2>

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+62.1-44.15>

The content of the statutory authority is related to the specific regulation in that the amendments are modifications of existing criteria that will protect designated uses and criteria and designated uses are requirements of the water quality standards.

The proposed amendments do not exceed federal minimum requirements.

The Office of the Attorney General has certified that the agency has the statutory authority to promulgate the proposed regulation and it comports with applicable state and/or federal law.

Purpose

Please provide a statement explaining the need for the new or amended regulation. This statement must include the rationale or justification of the final regulatory action and detail the specific reasons it is essential to protect the health, safety or welfare of citizens. A statement of a general nature is not acceptable, particular rationales must be explicitly discussed. Please include a discussion of the goals of the proposal and the problems the proposal is intended to solve.

Water Quality Standards establish the requirements for the protection of water quality and of beneficial uses of these waters. The purpose of this rulemaking is to update the statewide ammonia criteria and recreational uses to match updates published by the Environmental Protection Agency.

The amendments are needed because EPA has published updates to these criteria for the states to incorporate into their water quality standards. EPA's updates contain more recent scientific information. All states are required to consider these updates when amending their water quality standards.

This provision of the regulation is justified from the standpoint of the public's health, safety or welfare in that it allows for the protection of designated uses of the water bodies. Proper criteria protect water quality and living resources of Virginia's waters for consumption of fish and shellfish, recreational uses and conservation in general.

The goal of the proposal is to protect state waters at levels that are scientifically correct and protective of aquatic life.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement of the regulatory action's detail.

In the existing Table of Parameters (9 VAC 25-260-140), the ammonia criteria were deleted. Also, in this section a citation in the Table of Parameters was added to direct the reader to the location of the new ammonia and bacteria criteria (the revised bacteria criteria were adopted in May 2002). 9 VAC 25-260-155 is the section in the regulation that contains the new ammonia criteria and all its provisions.

Issues

Please provide a statement identifying the issues associated with the final regulatory action. The term “issues” means: 1) the advantages and disadvantages to the public of implementing the new provisions; 2) the 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 include a sentence to that effect.

The primary advantage to the public is that the updated criteria are based on better scientific information to protect water quality. The updated ammonia criteria may be viewed as less stringent than the existing criteria; however, the scientific data base supporting that criteria is better than the one supporting the existing criteria and more accurately portrays the toxicity of ammonia in fresh water. Being less stringent, the new ammonia criteria may result in financial relief for some Virginia Pollutant Discharge Elimination System permittees, particularly in the wintertime when early life stages of fish are absent. The disadvantage is that the public may see this as an attempt to “lower the bar” on water quality. 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. Specifically, the environmental groups have commented that these ammonia criteria will result in increases of toxic and nutrient pollution to the Chesapeake Bay. These concerns are addressed in the agency response to comments.

There is no advantage or disadvantage to the agency or the Commonwealth that will result from the adoption of the ammonia amendments. Many existing permits already contain ammonia limits based on the existing criteria and may not be able to modify their permit to obtain the less stringent limits based on the new criteria because of antibacksliding rules (9 VAC 25-31-220 L). Backsliding of limits is not allowed by the permit regulation when regulations are revised or when existing limits are met.

Statement of Changes Made Since the Proposed Stage

Please highlight any changes, other than strictly editorial changes, made to the text of the proposed regulation since its publication.

In 9 VAC 25-260-155 subdivision C 4, the requirement in this section was revised so that the application of the early life stages of fish absent criteria would not likely jeopardize the continued existence of any **federal or state** threatened or endangered species. Previously, this requirement only referred to **federal** threatened or endangered species.

All other changes in the text were strictly editorial.

Public Comment

Please summarize all public comment received during the public comment period and provide the agency response. If no public comment was received, please include a statement indicating that fact.

Alexandria Sanitation Authority, Arlington County, Fairfax County and Prince William County Service Authority, Christopher Pomeroy, McGuire Woods LLP:

- Support the adoption of the revised EPA ammonia criteria and the applicability of the early life stages absent provision to those waters identified in prior comments. The revised criteria reflect the latest scientific understanding of ammonia toxicity.
- Agree that antibacksliding does not apply to implementing a winter tiered limit based on the early life stage absent provisions.
- Incorporated by reference previous comments and information submitted by the localities. Previously, the localities had submitted all the data information to support a site-specific criterion for some northern Virginia waters based on EPA's early life stage absent provision.

Chesapeake Bay Foundation, Jeff Corbin, Senior Scientist:

- The proposed ammonia criteria are in direct conflict with the toxic goals in the 2000 Bay Agreement.
- Under no obligation to adopt revised criteria that would result in a significant increase in pollution discharge to state waters (four times as much ammonia under certain situations).
- Should suspend adoption of the new ammonia criteria until the federal review of the protectiveness of the new criteria to endangered species is completed.
- Pollution prevention must be considered before any less stringent criteria are allowed in a permit if the more stringent limits can be attained through enhancements in treatment processes or pollution prevention measures. This is a state law requirement.
- For these reasons, the DEQ should continue to implement the current acute and chronic criteria for ammonia.

Dominion Virginia Power, Pamela Faggert:

- Supports DEQ's proposal to adopt EPA's 1999 freshwater ammonia criteria which have a more current and sound technical basis than Virginia's existing ammonia criteria.

Franklin County Richard E Huff, II, County Administrator and Bonnie Johnson, Assistant County Administrator:

- (No comments submitted regarding the ammonia criteria. All comments previously submitted to the Board from this entity were related to the bacteria criteria)

James River Association, Patricia Jackson, Executive Director:

- Opposes the proposed ammonia standards because DEQ must reduce ammonia in state waters to reduce toxic impacts and to meet the nutrient reduction goals of the Chesapeake Bay Agreement and tributary strategies. Therefore, the existing ammonia standards should be retained.

Senator Wm. Roscoe Reynolds, 20th Senatorial District:

- Supports the requests made by Franklin County and urges the Board to modify the proposed regulation to minimize adverse impacts on agriculture.

Southern Environmental Law Center, Katherine Slaughter and Pilar Penn:

- Opposed to the proposed ammonia criterion because it runs counter to toxics reduction goals and may allow up to four times as much ammonia discharge under certain situations.
- Should maintain the existing more stringent criteria in order to protect endangered mussels or at least suspend adoption of the new criteria until there has been a federal review validating that the proposed criteria will protect endangered fresh water mussels.
- Site-specific modifications for early life stages should include a determination that there are no amphibious species present.
- Focus on the toxicity of ammonia in these situations rather than the engineering capacity problems mentioned by the municipalities, which favors higher ammonia discharge in order to shift more capacity in winter to nitrogen removal.

Virginia Association of Municipal Wastewater Agencies, Christopher Pomeroy, McGuire Woods LLP:

- Supportive of the revised EPA ammonia criteria proposed by the DEQ with the early life stage provision. These criteria are more scientifically accurate and promote the concept of protecting aquatic life during the time frame they are actually present in the water body. These are not a lowering of protection or uses, but a more accurate threshold to protect the existing uses.
- Agrees with comments made in support of the four Northern VA communities seeking site-specific ammonia criteria (see comment summary for Alexandria, Arlington, Fairfax and Prince William).

Virginia Department of Health, Robert Stroube, M.D. M.P.H., Acting State Health Commissioner:

- (No comments submitted regarding the ammonia criteria. All comments previously submitted to the Board from this entity were related to the bacteria criteria).

Virginia State Dairymen's Association, Dale Gardner, Executive Secretary-Treasurer:

- (No comments submitted regarding the ammonia criteria. All comments previously submitted to the Board from this entity were related to the bacteria criteria)

AGENCY RESPONSE:

- Agree that waters containing more sensitive species should have criteria to protect those species. However, DEQ does not believe there is enough scientific information available at this time to delay adoption of the freshwater ammonia criterion. EPA recommends the 1999 criteria for adoption in all the states and maintains that it is the most defensible criteria.
- Disagree that the revised ammonia criteria would result in significant increases in pollution discharges - existing discharges are subject to certain antibacksliding provisions. If permittees are allowed the new criteria as a basis for limits (example new discharges or permittees who demonstrate the early life stage absent provision applies during certain months of the year) the new criteria is still protective of aquatic life from toxic effects.

- Disagrees that the new criteria are in conflict with the Bay agreement. The Chesapeake 2000 agreement states that we commit to fulfilling the 1994 goal of a Chesapeake Bay free of toxics by reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources that inhabit the Bay or on human health. The Bay agreement also says that states will strive for zero release of chemical contaminants from point sources through continual improvement of pollution prevention measures and other voluntary means. Particular emphasis is placed on the elimination of mixing zones for persistent or bioaccumulative toxics. Ammonia is neither persistent nor bioaccumulative and the new criteria are protective of aquatic life and water quality in freshwater. Furthermore, ammonia is a short-lived toxicant and will have no toxic effect on the Bay farther downstream. Since the revised freshwater ammonia criterion is still protective of water quality, with no adverse impacts on living resources expected, then it is not in conflict (i.e. it does not result in a toxic or bioaccumulative impact). The Bay agreement also targets the nutrients nitrogen and phosphorus and these nutrient reduction goals will not change because of a criteria based on toxicity. Based on the biological wastewater treatment processes predominately used by point source owners, nitrification is a necessary first step in the process, and will be maintained in order to meet performance levels for total nitrogen removal. Furthermore, the new Bay nutrient criteria for tidal waters adopted by the Commonwealth will result in new nutrient reduction goals under the Bay agreement. When these nutrient criteria are adopted, both ammonia-nitrogen and total nitrogen will be analyzed as potential permit limits and if applicable, these limits will have to be met.
- Disagrees that pollution prevention requirements for permits should prevent DEQ from adopting technically defensible EPA recommended criteria even if they are less stringent than existing criteria. Section 62.1-44.19:8 states that "Owners of establishments that discharge toxics to toxic-impaired waters shall evaluate the options described in Sections 10.1-1425.10 and 10.1-1425.11 in determining the appropriate means to control such discharges. Prior to issuing or reissuing any permit for the discharge of toxics into toxic-impaired waters, the Board shall review and consider the owner's evaluation of the options in determining the conditions and limitations of the permit." These requirements only pertain to permit limits in toxic impaired waters. If any waters were impaired due to ammonia, these requirements would still apply.

Detail of Changes

Please detail any changes, other than strictly editorial changes, that are being proposed. Please detail new substantive provisions, all substantive changes to existing sections, or both where appropriate. This statement should provide a section-by-section description - or crosswalk - of changes implemented by the proposed regulatory action. Include citations to the specific sections of an existing regulation being amended and explain the consequences of the changes.

In the Table of Parameters (9 VAC 25-260-140) a reference to the ammonia and bacteria sections have been added. Also, under footnote 10 of the Table of Parameters, the EPA

recommended default design flow for the chronic ammonia criterion for ammonia is added. Also the existing numerical ammonia criteria in Tables 1, 2, 3 and 4 are proposed for deletion because the new ammonia criteria have been moved to a new section.

A new section (9 VAC 25-260-155) is proposed which includes the updates to the ammonia criteria. This section includes EPA's 1999 freshwater ammonia criteria with acute criteria and chronic criteria for waters with early life stages of fish present and chronic criteria for waters with early life stages of fish absent. The chronic criteria for waters with early life stages of fish present applies unless a specific procedure is followed to make the determination if the early life stages of fish are absent. The procedure to determine whether early life stages of fish are absent is described in the regulation (9 VAC 25-260-155 subsection C). These determinations of whether the early life stages of fish are absent are implemented via the permit process. If the procedure is not followed or if any additional data are used to make the determination, then a site-specific criterion must be adopted. Several clarifications were made to the criteria equations in subsections A, B and C to improve readability. Also, a clarification was added to the early life stage absent provision so that the existence of both state and federal endangered and threatened species cannot be jeopardized before we allow the less stringent early life stage absent provision to apply (the previous language only referred to federal 9 VAC 25-260-155 C 4).

9 VAC 25-260-155 also contains the saltwater ammonia criteria in subsections D and E. These criteria are updated to reflect the same concentration units (mg nitrogen per liter) as the freshwater criteria. In addition, the saltwater ammonia criteria have been recalculated based on the formulas referenced in EPA's 1989 saltwater ammonia criteria document. The existing saltwater ammonia criteria were based on the tables in this same 1989 EPA document. Several clarifications were also made to the criteria equations in these subsections to improve readability.

Family Impact Statement

Please provide an analysis of the regulatory action that assesses the impact on the institution of the family and family stability including the extent to which 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 development of water quality standards is for the protection of public health and safety, which has only an indirect impact on families.