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Notice of Intended Regulatory Action (NOIRA) Agency Background Document

Approving authority name	State Water Control Board
Virginia Administrative Code (VAC) citation	9 VAC 25-260
Regulation title	Water Quality Standards
Action title	Amendments to Water Quality Standards – Chesapeake Bay and Tidal Waters Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll <i>a</i> and Designated Uses
Document preparation date	Enter date this form is uploaded on the Town Hall

This information is required for executive review (www.townhall.state.va.us/dpbpages/apaintro.htm#execreview) and the Virginia Registrar of Regulations (legis.state.va.us/codecomm/register/regindex.htm), pursuant to the Virginia Administrative Process Act (www.townhall.state.va.us/dpbpages/dpb_apa.htm), Executive Orders 21 (2002) and 58 (1999) (www.governor.state.va.us/Press_Policy/Executive_Orders/EOHome.html), and the *Virginia Register Form, Style, and Procedure Manual* (http://legis.state.va.us/codecomm/register/download/styl8_95.rtf).

Purpose

Please describe the subject matter and intent of the planned regulatory action. Also include a brief explanation of the need for and the goals of the new or amended regulation.

The subject matter of the rulemaking will include updated numerical and narrative criteria to protect designated uses from the impacts of nutrients and sedimentation. The rulemaking will also include new and revised use designations for the Chesapeake Bay and its tidal tributaries.

The intent of this rulemaking is to protect state waters by adopting regulations that are technically correct, necessary and reasonable. These standards will be used in calculating load allocations for the Chesapeake Bay Tributary Strategies, 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 will require development of a Total Maximum Daily Load (TMDL) under section 303(d) of the Clean Water Act. In May 1999, EPA Region III included Virginia's portion of the Chesapeake Bay and portions of several tidal tributaries on Virginia's 1998 Clean Water Act

section 303(d) impaired waters list. The Chesapeake 2000 Agreement specifies a goal to remove the Chesapeake Bay and its tidal tributaries from the list of impaired water bodies for nutrient and sediments by 2010. Thus, the development of a TMDL for the entire Chesapeake Bay is not being scheduled until 2010 anticipating that the Chesapeake Bay Program partners can cooperatively achieve water quality standards by that time making a bay wide TMDL unnecessary.

This rulemaking is needed to establish the appropriate uses and criteria for the Bay and because the Bay partners with the U.S. Environmental Protection Agency (EPA) Chesapeake Bay program have worked together to publish nutrient related criteria and designated uses specific to the Chesapeake Bay. Adoption of Bay specific criteria and uses is necessary to define the most accurate water quality goals for clean up or TMDL development. Virginia is also committed through Chesapeake 2000 to adopt new and revised water quality standards for the Bay. Changes to the regulation are also needed to meet EPA priorities for setting nutrient criteria.

Legal Basis

Please identify the state and/or federal source of legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly bill and chapter numbers, if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

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) are the sources of legal authority identified to promulgate these amendments. The most relevant law is the Code of Virginia at §62.1-44.15(3a). The promulgating entity is the State Water Control Board.

The scope and objective of the Clean Water Act is to restore and maintain 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 scope of the Federal regulations at 40 CFR 131 is to describe the 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 scope and purpose of the State Water Control Law is to protect and to restore the quality of state waters, to safeguard the clean waters from pollution, to prevent and to reduce pollution and to promote 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 is mandated, although the specific standards to be adopted or modified are discretionary to the Environmental Protection Agency and the state.

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>

Need

Please detail the specific reasons why the agency has determined that the proposed regulatory action is essential to protect the health, safety, or welfare of citizens. In addition, delineate any potential issues that may need to be addressed as the regulation is developed.

The rulemaking is essential to the protection of health, safety or welfare of the citizens of the Commonwealth. 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.

Potential issues that may need to be addressed are listed in the alternatives sections.

Substance

Please detail any changes that will be proposed. For new regulations, include a summary of the proposed regulatory action. Where provisions of an existing regulation are being amended, explain how the existing regulation will be changed.

The proposed regulatory action will constitute an amendment of existing regulatory provisions. The existing regulation currently designates all depths, areas and time periods of the Chesapeake Bay and its tidal tributaries for aquatic life protection. Therefore, existing numerical criteria apply equally at all depths and in all areas of the Bay at all times. The proposed regulatory action will subcategorize existing aquatic life uses and add new aquatic life uses for shallow and migratory and spawning waters. Criteria will be proposed to protect the subcategorized and new uses.

Alternatives

Please describe all viable alternatives to the proposed regulatory action that have been or will be considered to meet the essential purpose of the action. Also, describe the process by which the agency has considered or will consider, other alternatives for achieving the need in the most cost-effective manner.

The following are alternatives for consideration but DEQ staff will work in conjunction with other state and federal agencies to find other alternatives. Alternatives provided by the public will also be considered. The EPA criteria and designated use publications referred to below are *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries*, April 2003 and the *Technical Support Document for the Identification of Chesapeake Bay Designated Uses and Attainability*, 2003.

(<http://www.chesapeakebay.net/baycriteria.htm>)

Each of the alternatives presented is intended to explore issues presented in one or both of the documents referenced above. Some alternatives considered by the agency include, but are not limited to, the following:

General

- Whether nutrient and sediment enrichment criteria should be adopted for the Chesapeake Bay and its tidal tributaries and whether these criteria should be based on nutrient and sediment pollution response variables published by EPA or should some other approach be taken to control nutrients in the Bay watershed (the nutrient and sediment pollution response variable approach is favored);
- Whether the existing Policy for Nutrient Enriched Waters Policy (9 VAC 25-40-10 et.seq.) or the Designation of Nutrient Enriched Waters (9 VAC 25-260-350) should be revised (e.g. remove the Chesapeake Bay and tidal tributaries from the list of nutrient enriched waters) if these nutrient response variables are adopted;
- Whether any of the individual alternatives listed here be placed in agency guidance or should it be placed in the water quality standards regulation (e.g. implementation issues);

Use Designations

- Whether the adoption of new aquatic life use designations (e.g. deep channel and deep water) as proposed by EPA for the Bay constitute seasonal aquatic life uses (9 VAC 25-260-10.F), subcategorizations of aquatic life uses or aquatic life use removals (9 VAC 25-260-10.G);
- Whether factors 9 VAC 25-260-10.G. 1, 3, 5 and/or 6 should be used to support these use changes and whether there is enough information provided by EPA in the references listed above to justify using any of all of these factors for the use changes;
- Whether the use boundaries for migratory and spawning fishes should be extended to include potential spawning areas;
- Whether deep channel or deep water use boundaries should be delineated bay wide as an area below the pycnocline or should a horizontal boundary be included with the deeper waters below the pycnocline to limit the horizontal extent of these deeper waters (which would result in no deeper water uses in some parts of the Bay regardless of pycnocline presence);
- Whether these deeper water uses that are limited by a horizontal extent should reflect what is described in the EPA Technical Support Document or should some other boundary be set; (see alternatives for criteria - next section);
- Whether the shallow water designated use should cover tidally influenced waters from the intertidal zone to a Chesapeake Bay Program segment-specific depth contour from 0.5 to 2 meters as published by EPA or should the use cover these waters to a single depth contour bay-wide to 2 meters or should the concept of a segment specific depth contour not be incorporated and instead provide a shallow water use description with appropriate criteria (see alternatives for criteria - next section);

- Whether to incorporate these designated uses into the definition section (9 VAC 25-260-5), designation of uses section (9 VAC 25-260-10), the Class II fresh/transition zone/saltwater delineations (9VAC 25-260-140C) or in a new section of the regulation;

Criteria

- Whether the less stringent dissolved oxygen criteria published by EPA for open water (i.e. instantaneous minimum 3.2 mg/L) be proposed in the VA open water portions of the Chesapeake Bay or should the existing Virginia criteria (i.e. instantaneous minimum 4.0 mg/L) be retained in proposed open water areas;
- Whether the less stringent dissolved oxygen criteria published by EPA for the deep waters (i.e. 30-day mean of 3 mg/L, 1-day mean of 2.3 mg/L and instantaneous minimum of 1.7 mg/L June - September) be proposed or should other criteria be used in deep waters (depending on how deep water is delineated - see use alternatives above). Other criteria that may be appropriate for some deep water areas in VA include EPA's published open water criteria and VA's existing criteria;
- Whether any of the more stringent revised dissolved oxygen criteria published by EPA (e.g. for tidal-fresh waters year-round 30-day dissolved oxygen criteria of 5.5 mg/L and 7-day spring migratory spawning and nursery dissolved oxygen criteria of 6 mg/L) should be proposed or is there another technically valid alternative;
- Whether the EPA published dissolved oxygen criteria are appropriate for waters inundated with low dissolved oxygen from extensive surrounding tidal wetlands (e.g. Mattaponi and Pamunkey) or should VA consider an alternate criteria for these waters or consider an alternate method of measuring attainment in these waters;
- Whether there is any other technically valid alternative for any of the new or revised criteria published by EPA for the Chesapeake Bay and its tidal tributaries;
- Whether numerical criteria for water clarity as published by EPA should be proposed or biological criteria expressed in acres of submerged aquatic vegetation (SAV) as published by EPA should be proposed or some combination of a biological (SAV) criteria with water clarity criteria should be proposed;
- If biological SAV criteria are proposed, should they be expressed in terms of number of acres from a local, regional, Chesapeake Bay Program segment, statewide or bay wide total acres;
- Whether chlorophyll *a* criteria would be beneficial to resource protection in the Bay if water clarity and dissolved oxygen criteria are proposed to reduce the nutrient inputs or is the addition of chlorophyll *a* criteria necessary for protection of different resources;
- If a chlorophyll *a* criterion is needed, should a narrative chlorophyll *a* criterion as published by EPA for all Chesapeake Bay and tidal tributary waters be considered or should a site-specific numerical chlorophyll *a* criteria be developed;
- If site-specific chlorophyll *a* numerical criteria are proposed how should they be expressed (e.g. concentration, duration);
- Whether the measures of attainment of the criteria published by the EPA are appropriate for all small tidal creeks and embayments given that the data used to determine attainment was primarily taken from main stem Bay and main channel tributary data;

Implementation

- Whether, due to the unique nature of these criteria (interstate waters, large watershed, expected high implementation costs), DEQ should consider adopting policies in the standards to address implementation or should they be placed in agency guidance;

- Whether the cumulative frequency distribution methodology as published by EPA for determining attainment be included in the regulation or should it be placed in agency guidance;
- Whether attainment of the dissolved oxygen criteria should be assessed using direct monitoring at the increased levels required for assessing attainment of the 1-day mean, 7-day mean and 30-day mean or should assessment be based on statistical methods to estimate attainment. Should this assessment methodology be placed in the regulation or published as guidance;
- Whether these criteria should be applied to all permitted discharges or should they be applied only to the "significant" permitted discharges that are identified by the interstate Chesapeake Bay Program and that are included in the Chesapeake Bay tributary strategies designed to achieve the assigned river basin nutrient load allocations;
- How should this rulemaking be approached since attainment of these criteria and uses in Virginia requires improved treatment technologies and best management practices in other Bay watershed states. Conversely, meeting Maryland's criteria and uses will require improvements in treatment and best management practices in Virginia. Should the states collaborate in developing a uniform set of water quality standards for the Chesapeake Bay, or are compatible standards for the Bay sufficient?

Public Participation

Please indicate the agency is seeking comments on the intended regulatory action, to include ideas to assist the agency in the development of the proposal and the costs and benefits of the alternatives stated in this notice or other alternatives. Also indicate whether a public meeting is to be held to receive comments on this notice. Indicate that 1) the agency is not holding a public meeting because the agency has authorized proceeding without holding a meeting or 2) the agency is holding a meeting. If a public meeting is to be held, indicate that the date, time and place of the meeting may be found in the calendar of events section of the Virginia Register of Regulations.

The Board is seeking comments on the intended regulatory action, including ideas to assist in the development of a proposal, on the alternatives described, on the costs and benefits of the alternatives described or any other alternatives related to these designated uses, criteria, or implementation of the criteria and impacts of the regulation on farm and forest land preservation. The Board also seeks comment from the public on any aspects of technical support documentation for this rulemaking provided by the Environmental Protection Agency's Chesapeake Bay Program Office that should or should not relate to the Commonwealth of Virginia or should be modified in some way to better protect water quality in the Commonwealth. These technical documents include:

Ambient Water Quality Criteria for Dissolved, Water Clarity and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries, April 2003

Technical Support Document for the Identification of Chesapeake Bay Designated Uses and Attainability, August 2003

Biological Evaluation for the Issuance of Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for Chesapeake Bay and its Tidal Tributaries

Economic Analyses of Nutrient and Sediment Reduction Actions to Restore Chesapeake Bay Water Quality, May 2003

All these documents can be found at <http://www.chesapeakebay.net/baycriteria.htm>

The Board is also seeking comment on ad hoc advisory committee membership. Names of individuals or organizations for the ad hoc committee should be submitted to the contact person 30 days after publication of the Notice of Intended Regulatory Action in the Virginia Register of Regulations.

Anyone wishing to submit written comments for the public comment file may do so at the public meeting, by mail to the Department of Environmental Quality (c/o Elleanore Daub), P.O. Box 10009, Richmond, VA 23240-0009, or by email to emdaub@deq.state.va.us or by fax at (804) 698-4116. Written comments must include the name and address of the commenter. In order to be considered comments must be received by the close of the comment period.

A public meeting will be held and notice of the meeting can be found in the Calendar of Events section of the Virginia Register of Regulations. Both oral and written comments may be submitted at that time.

Participatory Approach

Please indicate the extent to which an ad hoc advisory group will be used in the development of the proposed regulation. Indicate that 1) the agency is not using the participatory approach in the development of the proposal because the agency has authorized proceeding without using the participatory approach; 2) the agency is using the participatory approach in the development of the proposal; or 3) the agency is inviting comment on whether to use the participatory approach to assist the agency in the development of a proposal.

The agency is using the participatory approach in the development of this proposal. This will involve the formation of an ad hoc advisory committee to assist in the development of the proposal. The Board is also seeking comment on ad hoc advisory committee membership. Names of individuals or organizations for the ad hoc committee should be submitted to the contact person 30 days after publication of the Notice of Intended Regulatory Action in the Virginia Register of Regulations.

Impact on family

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.

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