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## Notice of Intended Regulatory Action (NOIRA) Agency Background Document

<b>Approving authority name</b>	State Water Control Board
<b>Virginia Administrative Code (VAC) citation</b>	9 VAC 25-40
<b>Regulation title</b>	Policy For Nutrient Enriched Waters
<b>Primary Action title</b>	Amendments to Policy For Nutrient Enriched Waters – Total Nitrogen and Total Phosphorus Technology Based Numerical Limitations for Permits within the Chesapeake Bay Watershed
<b>Secondary Action title 9 VAC 25-720</b>	Amendments to Water Quality Management Planning Regulation
<b>Document preparation date</b>	December 16, 2003

This information is required for executive review ([www.townhall.state.va.us/dpbpages/apaintro.htm#execreview](http://www.townhall.state.va.us/dpbpages/apaintro.htm#execreview)) and the Virginia Registrar of Regulations ([legis.state.va.us/codecomm/register/regindex.htm](http://legis.state.va.us/codecomm/register/regindex.htm)), pursuant to the Virginia Administrative Process Act ([www.townhall.state.va.us/dpbpages/dpb\\_apa.htm](http://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](http://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](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 establishing numerical limitations for the discharge of total nitrogen, and the possible revision of numerical limitations for the discharge of total phosphorus, for permitted discharges located within the Virginia portion of the Chesapeake Bay Watershed based on state-of-the-art technology.

The intent of this rulemaking is to protect State waters by adopting regulations that are technically correct, necessary and reasonable. This regulatory action will establish technology based numerical limitations in permits for total nitrogen for discharges within that portion of the Commonwealth that is part of the Chesapeake Bay watershed. This action is needed because

nitrogen discharged from municipal and industrial wastewater treatment plants contributes to the overall loading of nitrogen to the Chesapeake Bay and its tributaries. Nitrogen has been identified as a pollutant contributing to the impairment of large portions of the Bay and tidal portions of these tributaries, which are included on the list of impaired waters required under §303(d) of the Clean Water Act and §62.1-44.19:5 of the Code of Virginia. Waters not meeting standards will require development of a Total Maximum Daily Load (TMDL), also required under the same sections of federal and state law. In May 1999, EPA Region III included most of Virginia's portion of the Chesapeake Bay and portions of several tidal tributaries on Virginia's 1998 impaired waters list. The Chesapeake 2000 Agreement specifies a goal to remove the Chesapeake Bay and its tidal tributaries from the list of impaired waters 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 achieve water quality standards by that time making a bay wide TMDL unnecessary. This regulatory action will help to meet the goals of the Chesapeake 2000 Agreement.

This rulemaking will also consider whether existing effluent limitations for total phosphorus contained in the Policy for Nutrient Enriched Waters should be revised as part of the Chesapeake Bay restoration program.

Under a separate rulemaking, amendments to the Virginia Water Quality Standards regulation [9 VAC 25-260] are being considered that will update numerical and narrative criteria to protect designated uses of the Chesapeake Bay and its tidal rivers from the impacts of excessive amounts of nutrients and sediments. The rulemaking will also include new and revised use designations for the Chesapeake Bay and its tidal tributaries. Adoption of Bay specific criteria and uses is necessary to define the most accurate water quality goals for reducing the input of nitrogen, phosphorus and sediments and for subsequent TMDL development.

This rulemaking is needed to establish technology based numerical limitations for the discharge of total nitrogen and total phosphorus within the Virginia portion of the Chesapeake Bay watershed. Nitrogen and phosphorus discharges throughout the Bay watershed have been shown to impact the water quality in the Bay and its tidal rivers. Numerical limitations for total nitrogen or total phosphorus that are more restrictive than the technology based numerical limitations included in the revised Policy may be needed for some discharges to meet the requirement of the Virginia Water Quality Standards or any applicable TMDL.

Based on the results of this rulemaking process, there may be amendments needed to the Water Quality Management Planning Regulation [9VAC 25-720].

### 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.*

State mandate in the Code of Virginia in §62.1-44.15 is the source of legal authority identified to promulgate these amendments. The promulgating entity is the State Water Control Board.

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(10) mandates the Board to adopt such regulations as it deems necessary to enforce the general water quality management program of the Board in all or part of the Commonwealth. In addition, §62.1-44.15(14) requires the Board to establish requirements for the treatment of sewage, industrial wastes and other wastes that are consistent with the purposes of this chapter. Setting the specific effluent limits needed to meet the water quality goals is within the discretion of the Board.

The correlation between the proposed regulatory action and the legal authority identified above is that the amendments being considered are modifications of the current requirements for the treatment of wastewater that will contribute to the protection of Virginia's water quality.

State Water Control Law (Code of Virginia) web site:

<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 treatment of wastewater protects 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 current Policy for Nutrient Enriched Waters contains specific limitations for phosphorus, but water quality in the Chesapeake Bay and its tributaries is also significantly impacted by the input of nitrogen from point sources (municipal and industrial wastewater treatment plants), non-point sources (runoff from agricultural, forested and urban lands) and air deposition. This proposed regulatory action would add technology based numerical limitations for total nitrogen for certain permitted discharges from wastewater treatment plants located within the Virginia portion of the Chesapeake Bay watershed. Given that a range of technologies is available for removing total nitrogen from wastewater, the Board will consider all options. The proposed regulatory action

will also consider whether the current effluent limitations for phosphorus in the Policy need to be changed.

## 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.

Some alternatives considered by the agency include, but are not limited to, the following:

- Whether implementation of technology based numerical limitations for municipally owned wastewater treatment plants should be contingent upon provision of a specified amount of federal and/or state grant funding for construction of needed facilities;
- Whether technology based numerical limitations in permits for total nitrogen should be defined as any of the following concentrations: 3.0 mg/l [limit of technology]; 5.0 mg/l [enhanced nutrient removal]; 8.0 mg/l [biological nutrient removal]; or at some other level;
- Whether the existing effluent limitation for total phosphorus should remain as currently defined in the Policy for Nutrient Enriched Waters, or should another technology based numerical limitation for total phosphorus be adopted for certain discharges within the Chesapeake Bay watershed;
- Whether assignment of technology based numerical limitations for nitrogen and phosphorus can be done in ways to ensure that wastewater treatment plants are able to serve the future needs of Virginia communities as well as protect the Chesapeake Bay;
- Whether the technology based numerical limitations should apply to certain discharges located throughout all, or only certain sections, of the following river basins within Virginia that constitute the Chesapeake Bay watershed: Potomac, Rappahannock, York, James, and small coastal basins on the western and eastern shores draining into the Chesapeake Bay;
- Whether these limitations should be applied to: 1. all permitted discharges; or 2. those discharges as currently defined in the Policy for Nutrient Enriched Waters; or 3. those "significant" permitted discharges that are identified by the interstate Chesapeake Bay Program and that are included in the Chesapeake Bay tributary strategies; or 4. discharges defined in some other manner;
- Whether the monthly averaging period currently included in the Policy for Nutrient Enriched Waters should be applied to these technology based numerical limitations, or should another averaging period (e.g., annual average, seasonal tiers) be used for these limitations;
- Whether the Policy should also contain requirements for nutrient loadings from the discharges regulated by the Policy or should nutrient loadings be governed by the applicable Tributary Strategy developed in accordance with §§2.1-51.12:1 and 2 of the Code of Virginia

or should nutrient loadings be governed by a Total Maximum Daily Load waste load allocation developed in accordance with §62.1-44.19:7 and included in the Water Quality Management Planning Regulation [9VAC 25-720], or should the total nutrient allocation for the applicable river basin be governed through some other action by the Board;

- Whether the Policy should include a process for granting a variance from meeting the technology based numerical limitations for those discharges not capable of meeting them and an allowance for meeting less restrictive effluent limitations;
- Whether the revised Policy should include implementation schedules;
- Whether the revised Policy should contain provisions for integrating the requirements of the Policy with watershed approaches, such as, watershed permitting concepts or point source to point source trading, that may be recommended in the Tributary Strategies developed in accordance with §§2.1-51.12:1 and 2 of the Code of Virginia or contained in a subsequent Total Maximum Daily Load waste load allocation developed in accordance with §62.1-44.19:7; and
- Whether the individual alternatives listed here should be included in agency guidance or should be included in the Policy.

## 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 the establishment of technology based numerical limitations for permitted discharges and impacts of the regulation on farm and forest land preservation. The Board also seeks comment from the public on any aspects of the 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, but are not limited to:

*Economic Analyses of Nutrient and Sediment Reduction Actions to Restore Chesapeake Bay Water Quality, May 2003 (including Appendices A - D )*  
<http://www.chesapeakebay.net/eoanalyses.htm>

*Nutrient Reduction Technology Cost Estimations for Point Sources in the Chesapeake Bay Watershed, November 2002*  
[http://www.chesapeakebay.net/pubs/NRT\\_REPORT\\_FINAL.pdf](http://www.chesapeakebay.net/pubs/NRT_REPORT_FINAL.pdf)

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 John Kennedy), P.O. Box 10009, Richmond, VA 23240-0009, or by email to [jmkennedy@deq.state.va.us](mailto:jmkennedy@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.*

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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.

### 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.*

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The direct impact resulting from the development of technology based numerical limitations for the discharge of total nitrogen and total phosphorus from wastewater treatment plants is for the protection of public health and safety. The adoption of these technology based numerical limitations may increase the cost of wastewater treatment at publicly owned treatment works, thereby increasing the user charges paid by residential and commercial customers, potentially decreasing the disposable family income.