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Final Regulation Agency Background Document

Approving authority name	State Water Control Board
Virginia Administrative Code (VAC) citation	9 VAC 25-40 (Primary Action) 9 VAC 25-720 (Secondary Action)
Regulation title	<u>Policy for Nutrient Enriched Waters</u> - Primary Action <u>Water Quality Management Planning Regulation</u> - Secondary Action
Action title	Primary Action: Amendments to Policy for Nutrient Enriched Waters – Regulation for Nutrient Enriched Waters and Dischargers Within the Chesapeake Bay Watershed. Secondary Action: Amendments to Water Quality Management Planning Regulation - Total Nitrogen and Total Phosphorus Annual Waste Load Allocations for Certain Dischargers within Chesapeake Bay Watershed, and Implementation Provisions for Trading and Offsets.
Document preparation date	September 27, 2005

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 21 (2002) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Brief summary

Please provide a brief summary (no more than 2 short paragraphs) of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed.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. Also, please include a brief description of changes to the regulation from publication of the proposed regulation to the final regulation.

The subject matter of the rulemaking is two-fold:

1. Revise the existing Point Source Policy for Nutrient Enriched Waters, to conform to provisions of the 2005 Nutrient Credit Exchange Program legislation (Code of Virginia, Chap. 3.1, Title 62.1, §62.1-44.19:12 - 19:19), and as appropriate establish authority for technology-based, annual average total nitrogen and total phosphorus concentration requirements for certain dischargers located in Virginia's Chesapeake Bay watershed.

2. Revise the Water Quality Management Planning Regulation, to establish total nitrogen and total phosphorus annual waste load allocations for certain dischargers within Virginia's portion of the Chesapeake Bay Watershed. In addition, present implementation provisions related to trading and offsets enacted by the 2005 Nutrient Credit Exchange Program legislation (Code of Virginia, Chap. 3.1, Title 62.1, §62.1-44.19:12 - 19:19), to assist in the achievement and maintenance of the waste load allocations.

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.

At their September 27, 2005 meeting, the State Water Control Board heard the following recommendations by staff of the Department of Environmental Quality:

1. 9 VAC 25-40: Adopt the amendments to the **Regulation for Nutrient Enriched Waters and Dischargers Within the Chesapeake Bay Watershed** as proposed today.
2. 9 VAC 25-720: Adopt the amendments to the **Water Quality Management Planning Regulation** as proposed today for Sections 9 VAC 25-720-10, -30, -40, -50, -70, and -110.

The motion to accept the staff recommendations was accepted unanimously.

In the staff presentation the Board was reminded that the effective date was still suspended for previously adopted amendments to the Water Quality Management Planning Regulation, Sections 9 VAC 25-720-60 (James River Basin), and 9 VAC 25-720-120 (York River Basin), Subsection C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers. Any further amendments to these sections will be presented to the Board for final action at a future meeting.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter numbers, if applicable, and (2) promulgating entity, i.e., 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, §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. The specific effluent limits needed to meet the water quality goals are discretionary.

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 attainment of the Virginia Water Quality Standards.

Action on this regulatory package has been completed by the Office of Attorney General, and the Board's authority to adopt these point source nutrient discharge regulations has been certified.

State Water Control Law (Code of Virginia) web site:
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+62.1-44.15>

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it 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 purpose of this rulemaking is to protect State waters by adopting regulations that are technically correct, necessary and reasonable. The combined effect of these regulatory actions is to establish permit limitations for two nutrients – total nitrogen and total phosphorus -- for certain dischargers within Virginia's portion of the Chesapeake Bay watershed. Resulting permit limitations will be expressed principally as annual waste load allocations, and also as technology-based annual average concentrations where appropriate and authorized. These actions are needed because nutrients discharged from wastewater treatment plants contribute to the overall, excessive loading of nitrogen and phosphorus to the Chesapeake Bay and its tributaries. These nutrients have been identified as pollutants contributing to adverse impacts on large portions of the Bay and its tidal rivers, which are included in 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 extensive sections of several tidal tributaries on Virginia's impaired waters list. The *Chesapeake 2000 Agreement* commits Virginia to the goal of removing 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 cooperatively achieve water quality standards by that time making a Bay wide TMDL unnecessary. These regulatory actions will help to meet the goals of the *Chesapeake 2000 Agreement*.

Under a separate rulemaking, amendments to the Virginia Water Quality Standards Regulation [9 VAC 25-260] have been made that update numerical and narrative criteria to protect designated uses of the Chesapeake Bay and its tidal rivers from the impacts of excessive nutrient and sediment loads. That rulemaking includes new and revised use designations for the Chesapeake Bay and its tidal tributaries. Adoption of Bay-specific criteria and uses was necessary to define the most accurate water quality goals for reducing the inputs of nitrogen, phosphorus and sediment and for subsequent TMDL development. Achievement of the point source effluent limitations governed by the proposed regulations will aid in compliance with the new tidal water quality standards and are reasonably expected to contribute to the attainment or maintenance of such water quality.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

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1. **Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed; 9 VAC 25-40**: The main revisions made to the June 28, 2005 amended regulation are as follows:
 - a. Deleted first paragraph under 9 VAC 25-40-70 since it is only a descriptive paragraph and does not add any requirements.
 - b. Added a provision, under 9 VAC 25-40-70.A.4., that less stringent technology-based standards and associated concentration limitations may be established for dischargers where such standards and concentrations for the nutrient technology installed would degrade receiving waters, such as a reservoir used as a public water supply.

 2. **Water Quality Management Plan Regulation; 9 VAC 25-720**: The main revisions made to the June 28, 2005 amended regulation are as follows:
 - a. Revised the definition for “Significant Discharger” to clarify that dischargers “downstream” of the fall line are covered. Prior wording referred to “east” of the fall line which would not include the Bay dischargers on the Eastern Shore which are west of its fall line.
 - b. Deleted definition for “trading” since the term “exchanged” is used in 9 VAC 25-720-40 of the regulation to match the terminology used in the Code of Virginia.
 - c. Clarified under 9 VAC 25-720-40.B. and C. that when limiting a discharger to that portion of its allocation that is either ‘bioavailable’ or is the ‘net’ nutrient load, such limits must be set consistent with the assumptions and methods used to derive allocations through the Chesapeake Bay watershed and water quality models.
 - d. Added a new Section D to 9 VAC 25-720-40 to clarify that the Board may adjust individual allocations through amendment to the regulation. Reasons for an adjustment include, but are not limited to:
 - Whether or not a discharger completes a plant expansion as evidenced by issuance of a Certificate to Operate by December 31, 2010. Some dischargers may successfully expand their treatment facilities even though they were not able to provide reasonable assurance at this time that their expanded facility would be operating by 2010. Other dischargers may not be successful in having the expanded facility in operation by 2010.
 - To ensure the river basin nutrient load allocations are achieved. The river basin allocations represent attainment of water quality standards. Future adjustments to the point source allocations may be necessary to achieve water quality standards.Any adjusted individual waste load allocation must maintain water quality standards.
 - e. Clarified that the total figures in the waste load allocation tables relate to the listed facilities and not the total allocations (point source plus nonpoint source inputs) for each basin.

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.

The public will benefit, as these amendments will result in the discharge of reduced amounts of nitrogen and phosphorus from wastewater treatment plants in the Chesapeake Bay watershed. This, in turn, will aid in the restoration of water quality in the Chesapeake Bay and its tributary rivers, and assist in meeting the water quality standards necessary for protection of the living resources that inhabit the Bay.

One disadvantage that the public may perceive is that these actions only address a portion of the nutrient loads to the Bay and its tributaries -- that being the point source discharges. Unless a comparable level of effort is applied to reduce the nonpoint source inputs (runoff from agricultural, urban/suburban, and forested lands, septic systems, and air deposition), which are largely unregulated, the Commonwealth will be unable to achieve the load reductions necessary to meet the revised water quality standards. The needed nonpoint source controls are detailed in Virginia's Tributary Strategies for Nutrient and Sediment Reduction, released in early 2005 by the Secretary of Natural Resources. Wastewater treatment plant owners may see these proposals as too stringent, with the discharge limitations being difficult and expensive to meet. Long-term planning and capacity needs to serve future growth are also significant concerns that the facility owners have expressed, with the uncertainty of living under a "cap" on nutrient discharges. Other public groups, particularly citizen conservation organizations, may view the absence of strict technology-based concentration limitations as too lax, since they have advocated uniform treatment requirements based on use of current limits of available technology.

One advantage to the Commonwealth is that adoption of these amendments will fulfill a directive from Governor Warner to DEQ, given at the December 2003 Chesapeake Bay Program Executive Council meeting, calling for regulations authorizing numerical, technology-based nutrient limitations in permits for Bay dischargers. The proposals are also consistent with a draft permitting policy for Chesapeake Bay dischargers announced by EPA Region 3 in January 2005 ("NPDES Permitting Approach for Discharges of Nutrients in the Chesapeake Bay Watershed"), which describes a consistent basin-wide method to issue permits that include measurable and enforceable nitrogen and phosphorus limits. Although not formally a regulation, EPA intends to use this approach to monitor states' progress in placing appropriate limits in permits and will closely review the nutrient reduction requirements in those permits submitted for approval. These proposals will provide the regulatory basis for including nutrient effluent limits within the VPDES permits of the affected dischargers. There is no disadvantage to the agency or the Commonwealth that will result from the adoption of these amendments.

Changes made since the June 2005 "Adopted-Suspended" stage

Please describe all changes made to the text of the proposed regulation since the publication of the regulations adopted by the State Water Control Board on June 28, 2005, with the effective date suspended to allow for another 30-day comment period. For the Registrar's office, please put an asterisk next to any substantive changes.

1) Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed; 9 VAC 25-40:

Section number	Requirement at "Adopted-Suspended" stage	What has changed	Rationale for change
9VAC25-40-25	Definitions.	Revised definition for "Expansion" or "expands"	Clarification of terms, to make clear that the meaning applies to an "existing facility".
9VAC25-40-70.A.	Description of the significant role point source discharges have in the restoration of the Bay and its tidal rivers.	Paragraph "A" deleted; all subsequent paragraph identifiers revised.	Deleted first paragraph since it is only a descriptive section and does not add any requirements.
9VAC25-	Technology-based standard	Added another factor to	In at least one documented

40-70.B.4	and associated concentration limitation less stringent than the applicable standard.	consider -- if the limitation would cause degradation of local receiving waters.	case (Upper Occoquan Reservoir), the discharge of a sufficient quantity of nitrate aids in protecting the quality of the receiving water.
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2) Water Quality Management Plan Regulation; 9 VAC 25-720:

Section number	Requirement at proposed stage	What has changed	Rationale for change
9VAC25-720-10	Definitions.	Revised definition for "Significant discharger"	Clarify that dischargers "downstream" of the fall line are covered. Prior wording referred to "east" of the fall line, which is incorrect for Eastern Shore's Bay drainage area.
9VAC25-720-10	Definitions.	Deleted definition for "trading".	Conform to use of the terms "exchanged" and "exchanges" in 9 VAC 25-720-40, which matches terminology used in the Code of Virginia.
9VAC25-720-40.B.	Discharged nutrients considered bioavailable to aquatic life; industrial discharger may demonstrate a significant portion of nutrients discharged is not bioavailable.	Limits must be set consistent with assumptions and methods used to derive allocations through the Chesapeake Bay Program's watershed and water quality models.	Consistency with principal planning tool used to derive total river basin allocations and test compliance with water quality standards under future conditions. Ensure agreement with modeling assumptions and input parameters.
9VAC25-720-40.C.	Discharged nutrients are considered total loads, including nutrients present in the intake water from river; industrial discharger may demonstrate a significant portion of the nutrient load originates in its intake water.	Limits must be set consistent with assumptions and methods used to derive allocations through the Chesapeake Bay Program's watershed and water quality models.	Consistency with principal planning tool used to derive total river basin allocations and test compliance with water quality standards under future conditions. Ensure agreement with modeling assumptions and input parameters.
9VAC25-720-40.C.	Not applicable.	New section added to clarify that the Board may adjust individual allocations through amendment to the regulation.	Reasons for considering an adjustment (which is not automatic) include, but are not limited to: <ul style="list-style-type: none"> • Whether or not a discharger completes a plant expansion as evidenced by issuance of a Certificate to Operate by 12/31/10. Some owners may finish their plant expansion even though they were unable to provide reasonable assurance at this time that the increased design flow would be certified by 2010. Other dischargers may not be successful in having the expanded facility in operation

			<p>by 2010.</p> <ul style="list-style-type: none"> To ensure the total river basin nutrient load allocations are achieved. The river basin allocations represent attainment of water quality standards. Future adjustments to the point source allocations may be necessary to achieve water quality standards. Reaffirm that any adjusted individual waste load allocation must maintain water quality standards.
Item C. in 9VAC25-720-50, -70, and -110	Introduction to nutrient waste load allocation tables.	Added terms “ <i>listed facilities</i> ”	Clarify that the total figures in the waste load allocation tables relate to the listed facilities and not the total allocations (point source plus nonpoint source inputs) for each basin.

Public comment

Many detailed comments on specific provisions of the regulations were received from 69 respondents. Among these were requests for revised nutrient waste load allocations for 42 significant dischargers (14 located in the Shenandoah-Potomac, 7 in the Rappahannock, and 1 in the Eastern Shore basins; 6 in the York, and 14 in the James basins). Several wrote letters of support for the waste load allocation increase requests, while others provided general comments on the content of the amended nutrient discharge regulations. In addition, using a form letter that was essentially the same in all cases, 382 citizens wrote in support of water quality regulations to reduce nitrogen and phosphorus pollution from sewage treatment plants and industrial facilities. General comments and responses are summarized below.

A. Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed (9 VAC 25-40)

1. **Comment:** Revise regulation to exempt a technology-based standard and associated concentration limits in those cases where such limits would not be protective of receiving water quality. (UOSA)

Response: *Studies have shown that the discharge of nitrate-nitrogen to the Occoquan Reservoir from the Upper Occoquan Sewage Authority regional treatment plant helps water quality by suppressing the release of phosphorus bound to the bottom sediments in the reservoir. Such a release of phosphorus would contribute to excessive algae blooms in the reservoir, impacting its use as a drinking water sources. Staff agrees with this assessment and has included wording, under 9 VAC 25-40-70.A.4., which allows the application of less stringent technology-based standards and associated concentration limits in order to protect receiving water quality.*

2. **Comment:** Regulation should not include technology based concentration limits; also, DEQ should provide guidance to facilitate NPS offsets. (Coors)

Response: *as part of the overall watershed approach, nutrients need to be reduced wherever possible from all sources amenable to treatment. Efficient operation of treatment plants is a reliable, cost-effective and equitable means of reducing nutrients. If plants are discharging below their design flow and treating for nutrient reduction at the efficiency of the system installed, the reduced nutrient load it will also provide*

credits available to other communities and industrial plants. Guidance to facilitate nonpoint source offsets will be provided through the Watershed General Permit program (another rulemaking underway under authorization of the Nutrient Credit Exchange Program legislation).

3. **Comment:** Retain technology-based numerical limits as a "backstop", regardless of alternative compliance methods established for facilities certified under Environmental Excellence Program.

(Chesapeake Bay Foundation, R. W. Ehrhart)

Response: *Concentration limits, based on the technology installed, will still appear in the facility's discharge permit, with a provision that they do not apply so long as the plant is certified under the Environmental Excellence Program at the "E3" or "E4" level. Permit limits would apply immediately upon decertification.*

B. Water Quality Management Planning Regulation (9 VAC 25-720)

1. **Comment:** Several dischargers in the Shenandoah-Potomac, Rappahannock, and Eastern Shore Basins have requested additional nutrient load allocations due to claims they will have expanded treatment facilities in operation by 2010.

Response: *Establishing nutrient load allocations has been based, in part, on the design capacity of the wastewater treatment facility that is certified to operate by 2010. Owners of 17 treatment facilities have requested additional nutrient load allocations due to claims their facilities will be expanded by that date. After staff review of the information submitted by these owners, 12 of these requests were judged to have provided reasonable assurance that their treatment facility would be certified to operate at the expanded flow by 2010. In these cases, the higher allocation was included in the regulation, although some of these also included a footnote in the river basin table that stated the allocation would revert to the amount based on their existing design flow if the expanded facilities were not on-line by 2010.*

While the proposed regulation does not include a higher allocation for the remaining owners, staff believes some assurance should be provided that an increase in allocation will be considered in the future should their facility be expanded and operational by 2010. A new section, 9 VAC 25-720-40.D., has been added to recognize that the Board may amend the regulation in the future to adjust individual nutrient load allocations for a number of reasons, including completion of a plant expansion as evidenced by issuance of a Certificate to Operate by December 31, 2010. The section also states that any adjustments to allocations must ensure water quality standards are maintained.

Based on staff review of requests received during the public comment period for waste load allocation increases, figures in the Water Quality Management Planning Regulation either remain unchanged or have been revised as appropriate to increase or decrease waste load allocations (WLA), as follows for facilities in the Shenandoah-Potomac, Rappahannock, and Eastern Shore Basins:

Shenandoah-Potomac

1. Augusta Co. S.A.: Weyers Cave STP - WLAs currently based on 0.5 MGD, request increase based on 3.0 MGD. ACSA claims plant needs major expansion to serve potential industrial development. WLAs remain unchanged, as project is still in very early planning stages and increase is requested to enhance recruitment efforts, rather than serve anticipated and expected customers in the development.
2. Dale Service Corporation: DSC #1 and #8 STPs – WLAs currently based 4.0 MGD design flow for each plant; request increase based on 4.6 MGD for each. DSC provided details on planned increase in number of residences in service area from 2005-2010, which this public service company is obligated to accommodate. Also provided description of existing plant that includes 70% of the infrastructure needed for increased flows, financing plan, and milestone schedule. WLAs have been revised based on 4.6 MGD at each plant, but Certificate to Operate (CTO) for expansion must be secured by December 2010, or WLAs will decrease based on a design flow of 4.0 MGD for each plant.

3. Fauquier Co. W&SA: Vint Hill STP – WLAs currently based on 0.6 MGD and total nitrogen (TN) of 3.0 mg/l; request increase based on 0.95 MGD, and TN concentration of 8.0 mg/l. Owner provided information about current upgrade/expansion activities in two phases, both to be complete by 2010. WLAs have been revised based on 0.95 MGD, but CTO for expansion must be secured by December 2010, or WLAs will decrease based on a design flow of 0.6 MGD. Basis for TN concentration used to calculate WLAs remains unchanged. Owner justified request based on information supplied by Upper Occoquan S.A. regarding impacts from nitrate discharges to Occoquan reservoir. While TN from UOSA has been demonstrated through monitoring and modeling to reach the reservoir in the form of NO₃, which aids in protecting water quality, no such modeling exists for the discharge from Vint Hill. This factor lead to the decision when the permit was last reissued to treat the 0.95 MGD discharge as having no impact, positive or negative, on the reservoir when setting limits for all effluent parameters.
4. Frederick-Winchester S.A.: Opequon STP - Basis for WLAs remains unchanged. Wet weather tier accommodates excessive infiltration and inflow, which is not a design flow for seasonal capacity needs achieving full treatment. Although receiving stream conditions have assimilative capacity to accept higher wet weather effluent discharge without violating water quality standards locally, there are downstream impacts on tidal water quality and impairments due to excessive annual loads of nutrients from all sources.
5. Frederick-Winchester S.A.: Parkins Mill STP - WLAs currently based 3.0 MGD; request increase based on 5.0 MGD. The discharge permit is currently undergoing modification to include a 5.0 MGD flow tier, and owner has begun the process to upgrade/expand plant (Preliminary Engineering Report being drafted), with construction scheduled for completion in 2009. WLAs have been revised based on 5.0 MGD, but CTO for expansion must be secured by December 2010, or WLAs will decrease based on a design flow of 3.0 MGD.
6. Harrisonburg-Rockingham Regional S.A.: North River STP – WLAs currently based 16 MGD; request increase based on 20.8 MGD. HRRSA has applied for permit reissuance (April 2006) with a design flow basis of 20.8 MGD. Engineering for the increased capacity began May 2005 and is scheduled for completion January 2007; project schedule shows completion of construction and issuance of the CTO by December 2009. WLAs have been revised based on 20.8 MGD, but CTO for expansion must be secured by December 2010, or WLAs will decrease based on a design flow of 16.0 MGD.
7. Loudoun County S.A.: Broad Run STP – WLAs currently based 10 MGD; request increase based on 11 MGD. Request does not depend on additional construction beyond current project, but seeks a re-rating of system installed. LCSA's design engineer has stated that the plant's 11 MGD design criteria, identified as Maximum 30-day Flow in the March 2003 Design Development Report, is a continuous hydraulic and treatment design flow capacity that can reliably achieve the target performance in accordance with Virginia's Sewerage regulations. LCSA plans to seek a revised Certificate to Construct and subsequent CTO based on this design criteria. WLAs have been revised based on 11 MGD, but CTO for plant re-rating must be secured by December 2010, or WLAs will decrease based on a design flow of 10 MGD.
8. Merck - WLAs currently based on 10.09 MGD (outfall 001, final surface water discharge), TN = 3.13 mg/l, and TP = 0.5 mg/l. Merck's discharge permit being reissued to include nutrient monitoring at internal Outfall 101, which accounts for just treated process wastewater stream (excludes cooling water). WLAs revised based on 1.2 MGD, TN = 4.0 mg/l, and TP = 0.3 mg/l.
9. Town of Mount Jackson STP – WLAs currently based 0.6 MGD; request increase based on 0.7 MGD. Plant recently received a new permit for the 0.6 MGD expansion tier, and submitted a request for modification to 0.7 MGD on 8/24/05, to serve an industrial customer that was not anticipated in the approved PER, which is being updated to account for the additional flow. Plant scheduled to be in service within 3 years. WLAs have been revised based on 0.7 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 0.6 MGD.
10. Town of New Market STP – WLAs currently based 0.5 MGD; request increase based on 1.0 MGD. Basis for WLAs remains unchanged. No expectation of CTO for expanded design flow by 2010, based on information provided.
11. Town of Purcellville: Basham Simms STP – WLAs currently based 1.0 MGD; request increase based on 1.5 MGD. Town accepted proposed WLAs for 1.0 MGD plant in 7/04 permit reissuance, which included compliance schedule for nutrient control system to be installed by 7/1/09. Recent study indicates flows are increasing rapidly due to unprecedented growth in service area and base flows

generally higher than those used in basis of design (likely due to inaccuracies in flow measuring equipment previously used at the plant that has been replaced in new facility). Engineer has begun planning/design for proposed upgrade and expansion, and Town submitted permit modification request 8/26/05 for a 1.5 MGD flow tier. WLAs have been revised based on 1.5 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 1.0 MGD.

12. Shenandoah Co.: Stoney Creek STP – WLAs currently based 0.6 MGD; request increase based on 1.2 MGD. Basis for WLAs remains unchanged. No expectation of CTO for expanded design flow by 2010, based on information provided.
13. Stafford Co.: Aquia STP – WLAs currently based 8.0 MGD; request increase based on 12.0 MGD. Basis for WLAs remains unchanged. No expectation of CTO for expanded design flow by 2010, based on information provided.

Rappahannock

14. Culpeper County: Mountain Run STP – WLAs currently based 1.5 MGD; request increase based on 2.5 MGD. Permit reissued on 6/21/05 which included a design flow tier of 1.5 MGD. County will submit an application to increase the permitted capacity to 2.5 MGD, to serve a large commercial and mixed use development that is projected to produce approximately 0.75 MGD. Mountain Run plant will also incorporate two currently permitted plants (Airpark plant and Elkwood plant), with plans for 2.5 MGD capacity to be on-line by 2010. WLAs have been revised based on 2.5 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 1.5 MGD.
15. Culpeper County: South Wales STP – WLAs currently based 0.6 MGD; request increase based on 0.9 MGD. County expects to have 0.9 MGD facility constructed by Jan. 2008; both the PER and discharge permit document the higher design flow. WLAs have been revised based on 0.9 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 0.6 MGD.
16. Town of Culpeper STP – WLAs currently based 4.5 MGD; request increase based on 6.0 MGD. Basis for WLAs remains unchanged. No expectation of CTO for expanded design flow by 2010, based on information provided. Town of Culpeper's request for increased capacity included an expectation to accommodate flows from surrounding portions of Culpeper County. As noted in response to comments from Culpeper County (above), the County has documented their intention to provide service to these areas, thus removing the need for this capacity in the Town's plant.
17. Fauquier Co. W&SA: Remington STP – WLAs currently based 2.0 MGD; request increase based on 2.5 MGD. Plant has approximately 90% of the infrastructure already installed to operate at the permitted 2.5 MGD tier; only minor appurtenances and improvements necessary to allow plant to operate at the 2.5 MGD tier. WLAs have been revised based on 2.5 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 2.0 MGD.
18. Fauquier Co. W&SA: Marsh Run STP – requested WLAs for a proposed facility to replace failing septic tanks in the communities of Catlett and Calverton. Facility appears unlikely to be built by 2010, as no planning, design, or construction actions have been taken to-date, therefore no WLAs assigned and new discharge will be addressed, if it occurs, under the provisions of the Nutrient Credit Exchange Program legislation. County will have the option of distributing the WLAs from the other facility it owns and operates in the Rappahannock basin (Remington STP) between these two plants. County's comment that the Board should develop a policy for taking septic systems off-line into a treatment facility, with an allowance for load allocations, will be dealt with under the Watershed General Permit program (authorized by the 2005 Nutrient Credit Exchange Program statute).
19. Haymount Ltd. Partnership: Haymount STP – WLAs currently based 0.58 MGD; request increase based on 0.96 MGD. Certificate to Construct for the 0.58 MGD plant is about to be issued, with many of the treatment units to be installed with capacity for 0.96 MGD. Schedule for completing increased sizing for remaining units to bring full plant design flow to 0.96 MGD anticipates issuance of CTO in summer 2008. WLAs have been revised based on 0.96 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 0.58 MGD.

20. Omega Protein – WLAs currently based on long-term average production flow figure of 3.21 MGD (outfall 001 = 3.0 MGD + outfall 002 = 0.21 MGD). Owner claimed design flow of 4.0 MGD for outfall 001 and 0.4 MGD for outfall 002; these are daily peak flow maximums, which is an unlikely operating status to be sustained under normal production conditions over the course of an entire year. Omega's comment letter admitted that this peak level was reached only 50-60% of the time under representative data from 2004. The main factor in deciding the production flow figure is the amount of fish processed over a year. On 8/17/05, the Atlantic Marine States Fisheries Commission (AMSFC) approved Addendum II to the Menhaden Fisheries Management Plan, which established a 5-year annual cap, beginning in 2006, on reduction fishery landings in Chesapeake Bay based on the mean landings over the last 5 years. The production-based long-term average flow figure of 3.21 MGD is considered appropriate and equitable under the restrictions approved by the AMSFC, in addition to another key factor of production used to calculate Omega's WLAs, the number of days of operation, which has been assumed at the theoretical maximum of 198 days/year.

Eastern Shore

21. Town of Onancock STP – WLAs currently based 0.25 MGD; request increase based on 0.75 MGD. Onancock's plant has been discharging near its current permitted capacity for the last 4 years (annual average flows in 2003 and 2004 were 0.25 MGD), and recent Basis of Design Report for nutrient reduction has concluded that additional capacity must be constructed by 2010. The Town intends to submit a permit application for the higher flow tier, and anticipates expanded facility to be constructed and certified for operation by 2010. WLAs have been revised based on 0.75 MGD, but CTO for increased design flow must be secured by December 2010, or WLAs will decrease based on a design flow of 0.25 MGD.

Requests for increased waste load allocations from dischargers in the York and James basins have been deferred, and will be addressed when final recommendations for the special water quality standards proposed for those waters (site-specific dissolved oxygen in the Pamunkey and Mattaponi; numeric chlorophyll criteria in the James) are presented to the Board at a future date. Time is being provided to allow additional water quality model runs to be made for the York and James basins by the EPA-Chesapeake Bay Program Office, with point source nutrient reduction scenarios developed in consultation with representatives of the Virginia Association of Municipal Wastewater Agencies (VAMWA). These scenarios will simulate varying levels of point source nitrogen and phosphorus discharge, and the resulting water quality conditions that will be evaluated in terms of compliance with the new tidal water quality standards already adopted by the Board, and the special standards for the York and James that are being considered for recommendation to the Board at a subsequent meeting.

In addition to considering requested WLA revisions submitted by the close of the public comment period, DEQ staff reviewed the entire list of Significant Dischargers to ensure application of consistent decision criteria among all dischargers, and confirm that earlier assumptions about plant design flows and expected dates of certification to operate (CTO) for plants currently being expanded, newly constructed, or planned for these actions were still valid. Based on the findings from that review, WLA figures either remain unchanged or have been revised as appropriate, as follows:

22. Westmoreland Co.-Montross STP: design flow reviewed by DEQ staff. WLAs originally based on 0.10 MGD; however, the permitted design flow for this plant is 0.13 MGD, and WLAs have been revised based on this corrected figure.
23. Cape Charles STP: design flow assumptions reviewed by DEQ staff. WLAs currently based on 0.5 MGD, a design flow tier in the discharge permit, assuming plant expansion would occur and be certified for operation by 2010 based on information provided during Tributary Strategy process. A note has been added to allocation table that the Town must have CTO for expanded design flow (0.5 MGD) by December 2010, or WLAs will decrease based on a design flow of 0.25 MGD.
24. Strasburg STP: Town's letter received after the 8/24/05 closing date of the public comment period (post marked 9/06/05; received 9/16/05). WLAs currently based 0.98 MGD; request increase based on 2.0 MGD. Had this letter been received during the comment period, the recommendation to the Board would be that the basis for the WLAs remains unchanged. No expectation of CTO for

expanded design flow by 2010, based on the limited information provided. However, the Town's request for increased allocations may be addressed through language added to the WQMP regulation before the river basin WLA tables (9 VAC 25-720-40. Implementing Nitrogen and Phosphorus Waste Load Allocations in the Chesapeake Bay Watershed):

D. The Board may amend this regulation to adjust individual nitrogen and phosphorus waste load allocations. Reasons for considering such an adjustment include, but are not limited to:

- 1. a discharger completes or does not complete a plant expansion as evidenced by issuance of a Certificate To Operate by December 31, 2010; or*
- 2. a river basin nutrient load allocation is not achieved.*

Any adjustment to an individual waste load allocation must ensure water quality standards are maintained.

2. Comment: Regulation should state that non-significant dischargers have waste load allocations based on current permitted capacity and total nitrogen and total phosphorus concentrations reflecting no additional treatment; provide explicit allocations for non-significant plants; allow owners of multiple facilities to "bubble" the allocations and manage them collectively, including non-significant dischargers. (Rapidan S.A., Spotsylvania Co., Virginia Association of Municipal Wastewater Agencies)

Response: *Only those significant dischargers included in the WQMP regulation have assigned waste load allocations; the non-significant dischargers do not. Therefore, any "bubbling" of loads by an owner of multiple treatment plants only applies to those plants that are significant dischargers with assigned waste load allocations. The Code of Virginia, at §62.1-44.19:14 and 15, describes the responsibilities for the non-significant dischargers to offset any nutrient loads discharged over their permitted design capacity as of July 1, 2005. While the significant dischargers at their design capacity need to reduce their nutrient loads, the non-significant dischargers are responsible to offset any increase in their nutrient load resulting from expansion above their current design capacity.*

3. Comment: Policy needed to allow all or some of the existing nutrient load from non-significant dischargers to be utilized when another plant takes them off-line; develop an equitable plan to support and promote regionalization of smaller, less efficient treatment plants into larger facilities with better treatment capability; concerned that regulation only targets major dischargers. (Fauquier Co W & SA, Augusta Co. S.A., Steven Herzog, Spotsylvania Co.)

Response: *The WQMP regulation only deals with allocations for Significant Dischargers. Non-Significant Dischargers are dealt with through the rulemaking now underway for the Watershed General Permit (WGP; authorized by the 2005 Nutrient Credit Exchange Program statute). The agency will consider means through the WGP process to not discourage regionalization, but also to recognize the need to maintain loading caps.*

4. Comment: Clarify that any adjustments that limit the allocations to either the bioavailable portion of the nitrogen or the net nutrient load are done consistent with the assumptions and methods used to derive allocations through the Chesapeake Bay models. (EPA)

Response: *Staff recognizes that the nutrient load allocations assigned to the point source dischargers, along with the allocations assigned to all of the other sources of nutrients within each of the river basins, must in combination achieve and maintain the water quality standards in the Chesapeake Bay and in the tidal tributary rivers. Staff agrees with this comment and has included wording under 9 VAC 25-720-40.B. and C. so that any adjusted limits are consistent with the approach used with the Chesapeake Bay watershed and water quality models.*

5. Comment: Technology-based waste load allocations, being more stringent than Federal requirements, are beyond the Board's authority and procedurally flawed for failure to notify the General Assembly. (Hanover County, Virginia Association of Municipal Wastewater Agencies)

Response: *DEQ staff has relied on an opinion from the Attorney General (July 9, 1984) that provides, in part:*

- *The Authority of the Board, set out under statute in the Virginia Code, is restricted by the Federal Water Pollution Control Act (the "Act"), which prohibits the State from adopting certain requirements on the discharge of pollutants that are less stringent than Federal requirements. The Act preserves the rights of the State to impose requirements that are more stringent.*
- *"The provisions of the Act...could include treatment requirements for nutrients arising from...(2) any more stringent limitations necessary to implement applicable water quality standards established pursuant to the Act." (emphasis added)*
- *"Regarding category (2) above,...If the administrator of EPA determines that a State's standards satisfy the requirements of the Act, those standards become the water quality standards for the applicable waters of the State. ...I am of the opinion that water quality standards approved in this manner are required by the applicable provisions of the Act, and are enforceable by the Board." (emphasis added)*

Therefore, achieving and maintaining compliance with the recently adopted tidal water quality standards for the Bay and its tributaries can result in treatment requirements for political subdivisions that are more stringent than Federal treatment requirements, and are enforceable.

The General Assembly was notified about the potential for these regulations to be more stringent than requirements of the Federal Clean Water Act, by memorandum dated February 18, 2005. This notification was not specific to a particular level of stringency, and would cover any treatment level necessary to support compliance with water quality standards.

6. Comment: Regulations treat all nutrients entering the Bay the same although modeling shows that the York and James have little impact on Bay; regulations may encourage growth on septic systems whereas new flows should be on state-of-the-art plants; regulations not consistent with trading law since they treat all pounds the same in the tributaries but the law does not allow trading between basins. (Steven Herzog)

Response: *The Water Quality Management Planning Regulation allocates loads based on a watershed approach that does recognize the different impacts nutrients discharged within each river basin have on the Bay and on the water quality within each of the tributaries themselves. While staff does not believe the proposed regulations will encourage growth served by septic systems, it is a potential problem that will need to be monitored closely and further regulatory or legislative actions may be needed if it becomes a problem. The regulations have been amended to be consistent with the 2005 Chesapeake Bay Watershed Nutrient Credit Exchange Program legislation.*

7. Comment: Treatment plants must start reducing pollution, but they [limits] must be scientifically attainable; insist they meet state of the art and are constantly upgraded. (Sherilynn Hummel)

Response: *Staff agrees that wastewater treatment plants have a critical role in reducing the overall nutrient loading to the Bay and tidal rivers. The allocations are set at levels that require the use proven nutrient reduction technologies.*

8. Comment: Account for nitrogen and phosphorus in raw water supplies; account for non-bioavailable nitrogen without amending regulation; extend applicability of these provisions beyond industries to include POTWs also. (Loudoun Co. S.A., Virginia Association of Municipal Wastewater Agencies)

Response: *The provision to allow consideration of nutrient loading within a plant's intake water is limited to industrial dischargers that demonstrate to the satisfaction of the Board that a significant portion of the nutrient load originates in its intake water. This is not the case with publicly owned treatment facilities which primarily treat sewage from residences and businesses. Municipal water supplies also receive extremely stringent purification and disinfection treatment prior to distribution, so the characteristics of the raw water are very different from the drinking water. Regarding non-bioavailable nitrogen, the Water Quality Management Planning Regulation will not have to be amended since any limitation approved for the non-bioavailable nitrogen will be a portion of the assigned waste load allocation.*

All changes made in this regulatory action

Please detail all changes that are being proposed and the consequences of the proposed changes.

Detail new provisions and/or all changes to existing sections.

1) **Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed; 9 VAC 25-40:**

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
9VAC25-40		Title	Changed from <u>Policy</u> to " <u>Regulation</u> for Nutrient Enriched Waters and Dischargers Within the Chesapeake Bay Watershed".
9VAC25-40-10		Purpose	<ul style="list-style-type: none"> Identifies river basins that comprise the Chesapeake Bay Watershed. Adds reference to 9VAC25-720, to make clear that point source nutrient limits combine technology-based concentrations <u>and</u> waste load allocations.
9VAC25-40-20		Authority	Repealed.
	9VAC25-40-25	Definitions	Added terms for " <i>Equivalent Load</i> ", " <i>Expansion</i> " or " <i>Expands</i> ", and " <i>Point Source dischargers</i> " or " <i>dischargers</i> ". Provides clarification and conforms to 2005 Nutrient Credit Exchange Program law.
9VAC25-40-30		Strategy for Nutrient Enriched Waters	Modified so this section now applies <u>only</u> to river basins <u>outside</u> the Chesapeake Bay watershed. Retains existing designations for nutrient enriched waters and discharger requirements outside the Bay drainage. Clarifies that the limitation for total phosphorus is 2.0 mg/l.
9VAC25-40-40		Permit Amendments	Revised to correct acronym for discharge permits (VPDES, not NPDES).
9VAC25-40-50		Possibility of Further Limitations	Changed from <u>Policy</u> to <u>Regulation</u> .
	9VAC25-40-70	Strategy for Chesapeake Bay Watershed	<p>Using an allowance in VA Code (§62.1-44.19:16.B, Nutrient Credit Exchange Program law), provision states that individual permits for certain dischargers in the Bay watershed shall include technology-based effluent concentration limitations. Compliance scheduling will be addressed in the Watershed General Permit. In addition:</p> <ul style="list-style-type: none"> Added wording from the new <u>Nutrient Credit Exchange</u> law for the two cases of <u>expanding</u> dischargers: (1) <u>into</u> the Significant Discharger category – state-of-the-art technology required; and (2) Non-Significant Dischargers above the fall line – biological nutrient removal required. Added wording from new <u>Nutrient Credit Exchange</u> law for construction of new plants of any size over 40,000 gpd – state-of-the-art technology required for Significant Dischargers and biological nutrient removal for Non-Significant Dischargers. Added wording from new Nutrient Credit

			<p>Exchange law to allow for less stringent treatment limits if owner demonstrates it is not technically or economically feasible to achieve those standards, or the technology is not needed to comply with assigned waste load allocations.</p> <p>Provisions for Alternative Effluent Limitations:</p> <ul style="list-style-type: none"> • Done on a case-by-case basis. • Discharger can demonstrate via treatability, engineering, or other studies that the applicable effluent limits above cannot be achieved; or, that the technology-based standard and associated concentration limitation would require construction of treatment facilities not otherwise necessary to comply with waste load allocations. • Discharger can demonstrate that the technology-based standard and associated concentration limitation would degrade receiving waters. <p>Section added allowing use of a compliance method that is an alternative to the technology-based effluent concentration limits. Under this alternative, concentration limits may be suspended during the period an Exemplary Environmental Enterprise (“E3”) or Extraordinary Environmental Enterprise (“E4”) facility has a fully-implemented Environmental Management System that includes operation of installed nutrient removal technologies at the efficiency levels for which they were designed.</p> <p>Discharger must still meet applicable waste load allocation in WQMP Regulation (9VAC25-720).</p> <p>Other Regulatory Requirements: Any other nutrient limits required by State or Federal law/regulation, more stringent than the limitations above, are not affected by this regulation.</p>
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2) **Water Quality Management Planning Regulation; 9 VAC 25-720:**

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
9VAC25-720-10		Definitions	Adds terms to list of definitions: “ <i>Chesapeake Bay Watershed</i> ”, “ <i>Delivery Factor</i> ”, “ <i>Significant Discharge</i> ”, and “ <i>Equivalent Load</i> ”.
9VAC25-720-30		Reserved	Changed to: " <u>Relationship to the Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed, 9 VAC 25-40</u> ". Refers to 9VAC25-40, to make clear that point

<p>9VAC25-720-40</p>	<p>Reserved</p>	<p>Reserved</p>	<p>source nutrient limits combine technology-based concentrations <u>and</u> waste load allocations.</p> <p>Changed to: "<u>Implementing Nitrogen and Phosphorus Waste Load Allocations in the Chesapeake Bay Watershed</u>":</p> <ul style="list-style-type: none"> • Section A allows waste load allocation exchanges in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program established under article 4.02 of Chapter 3.1 of Title 62.1 of the Code of Virginia. • Section B assumes 100% of discharged nutrient waste load allocations are bioavailable to aquatic life. On a case-by-case basis, an industrial discharger may demonstrate that a significant portion of the nutrients discharged is not bioavailable. In these cases, the permitted discharge may be limited to reflect only that portion of the waste load allocation that is bioavailable. • Section C recognizes that waste load allocations are total loads including nutrients present in the intake water from the river. On a case-by-case basis, an industrial discharger may demonstrate that a significant portion of the nutrient load originates in its intake water. In these cases, the permitted discharge may be limited to reflect only the "net" portion of the waste load allocation. • In cases where allowances are made for the bioavailable portion or net load as above, the resulting limits shall be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay Program's watershed and water quality models. • Section D allows the Board to adjust individual allocations through amendment to the regulation. Reasons for considering an adjustment (which is not automatic) include, but are not limited to: <ul style="list-style-type: none"> - Whether or not a discharger completes a plant expansion as evidenced by issuance of a Certificate to Operate by 12/31/10. - To ensure the total river basin nutrient load allocations are achieved. <p>This section reaffirms that any adjusted individual waste load allocation must maintain water quality standards.</p>
<p>9VAC25-720-50, -60, -70, -110, and -120</p>	<p>Chesapeake Bay Watershed Basin Sections (Potomac-Shenandoah, James, Rappahannock, Chesapeake Bay-Small Coastal-E. Shore, York)</p>	<p>Chesapeake Bay Watershed Basin Sections (Potomac-Shenandoah, James, Rappahannock, Chesapeake Bay-Small Coastal-E. Shore, York)</p>	<p>Existing regulatory text of paragraphs A. (Total maximum daily load [TMDLs]), and B. (Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations) in each of the river basin sections remain unchanged.</p> <p>A new <u>paragraph C.</u> (<i>Nitrogen and Phosphorus</i></p>

		<p><i>Waste Load Allocations to Restore the Chesapeake Bay and its Tidal Rivers</i>) is added to each river basin section. A table is provided, presenting total nitrogen and total phosphorus waste load allocations for individual significant dischargers, and the sum total of the individual allocations for the listed facilities in the basin.</p>
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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.

The regulations for control of nutrient discharges from point sources in the Chesapeake Bay watershed are part of the Commonwealth’s comprehensive initiative to restore water quality and habitat in Virginia’s Bay waters. They will assist in achieving compliance with new tidal water quality standards that protect designated uses in the Bay and the tidal portions of its tributary rivers. Virginia has used a watershed-based approach in this restoration effort, combining nutrient and sediment reductions from both point sources and nonpoint sources. The point source component of the watershed-based approach assigns total nitrogen and total phosphorus waste load allocations for significant nutrient dischargers, based on full design flow coupled with stringent nutrient reduction treatment. Alternative regulatory methods incorporated into this approach include:

- 1) The establishment of less stringent compliance or reporting requirements: an allowance is made in Section 9 VAC 25-40-70.B.4, whereby the Board may establish a technology-based standard and associated concentration limitation less stringent than the applicable standard specified in preceding sections. This would be based on a demonstration by an owner or operator that the specified standard is not technically or economically feasible for the affected facility or that the technology-based standard and associated concentration limitation would require the owner or operator to construct treatment facilities not otherwise necessary to comply with his waste load allocation without reliance on nutrient credit exchanges pursuant to the 2005 Nutrient Credit Exchange Program law, provided, however, the discharger must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720).

In addition, Section 9 VAC 25-40-70.C. specifies that the Board may approve an alternate compliance method to the technology-based effluent concentration limitations, by incorporating a provision into the VPDES permit of an Exemplary Environmental Enterprise (“E3”) facility or an Extraordinary Environmental Enterprise (“E4”) facility that allows suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system. The discharger would be required to operate the installed nutrient removal technologies at the treatment efficiency levels for which they were designed.

- 2) The establishment of less stringent schedules or deadlines for compliance or reporting requirements: The original proposals public-noticed for comment in February 2005 required

significant dischargers to achieve compliance with the regulations within four years following reissuance or major modification of the VPDES permit, but in no case later than December 31, 2010. Non-significant dischargers were to have the discharge requirements placed in their reissued or modified VPDES permit after December 31, 2010, with compliance achieved within four years following that reissuance or major modification.

The proposal adopted by the Board in June 2005 did not include these schedules for compliance. Instead, a compliance schedule will be developed by the Board under another rulemaking, which involves a regulation for a Watershed General Permit that will cover all the significant dischargers in the Bay drainage area. This regulation was authorized by the 2005 Nutrient Credit Exchange law, and is anticipated to be released for public comment in early 2006.

- 3) The consolidation or simplification of compliance or reporting requirements: With the concurrence of the U.S. Environmental Protection Agency, the regulations for control of nutrient discharges from point sources in the Chesapeake Bay watershed are based on annual average concentration requirements (as opposed to weekly or monthly averages) and an annual reporting requirement for the discharged waste loads of total nitrogen and total phosphorus.
- 4) The establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation: In appropriate cases, industrial dischargers have been assigned waste load allocations that reflect “design flow” allowances for full production potential, proportional level-of-effort reduction compared to municipal plants, and unique wastewater qualities affecting ‘treatability’. Allowances may also be made, upon acceptable demonstration to the Board, that a significant portion of an industry’s discharged nutrient load is not ‘bioavailable’ to aquatic life, or that ‘net’ load limits should apply in order to address nutrients in intake water.
- 5) The exemption of small businesses from all or any part of the requirements contained in the proposed regulation: The regulations apply to significant dischargers of nutrients. There are thresholds of ‘equivalent loads’ that may exclude or exempt small businesses from the requirements, depending on the magnitude of their annual discharged total nitrogen and total phosphorus loads, as follows: “Equivalent load” means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

Family impact

Please assess the 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 limitations on 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 nutrient limitations will 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.