Virginia Regulatory Town Hall

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Final Regulation
Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) citation	9VAC 25-260
Regulation title	Water Quality Standards
Action title	Adopt, modify or cancel Water Quality Standards, including numerical and narrative criteria, use designations, classifications, site specific or special standards, stream descriptions and implementation requirements
Date this document prepared	October 23, 2008

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) 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of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed.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 water quality standards are the cornerstone for water programs at the Virginia Department of Environmental Quality. For example, these standards are used to set pollution limits in discharge permits and to evaluate the health of waters statewide. Amendments are proposed to the state's Water Quality Standards Regulation at 9 VAC 25-260 to revise sections 10, 20, 30, 50, 90, 140, 160, 170, 185, 187, 310, 350, 360, 380, and 390-540; deletions are proposed for sections 55, 290 and 320.

The following substantive changes have been made since the proposed action was published: retention of the existing E. coli bacteria criteria in section 170 at the current 0.8% risk level for freshwater recreation with some updates to more closely reflect Environmental Protection Agency (EPA) recommendations; postponement of revisions to the freshwater aquatic life criteria for cadmium and lead until considered more fully by the triennial review ad hoc advisory committee which will be reconvened to consider updates to aquatic life criteria for these two parameters as well as ammonia, copper, and cyanide in section 140, and the prohibition of any new or expanded mixing zones for persistent bioaccumulative toxic substances in section 20.

Statement of final agency action

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

The State Water Control adopted the amendments to the Water Quality Standards regulation (9 VAC 25-260) at their October 17, 2008 quarterly 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.

Federal and state mandates in the Clean Water Act at 303(c), 40 CFR 131 and the Code of Virginia in §62.1-44.15(3a) require that water quality standards be adopted, modified or cancelled every three years. These are the most relevant laws and regulations. The promulgating entity is the State Water Control Board.

The Clean Water Act authorizes restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters. The Clean Water Act at 303(c) (1) requires that the states hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards.

The Federal regulations at 40 CFR 131 authorize requirements and procedures for developing, reviewing, revising and approving water quality standards by the States as authorized by section 303(c) of the Clean Water Act. 40 CFR 131 specifically requires the states to adopt criteria to protect designated uses.

The State Water Control Law authorizes protection and restoration of the quality of state waters, safeguarding the clean waters from pollution, prevention and reduction of pollution and promotion of water conservation. The State Water Control Law (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 authority to adopt standards as provided by the provisions in the previously referenced citations is mandated, although the specific standards to be adopted or modified are discretionary to the Environmental Protection Agency and the State.

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

Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. 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 rulemaking is essential to the protection of the health, safety, or welfare of the citizens of the Commonwealth because proper water quality standards protect water quality and living resources of Virginia's waters for consumption of fish and shellfish, recreational uses and conservation in general. These standards will be used in setting Virginia Pollutant Discharge Elimination System Permits limits and for evaluating the waters of the Commonwealth for inclusion in the Clean Water Act 305(b) report and on the 303(d) list. Waters not meeting standards will require development of a total Maximum Daily Load under the Clean Water Act at 303(e).

The justification for the proposed regulatory action is via the Clean Water Act and State Water Control Law requirements that the State conduct a review every three years of the surface water quality standards regulation for the purposes of revising and updating the standards to reflect changes in law, technology and information. This rulemaking is needed because the last triennial review was completed in February 2004 and new scientific infomation is available to update the water quality standards.The goal is to provide the citizens of the Commonwealth with a technical regulation that is protective of water quality in surface waters, reflects recent scientific information, reflects agency procedures and is reasonable and practical.

Substance

Please 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.

Updates were made to the parameters in section 140 using new technical information on the toxicity of these parameters to human health and aquatic life and/or EPA's most recent recommendations. The allowable concentrations for 93 existing human health criteria were lowered by 63-93 % making the criteria more protective. Three new criteria were added: a fish tissue based human health criterion for methyl mercury and aquatic life criteria for diazinon and nonylphenol. Two aquatic life criteria (dioxin and tributyltin) originally developed by Virginia DEQ were replaced with less restrictive criteria recently recommended by EPA. There were also some minor corrections regarding the units and Chemical Abstract Service number for some parameters. Revisions to the aquatic life criteria for cadmium and lead were postponed until a reconvened triennial review ad hoc advisory committee can consider new data for potential updates to these two parameters as well as ammonia, copper, and cyanide.

The existing E. coli bacteria criteria were retained in section 170 for freshwater recreation use; the only changes were some updates to more closely reflect Environmental Protection Agency (EPA) recommendations and delete the fecal coliform bacteria criteria since the section previously stated the criteria would no longer apply after June 30, 2008. The amendments also include a revision in section 160 to the fecal coliform criteria for shellfish waters to reflect changes the Virginia Department of Health is making in testing methods to transition from one analytical method to another to conform to National Shellfish Sanitation Program guidelines. A prohibition on mixing zones for bacteria in recreational waters was added in section 20.

Clarifications were made to the criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay; this included a clarification that the dissolved oxygen criteria will be assessed in two seasons. Updates were made to nutrient criteria for lakes and reservoirs in sections 50 and 187.

Several new special standards were added to section 310, including site specific standards to reflect the subcategory of benthic aquatic life uses present below Goshen Dam on the Little Calfpasture River, the appropriate form of manganese needed to protect the aesthetic qualities of drinking water in the Roanoke River, higher pH values in Lake Curtis which is fertilized to maintain a recreational fishery, seasonal summer temperatures in warm water streams that are stocked with trout during the winter, and to allow for part of the year within a portion of the tidal James River below the fall line E. coli bacteria criteria based on a risk level of 1%.

A narrative criterion was added to Section 50 to recognize that certain waters (Class VII Swamp Waters) are naturally low in dissolved oxygen and pH; the river basin sections were updated to identify the newly established swamp water delineations and some adjustments made to the delineations of existing Class VII swamp waters. Other updates to the river basin tables included designations of trout streams and public water supplies; the designated use for 17 public water supplies was extended to include tributaries from the raw water intake to 5 miles upstream and the latitude and longitude coordinates were removed for 15 public water supply intakes for security reasons.

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 primary advantages to the public are that the 1) updated numerical toxics criteria are based on better scientific information to protect water quality and 2) the current more protective 0.8% risk level E. coli bacteria criteria to protect freshwater recreational use has been retained in response to the substantial public comment (over 650 comments) that agency staff received in opposition to relaxation of the E. coli criteria for freshwater recreational use. Another advantage is that the Technical Advisory Committee (TAC) will be reconvened to consider some issues that they did not have sufficient time to study without delaying completion of the current rulemaking. The disadvantage is that 15 entities currently discharging to state waters may have to incur the costs of increased treatment to meet the new or revised water quality criteria.

The advantage to the agency or the Commonwealth that will result from the adoption of these amendments will be more accurate and scientifically defensible permit limits, assessments and clean up plans. For example, the adoption of several special standards in section 310 and the recognition that certain waters (Class VII swamp waters) are naturally low in dissolved oxygen will resolve some of the problems related to unreasonable and unattainable Total Maximum Daily Loads that retention of the current criteria would pose.

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

Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar's office, please put an asterisk next to any substantive changes.

Section number	Requirement at proposed stage	What has changed	Rationale for change
9 VAC 25-260-50 Numerical criteria for dissolved oxygen, pH, and maximum temperature	Revised pH criteria for Class VII swamp waters from 4.3 – 9.0 to 3.7-8.0. Expanded narrative criteria for Class VII swamp waters to recognize natural quality for DO and pH will fluctuate and fall outside values presented and when this happens the values are not considered violations of the criteria. Site specific criteria may be developed but only when protective. VPDES limits should not cause significant changes to background levels. Currently, the VPDES requirement only addresses pH and states that permit requirements shall meet a permit limit of 6.0 – 9.0. Added a reference to other sections of the regulation that may contain site specific criteria to DO, pH and temperature.	Removed the wording "in the lacustrine portion" from footnote *****.	This is a modification of the dissolved oxygen criteria amendment (effective date of August 14, 2007) in Section 50 that was part of the rulemaking to protect the designated uses of lakes and reservoirs from the impacts of nutrients. The additional change proposed to the footnote would have the DO criteria only apply in the epilimnion throughout a lake or reservoir listed in section 187 where nutrient criteria are in place for control of eutrophication and not just limited to the lacustirne portion. Regulation was not in effect at the time the SWCB considered proposed amendments at their June 2007 meeting but this issue was included in the staff presentation at the public hearings.
9 VAC 25-260-140 Criteria for Surface Water	Added correct footnotes to opening paragraph to subsection A. Deleted Opening paragraph to subsection B that says the agency may use information from the EPA to establish effluent limits as necessary until the board has completed the standards adoption process. Updated Table of	Postponed revisions proposed to the freshwater aquatic life criteria for cadmium and lead until considered more fully in the TAC.	DEQ will recommend to the SWCB that staff reconvene the TAC to consider new scientific information provided during the comment period about cadmium that could provide the basis for modifying the criteria and a comment that the EPA recommended conversion factor is not applicable to lead since Virginia's recalculated criteria differs from the

	Parameters to include the EPA 2000 Human Health Methodology (except for arsenic and nickel) and all updated aquatic life criteria. Also included in the Table of Parameters is a new fish tissue criterion for methyl mercury of 0.30 mg/kg. Radionuclide criteria updated to match drinking water regulations. Added a footnote to the table to clarify the criteria in the table are 2 significant digits and other criteria referenced in the table are the number of digits listed in their respective sections (e.g. dissolved oxygen is 2 and ammonia is 3 or 4 significant digits).	A footnote was added to the methylmercury fish tissue based criterion to clarify that it applies to edible tissue of commonly eaten species resident in the water body. Two additional CAS numbers were added to the nonylphenol criteria listing to clarify that the criteria applies to forms of this compound that are identified by these three CAS numbers.	older EPA criteria. This clarification follows EPA implementation guidance. Without this change, the state criterion would be more stringent than federal requirements and DEQ did not submit to the General Assembly the required justification for proposing a regulation more stringent than federal requirements. These CAS numbers reflect the information in the EPA criteria document and summary of criteria.
9 VAC 25-260-160 Fecal Coliform Shellfish Water	No change proposed but issue was included in the staff presentation at the public hearings.	Revised the fecal coliform criteria for shellfish waters to reflect changes VDH is making in their testing method to conform with the National Shellfish Sanitation Program.	Request came from Dept of Health Division of Shellfish Sanitation but was received too late to include in the proposal considered by the SWCB at their June 2007 meeting. Issue was included in the staff presentation at the public hearings.
9 VAC 25-260-170 Bacteria; Recreational waters	Recalculated the geometric mean criteria for freshwater using two values (126 and 206) to receive public input on both. The two values are calculated using the risk level for freshwater at 1% and .8% (the marine risk level remains at 1.9%). Included amendments to explain where the means apply (fresh vs. saltwater), how to calculate the geometric	Retained the current E. coli criteria in freshwater (geometric mean of 126 CFU/100ml and single sample max of 235 CFU/100ml).	Response to substantive public comment. Over 600 comments were received in support of retaining the current bacteria for freshwater recreation use based on a risk level of 0.8%. In addition, new information from EPA about bacteria permitting requirements became available after the June 2007 SWCB meeting that would allow for higher permit limits

	means (4 weekly samples each month), a requirement that no more than 10% of the total samples in the assessment period shall exceed 235 or 384 E. coli CFU in freshwater (two alternatives are presented because these values are mathematically derived from the geometric means, which are presented as two values) and 104 CFU in saltwater when there is not enough data to calculate a geometric mean. Also, single sample maxima of 235 or 384 (in freshwater) and 104 (in saltwater) shall be used for beach advisories and closures. The permitting requirements are deleted. The disinfection waiver allowance is deleted. Subsection C (Secondary Contact Criteria) are revised to match the primary contact subsection format.		for bacteria for wastewater dischargers if there was any increase in the bacteria criteria. Therefore, staff will recommend that the SWCB retain the existing criteria values at the .8% risk level.
9 VAC 25-260-185 Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries	Revised the open water dissolved oxygen criteria to indicate the assessment will be done in two seasons summer and non-summer. Simplified the introduction to the submerged aquatic vegetation (SAV) subsection to one sentence. Deleted the water clarity 'no grow zones' (no shallow water use in the Elizabeth River segments). There are four segments that currently have zero goals for SAV and water clarity acres but they are not 'no	Revised the last sentence of the opening paragraph to state "Attainment of the shallow-water submerged aquatic vegetation designated use shall be determined using any *one* of the following criteria" (revision italicized) in order to be consistent with agency practice. Retained Elizabeth River segments in the regulation.	In response to a suggestion from the Hampton Roads Sanitation District; DEQ staff agrees this change is appropriate. Made in response to a request from the Elizabeth River Project to retain these segments in the regulation since they plan on working towards restoring SAVs in the Elizabeth River.

	grow zones' like the Elizabeth River. New data indicates one of the segments has recovered 4 acres of SAV. These 4 acres along with the necessary water clarity acreages (10 acres) added to the table. Clarified that when the most recent three consecutive years of data are unavailable that the most recent three years within the data assessment window shall be used (rather than the most recent 5 years). Added a footnote to the chlorophyll criterion subsection to refer the public to section 310 which contains site specific criteria for chlorophyll. Added updated references for implementation.		
9 VAC 25-260-187	Section 187 was not in effect at the time the SWCB considered proposed amendments at their June 2007 meeting but these proposed changes were included in the staff presentation at the public hearings	Added the following lakes with the appropriate nutrient criteria based on fishery type: Chris Green Lake, Fluvanna Ruritan Lake, Lake Arrowhead, Lakeview Reservoir, and Swift Creek Lake. Changed nutrient for Lake Nelson to the criteria appropriate for a fertilized lake fishery. Corrected the chlorophyll "a" nutrient criterion for Lake Prince.	Section 187.A of the amendments effective on August 14, 2007 to protect the designated uses of lakes and reservoirs from the impacts of nutrients recognizes that additional man-made lakes and reservoirs may be added as new reservoirs are constructed or monitoring data become available from outside groups or future agency monitoring. DEQ staff intends to include Chris Green Lake (Albemarle county), Fluvanna Ruritan Lake (Fluvanna County), Lake Arrowhead (Page County), Lakeview

			Reservoir, and Swift Creek Lake (both in Chesterfield County) in the agency monitoring program. These lakes with appropriate nutrient criteria based on fishery type are proposed for addition to Section 187. VDGIF was consulted to confirm the appropriate fishery type was used in assigning the nutrient criteria. In addition, VDGIF noted that they now include Lake Nelson (Nelson County) in their lake fertilization program, so the current nutrient criteria in Section 187 for Lake Nelson are proposed for change to the criteria appropriate for a fertilized lake fishery. Also, a correction to the chlorophyll "a" nutrient criterion for Lake Prince, in the City of Suffolk, is proposed since the lake was originally assigned to the incorrect nutrient ecoregion.
9 VAC 25-260-310 Special Standards and Requirements	Updated special standard "m." Deleted special standard "s." Clarified special standard "y." Revised special standard "aa." Added special standard "ee" to reflect higher pH values in lake fertilized to maintain a recreational fishery. Added special standard "ff" to clarify the appropriate form of manganese needed to protect the aesthetic qualities of drinking water. Added special standard "gg" to reflect subcategory of benthic	Revised special standard "a" for shellfish waters to reflect changes VDH is making in their testing method to conform with the National Shellfish Sanitation Program.	In response to the previously mentioned request from the Dept of Health Division of Shellfish Sanitation.

	aquatic life uses present below a dam. Added special standard "hh" to reflect seasonal summer temperatures in certain streams that are stocked with trout in the winter but warm water in the summer.		
9 VAC 25-260-390 through 540	Revised and/or deleted in the River Basin Section Tables several trout streams, added new Class VII Swamp Water, identified Exceptional State Waters (ESW), deleted several pH non-limestone stream special standards and made miscellaneous corrections.	Addition of special standard notation in special standard column; "ee" for pH range of 5.5-9.5 in Lake Curtis and "gg" for site specific Stream Condition Index for a portion of the Little Calfpasture River. Addition of special standard "hh" in special standard column for Hays Creek. Wording change for Cedar Creek trout waters boundary description. Boundary alteration of one existing Class VII Swamp water (Three Creek) and deletion of one proposed Class VII Swamp water in section 9 VAC 25-260-470 (White Oak Creek). Boundary alteration of three proposed Class VII Swamp waters in section 9 VAC 25-260-470 (Assamoosick Swamp, Gravelly Run, Rowanty Creek). Addition of language to include tributaries within Public Water Supply (PWS) designations (17 total).	Administrative edits recognizing proposed special pH criteria for Lake Curtis as a result of the fertilization techniques used to manage the fishery (ee) and recognizing a site specific stream condition index criterion on approx. 0.74 miles of the Little Calfpasture River due to the presence of a dam (gg). To recognize warm water fishery status of the creek during summer months. In response to trout waters updates from DGIF No change in boundary. For clarification purposes only. In response to comment and consultation with DGIF. In response to regional staff recommendations. New data indicated need for boundary change. Routine request from Dept of Health was received too late to include in the proposal considered by the SWCB at their June 2007 meeting, but the

			requested changes were included in the staff presentation at the public hearings.
		Deletion of latitude/longitude coordinates for PWS intakes (15 total).	In response to VDH comment regarding security concerns. Request from VDH was received too late to include in the proposal considered by the SWCB at their June 2007 meeting, but the request was included in the staff presentation at the public hearings.

Public comment

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

Commenter	Comment +	Agency response
	9 VAC 25-260-10 Designation of Uses	Since no comments were received, no response is needed.
CBF	**9 VAC 25-260-20 General Criteria and Mixing Zones** Opposes continuation of VPDES permitting policies authorized by existing standards for mixing zones; urges revision of the proposal to prohibit any new or expanded mixing zones for PCBs, mercury, lead or arsenic and to eliminate the use of allocation impact zones to prevent lethality to all aquatic life, including resident aquatic life and passing and drifting organisms not considered important species or consumable shellfish at 9 VAC 25-260-270.	No modifications to proposed changes but DEQ will recommend to the SWCB that staff reconvene the Technical Advisory Committee (TAC) to consider the prohibition of any new or expanded mixing zones for persistent bioaccumulative toxic substances as well as comments about 5 aquatic life parameters.
CBF	**9 VAC 25-260-30 Antidegradation Policy** Opposes continuation of VPDES permitting policy of holistic approach for antidegradation policy; urges revision of the proposal to require the application of the antidegradation policy to Tier I	DEQ will recommend to the SWCB that an ad hoc advisory group be formed to assist agency permitting staff in the development of agency guidance on this topic.

	waters for all pollutants using a pollutant-by pollutant approach.	
	9 VAC 25-260-50 Numerical criteria for dissolved oxygen, pH, and maximum temperature	
ACB	Swamp water special standards are appropriate. Given TDML funding low in VA and EPA requires clean-up, may be opportunity for TMDL implementation to work as it has in the Lynnhaven.	No change indicated.
CBF	Supports addition of narrative exemption to dissolved oxygen and pH criteria for swamp water.	No change indicated.
EPA	Include documentation in submission for EPA approval that adopted narrative and numerical criteria for the swamp waters are based on a sound scientific rationale and contain sufficient parameters to protect the designated use(s), explain how the natural condition provision will be determined and implemented for Clean Water Act purposes, and explain how DEQ plans to permit for “significant changes.”	DEQ staff will provide documentation for submittal with the regulatory amendments to EPA within 30 days of completion of the state regulatory process that demonstrates the swamp waters are based on a sound scientific rationale, protect the designated use and explain how the natural condition is determined. The Virginia VPDES Permit Manual discusses permitting procedures for dissolved oxygen in swamp waters. These procedures have been in use since at least 1987 and recognize that mixing takes place slowly and high in-stream waste concentrations are possible in these waters. Therefore it is necessary that these "self sustaining" effluent limits be utilized. In effect, this means that the effluent will not normally violate the stream standards even if the stream consists of 100% effluent. These limits are: Parameter Averages Monthly Weekly CBOD5 : 10 mg/l 15 mg/l TSS : 10 mg/l 15 mg/l TKN : 3.0 mg/l 4.5 mg/l D.O.: 3.0 mg/l (minimum) The current practice is to require a minimum D.O of 5.0 mg/l and consideration will be given by permits staff to updating the permit manual to reflect current 5.0 mg/l practice. For pH, VPDES permits will be written to follow minimum secondary treatment requirements of 40 CFR 133 of pH 6.0 – 9.0 unless situations are noted where that higher effluent pH quality might be harmful to aquatic life that are adapted to a naturally occurring low pH in certain swamps in Virginia. Unless there is a water quality concern due to pH that is noted by DEQ staff during field study, analysis of background concentrations,

		inspection or as a comment from another natural resource agency, the secondary treatment requirements will be the guidance followed in these situations.
HRPDC, HRSD, Navy	Supports the new numeric and narrative criteria, which better reflect natural conditions, for Class VII Swamp Waters.	No change indicated.
USFWS	Supports narrative criteria for dissolved oxygen and recommends numeric criteria and narrative language for pH such as: *"The pH range shall be 4 – 8 standard units unless established on a site-specific basis by the Board, where the Board has determined that uses are not impaired due to anthropogenic sources, except that all VPDES permits shall be limited to pH 6.0 – 9.0 standard units and no discharge shall cause a change in the naturally occurring background range nor interfere with the existing and designated use. Excursions due solely to naturally occurring conditions shall not be interpreted as violations of the standard."*	An analysis was done on data collected by DEQ regional staff in waters that experience little to no anthropogenic impacts but still exhibit low DO and pH characteristics. This review indicated a pH range of 3.7-8.0 was a more appropriate representation of natural conditions than the current standard of 4.3-9.0. For pH, VPDES permits will be written to follow minimum secondary treatment requirements of 40 CFR 133 of pH 6.0 – 9.0 unless situations are noted where that higher effluent pH quality might be harmful to aquatic life that are adapted to a naturally occurring low pH in certain swamps in Virginia. Unless there is a water quality concern due to pH that is noted by DEQ staff during field study, analysis of background concentrations, inspection or as a comment from another natural resource agency, the secondary treatment requirements will be the guidance followed in these situations.
VDGIF	• Recommend a narrative be used to address DO criteria in these waters and continue to support the language recommended by USFWS. • Have reviewed list provided by DEQ of all currently designated Class VII Waters and those waters proposed for such designation and have determined that some of the waters on the list do not meet the criteria for "naturally occurring" swamp waters and recommend the waters on the list be further evaluated by DEQ, DGIF and other natural resource agencies to determine the validity of the current and proposed designations.	Subsequent discussion with DGIF staff regarding their need to be included in the process of determining whether impairments are a natural condition has resulted in mutual agreement for their agency to review and provide input regarding Natural Condition Reports while these reports are in the draft stage. This method, formalized in 2004, was adapted from "Maptech, Methodology for Assessing Natural Dissolved Oxygen and pH Impairments: Application to the Appomattox River Watershed, Virginia. 2003" and was developed to determine whether low DO and pH values within a water body are naturally occurring or the result of human impacts in need of TMDL development. At that point in the process, DEQ regional staff can follow up with report modifications and changes – where appropriate - to the proposed boundaries of a swamp water designation prior to initiation of the regulatory process to amend the water quality standards regulation. As members of the Technical Advisory Committee (TAC),

		DGIF had been made aware of proposed amendments regarding Class VII and the natural conditions reports had been made available at one of the TAC meetings. Based on comments made by DGIF staff, DEQ made boundary adjustments in the proposal for one water body (Three Creek) designated as Class VII during the last Triennial Review and removed one water body (White Oak Creek) from the proposal.
EPA	**9 VAC 25-26-55 Implementation procedure for dissolved oxygen criteria in waters naturally low in dissolved oxygen** Explain what the replacement requirement would be to protect the DO through NPDES permits in swamp waters.	The Virginia VPDES Permit Manual discusses permitting procedures for dissolved oxygen in swamp waters. These procedures have been in use since at least 1987 and recognize that mixing takes place slowly and high in stream waste concentrations are possible in these waters. Therefore it is necessary that these "self sustaining" effluent limits be utilized. In effect, this means that the effluent will not normally violate the stream standards even if the stream consists of 100% effluent. These limits are: Parameter Averages Monthly Weekly CBOD5 : 10 mg/l 15 mg/l TSS : 10 mg/l 15 mg/l TKN : 3.0 mg/l 4.5 mg/l D.O.: 3.0 mg/l (minimum) The current practice is to require a minimum D.O of 5.0 mg/l and consideration will be given by permits staff to updating the permit manual to reflect the current 5.0 mg/l practice.
HRSD	**9 VAC 25-260-90 Site Specific Temperature Requirements** Agrees the deleted text is not appropriate for inclusion in the Water Quality Standards regulation but requests that this protocol be immediately placed into guidance.	DEQ has never utilized these site specific temperature requirements and staff does not see a need to place this into guidance.
CBF, CBFM	**9 VAC 25-260-140 Criteria for Surface Water** Support update to numeric criteria for aquatic life and human health human health protection, particularly the new fish tissue criterion for methyl mercury and the recalculated human health criteria for 93 parameters based on EPA guidance.	No change indicated.
CBF	Urges the assistance of a TAC prior	The DEQ TDML program has contracted with

	to the next triennial review to develop freshwater total dissolved solids (TDS) and, with assistance from DCR, numeric turbidity criteria to ensure effective implementation of storm water and TMDL programs and to maximize protection of aquatic life.	Virginia Tech's Water Resources Research Center to provide assistance from their Academic Advisory Committee to DEQ in developing TDS criteria. When that project is completed, DEQ staff will evaluate whether moving forward with criteria is appropriate and on what schedule.
EPA	EPA fully supports and commends Virginia on its proposal to modify many of the human health and aquatic life criteria but notes the proposed criteria for chloroform, barium, acrolein, and phenol are not consistent with EPA's recommended criteria and remind Virginia to include in the submission for approval a discussion and rationale for these new and revised criteria.	VA DEQ's criteria for these four parameters are based on recent updates to toxicity data. Acrolein: EPA based on pre1980 data; VA based on reference dose (RfD) update in IRIS in 2003. Barium: EPA based on 1976 Red Book; VA based on current MCL (established in 1991). Chloroform: EPA based on 1980 methodology and 1991 IRIS carcinogenicity data: VA based on IRIS update in 2001 noting that the RfD of 0.01 mg/kg/day can be considered protective against increased risk of cancer. Phenol: EPA based on 1990 RfD; VA based on 2002 update of RfD in IRIS.
HRSD	• Supports deletion of the language in the first paragraph. • Does not support the wholesale acceptance of the 2000 EPA methodology for the calculation of human health criteria. The use of EPA's default fish intake and relative source contribution values result in extremely low human health criteria that provide an unnecessary, perhaps even costly, level of protection never intended by the human health standards.	No change indicated. The Water Quality Criteria for human health are being updated in accordance with EPA's most recent recommendations for deriving these criteria, including use of the higher fish consumption rate and use of a relative source contribution. The new EPA methodology has been developed after peer review and public comment opportunities, including general public comments and presentations at meetings of the Federal-State Toxicology and Risk Analysis Committee, the Society For Risk Analysis and the Society of Toxicology, as well as a public stakeholders meeting and the guidelines were submitted to a formal peer review work group. These components of the guidance for development of human health criteria passed all these public and peer reviews. These issues were discussed in VDEQ TAC meetings in 2007 and in the course of these TAC meetings and subsequent public comments, no viable alternatives were presented to these updated human health criteria as recommended by EPA. The criteria for the parameters that include a relative source contribution component were submitted by EPA to public comment on a national level and EPA considers these appropriate criteria for these parameters. Deviation from these

		nationally recommended criteria would require a scientifically defensible alternative, but no such substitute has been offered in public comments.
	• Does not support the addition of the new parameters diazinon, nonylphenol, and methylmercury until approved, promulgated and multi-laboratory validated methods are provided for their analysis.	The current DEQ permit manual does not address these parameters since they are new water quality criteria. Established analytical methods are available for detecting mercury, methylmercury, diazinon and nonylphenol and are widely used in scientific research. Analysis for mercury in fish tissue has been used by DEQ for decades. After adoption of these criteria, DEQ implementation guidance will determine any specific approved analytical methods for use in monitoring and potential permit limits if needed.
	• Does not support changing the cadmium criteria at this time. Provided new data that demonstrates these proposed criteria are overly stringent.	This issue involves new scientific information that has recently become available since EPA's latest update of their recommended criteria. This new information could provide a justification for modifying the current criteria. DEQ will recommend to the SWCB that staff postpone revisions to the freshwater aquatic life criteria for cadmium and reconvene the TAC to consider this issue as well as comments about 4 other aquatic life parameters.
	• Does not support changing the lead criteria at this time. The change is based on EPA's lead criteria adjustment factor used to convert the total recoverable metals standard to a dissolved metals standard. The same conversion factor does not necessarily apply to DEQ's current lead criteria.	This issue involves new scientific information that has recently become available since EPA's latest update of their recommended criteria. This new information could provide a justification for modifying the current criteria. DEQ will recommend to the SWCB that staff postpone revisions to the freshwater aquatic life criteria for lead and reconvene the TAC to consider this issue as well as comments about 4 other aquatic life parameters.
	• The language on significant figures in footnote 7 needs to recognize that 40CFR Part 136 methods may not be able to meet the significant digits of the criteria.	Footnote 7 only addresses the significant figures that apply to the water quality criteria values listed in the table. 9 VAC 25-260-280 of this regulation addresses the analytical procedures that should be used for monitoring. DEQ recognizes that some analytical methods referenced in 9 VAC 25-260-280 may have detection limits greater than the water quality criteria and that analytical results using these methods may not be able to demonstrate compliance with water quality criteria. Section 280 (Analytical Procedures) states: **"**Analytical testing should be done in accordance with accepted procedures in 40 CFR 136, as amended or other Board/EPA recognized and approved methods."

	• Strongly supports DEQ's plan to convene a TAC to review the technical issues associated with changing some of the numeric criteria. DEQ and the SWCB must delay implementing changes to the cadmium criteria until after the TAC has assessed the new data and provided its recommendations.	This issue involves new scientific information that has recently become available since EPA's latest update of their recommended criteria. This new information could provide a justification for modifying the current criteria. DEQ will recommend to the SWCB that staff postpone revisions to the freshwater aquatic life criteria for cadmium and reconvene the TAC to consider this issue as well as comments about 4 other aquatic life parameters.
HRSD, Navy. VAMWA*	Supports the proposed change to the tributyltin criteria.	No change indicated.
Navy	To be consistent with EPA's 2007 revision to freshwater criteria for copper, DEQ should express the freshwater copper criteria as a 24 hour average and not as a "one hour average" in Footnote 1.	The "24 hour average" recommended for applying the acute criterion of copper refers to use of the 2007 EPA criteria for copper using the biotic ligand model. This is not the basis for the Virginia criteria for copper which is based on the previous EPA criteria methodology that expresses the acute criterion as a "one hour average". This issue may be investigated further in the reconvened TAC meetings dealing with copper and freshwater mussel toxicity.
SELC	Requests DEQ initiate for next water quality standards development cycle, aquatic life criteria for TDS and its constituents sulfates, chloride, calcium, magnesium, potassium and selenium, recognizing that DEQ only has aquatic life criteria presently for chlorides and selenium. Request based on need for water quality standards for TDML development in alkaline mine drainage areas.	The DEQ TDML program has contracted with Virginia Tech's Water Resources Research Center to provide assistance from their Academic Advisory Committee to DEQ in developing TDS criteria. When that project is completed, DEQ staff will evaluate whether moving forward with criteria is appropriate and on what schedule.
VAMWA*, ASA , AUGCo, BEDCty, Fauquier, Henrico, LynchCo, Tapp, PFRWWTA, StafCo, UOSA, WVWA	Postpone possible changes to the freshwater cadmium and lead aquatic life criteria until considered more fully in the Department's planned Technical Advisory Committee process.	This issue involves new scientific information that has recently become available since EPA's latest update of their recommended criteria. This new information could provide a justification for modifying the current criteria. DEQ will recommend to the SWCB that staff postpone revisions to the freshwater aquatic life criteria for cadmium and lead and reconvene the TAC to consider these 2 parameters as well as comments about 3 other aquatic life parameters.
	9 VAC 25-260-155 Ammonia Surface Water Quality Criteria	

USFWS, VDGIF	Continues to recommend DEQ adopt revised aquatic life criteria for ammonia that will be protective of freshwater mussels; previously provided DEQ with recent published literature that shows freshwater mussels can be more sensitive to ammonia than standard test organisms. Available to work with DEQ WQS and VPDES program staff to develop criteria that will protect federally listed mussels.	This issue involves new scientific information that has recently become available since EPA's latest update of their recommended criteria. This new information could provide a justification for modifying the current criteria. DEQ will recommend to the SWCB that staff reconvene the TAC to consider this issue as well as comments about 4 other aquatic life parameters.
	9 VAC 25-260-160 Fecal Coliform Shellfish Waters	
VDHSS	Requests that DEQ revise the fecal coliform criteria for shellfish waters to reflect changes they are making in their testing method to conform with the National Shellfish Sanitation Program.	DEQ has modified the text as requested by VDH for SWCB consideration. Once VDH completes the transition from the MPN multiple tube method to the MF direct plate count method with mTEC media, DEQ anticipates proposing in a future rulemaking to remove the wording related to the MPN method.
HRSD	Does not support the standards change that permits the use of mTEC agar for the analysis of fecal coliforms. This is not an approved method for the analysis of fecal coliforms and this administrative change has not been subject to the full APA process.	The U.S. Food and Drug Administration, which is the federal agency overseeing the National Shellfish Sanitation Program administered by VDHSS, has approved using the mTEC agar method for analyzing fecal coliform bacteria and recommends this method for assessing shellfish sanitation issues in the National Shellfish Sanitation Program. DEQ uses the VDHSS data assessments in determination of impaired waters classifications and in the TDML program so the method of analysis used by VDHSS should be included in the regulation. DEQ acknowledges that mTEC is not approved in 40 CFR 136 for fecal coliform and will work with VDHSS, EPA and the permittee to determine the appropriate approved method for VPDES permit limits for fecal coliform.
	9 VAC 25-260-170 Bacteria; Recreational waters	
CBF, CBFM, FNFSR, LFSW, Dean, SOS, Nagelvoort, Davenport, Poague, Goho, Marzolf, Wallinger, Bernard	Opposed to relaxation of E. coli criteria for freshwater recreation use.	Based on public comment, DEQ intends to recommend the SWCB retain the existing criteria for freshwater recreation which are based on a risk level of 0.8 % (a geometric mean of 126 E. Coli CFU/100ml and a single sample value of 235 CFU/100 ml).
EPA	• EPA gives States flexibility in choice of illness rate (any rate between 8 -10 is	Based on public comment, DEQ intends to recommend retaining the current bacteria criteria for freshwater recreation use.

	protective of primary contact). However, Virginia's submission for approval to EPA of the final adopted criteria for bacteria must include a discussion and rationale of the selected criteria and risk level. • The Bacteria Section has also been clarified to list the geometric mean as the main criteria for assessment to ensure protection of primary contact recreational uses as this is considered the environmentally relevant endpoint. Virginia's submission for approval to EPA of adopted criteria for bacteria must include a discussion and rationale of the selected assessment protocol. EPA notes, as required by the BEACH Act, the State has proposed beach closure/advisory language which is appropriate (e.g. using 75% SSM for saltwater beach closure/advisories). EPA also notes the State has made organizational edits.	DEQ will include this information with the submittal to EPA.
VDCR	Supports the proposed move to the geometric mean and they believe that assessment based on the geometric mean is consistent with EPA policy though they take no position regarding the numeric criteria. Though not advocating a change in the standards at this time, Virginia's application of the primary contact recreation designated use to all waters regardless of location, climactic events, or public access render it difficult to meet the current bacteria standard for streams impaired by non-point sources of bacteria. Despite significant improvements in reducing the violation rate of the bacteria	DEQ agrees that the geometric mean is the environmentally relevant endpoint and intends to use the geometric mean of the bacteria criteria when developing TMDLs. Under this approach, it is expected that reductions in non-point source bacteria loadings should not be as high as the levels pointed out by VDCR's comments, and may meet or approach the levels attainable by current technology and BMPs. The current standards do allow for designating a waterbody suitable for secondary contact recreation though none at this time have been so designated. Under such a designation, the applicable bacteria criterion for secondary contact waters is 630 CFU/100 ml in freshwater, which is five times the criteria for primary contact recreation waters. Consideration for designating waters as

	standard for a number of targeted stream segments, none have met the current primary contact recreation standard. They believe it important that the Board consider that TMDLs based on the current E. coli standard may require a 95-100% reduction in non-point source bacteria loadings when current technology and BMPs may only achieve an 80-90% reduction. DCR is finding it difficult to engage the support of citizens, businesses and localities when restoration goals are unlikely to be met.	suitable for secondary contact recreation is expected to take place only after all reasonable steps have been taken to implement the needed BMPs and other actions to reduce bacteria loadings to the waterbody. In anticipation that a secondary contact recreation designation may one day be appropriate for certain waters, the proposal includes an amendment to section 9 VAC 25-260-170.B which states that for a water designated for secondary contact recreation, any higher water quality will be maintained in accordance with the anti-degradation policy of the standards in those cases where the existing water quality for bacteria is below the geometric mean criteria established for secondary contact recreation.
HRSD	• *Use of Geometric Mean*: Strongly supports the emphasis on the geometric mean value to assess standards attainment. EPA guidance states that the geometric mean is the more environmentally relevant standard for water quality assessment. • Does not support the language that specifies a minimum number of data points as well as a time frame necessary for the calculation of a geometric mean. This directly conflicts with current permitting practices. • *Adjustment of Illness Rate*: Strongly supports the freshwater *E. coli* criteria correlating to a 1.0% risk level. EPA supports a 1.0% risk level. This credible and technically defensible adjustment of the criteria will continue to protect public health and recreational opportunities in the Commonwealth. • *Former Section B*: Supports removing the language formerly in section B of this	No change indicated. Current permitting practice is to limit the monthly geometric mean for bacteria with a minimum of 2 samples per month and most facilities have more frequent sampling requirements (1/day every day or 3/week). This practice reflects the existing water quality standards which specify a time frame (month) and a minimum number of samples (2). Permitting practices may have to change in response to changes in the bacteria criteria. Based on public comment, DEQ intends to recommend retaining the current bacteria criteria. at the 0.8% risk level. DEQ has existing guidance for section B in the permit manual and also in a Guidance Memorandum; however this guidance may

	chapter pertaining to sewage dischargers as this is more appropriate for guidance. DEQ must ensure that this information is immediately placed into guidance to maintain continuity in the permit program.	have to change in response to the revisions to the bacteria criteria.
HRPDC, Navy, BEDCty,VAMSA, VAMWA*, ASA AUGCo, Fauquier, Hanover, Henrico, LynchCo, SpotCo, PFRWWTA, Tapp, StafCo, UOSA, WVWA	DEQ should recommend the SWCB adopt the 206 CFU per 100 ml geometric mean for E. coli as well as the corresponding changes to the single sample E. coli criterion in freshwater recreational waters.	Based on public comment, DEQ intends to recommend retaining the current E. coil geometric mean and single sample criterion.
Fairfax	DEQ should develop a new bacteria criterion to address storm water issues using cost benefit and risk analysis.	DEQ agrees that the wet weather bacteria criteria issue needs to be considered in the next triennial review.
RICH	Provided three alternatives in priority order for how to set the freshwater bacteria standard in Virginia that would allow DEQ to complete the water quality standards coordination process required by the CSO Policy for Richmond:	
	1. Statewide WQS of 206 cfu/100 mL for E.coli 2. "Special standard of 206 cfu/100 mL for E.coli for a portion of the James River during the summer season (May 1-September 30) that would maintain the use as primary contact recreation. The E.coli standard for all other waters of the state would be set at 126 cfu/100 mL. Richmond has discussed its proposal with CBF (although CBF has not seen the draft text that Richmond would propose that the SWCB adopt). Richmond's perspective from the meeting with CBF is that CBF was amenable to	Based on public comment, DEQ intends to recommend retaining the current E. coil geometric mean and single sample criterion. Although the City requested a special standard, the TDML for the James River through Richmond will be the administrative tool to document the fact that the Long Term Control plan Attachment E is acceptable to meet the water quality standards. Also, EPA expects to reexamine the current nationally recommended bacteria criteria with the expectation of developing new criteria by 2012.

	the idea in concept, subject, of course, to reviewing the details of the proposal. The City provided draft alternative text for inclusion in the WQS." 3. Use Attainability Process (UAA) Process If the SWCB rejects either Alternative 1 or 2, and chooses instead to set the E.coli standard at 126 cfu/100 mL statewide, certain portions of the James River will fail to meet WQS for freshwater bacteria. Without an attainable standard supportive of primary contact use, DEQ staff and interested participants will be required to conduct a use attainability analysis ("UAA"). The City does not support this approach. The UAA process is likely to be protracted and cumbersome, result in lengthy delays in implementation of the City's LTCP. Most importantly, the end result could be entirely inconsistent with what Richmond believes all interested participants and DEQ staff are trying to achieve through this process – to preserve primary contact recreation use of the James River. In addition to prompting a UAA process, setting the bacteria standard at 126 cfu/100 mL for E.coli would trigger review by the Virginia General Assembly. If a proposed SWCB regulation is "more restrictive than applicable federal requirements" the text "shall be provided to the standing committee of each house of the General Assembly to which matters relating to the content of the regulation are most properly referable." A statewide 126 cfu/100 mL standard would be more stringent than the acceptable EPA standard (see statement above that the 206 cfu/100 mL standard is "acceptable to the EPA."). As Virginia evaluates adjusting the freshwater bacteria standard, the City poses the following policy question that would likely be asked at the General Assembly: "What is	

	Virginia's basis for maintaining the E. coli 126 cfu/100 mL freshwater bacteria standard (0.8% illness rate) that is more stringent than marine water standard (1.9% illness rate?"	
VAMWA	Believes the adjustment to the E. coli criterion is so important to the Commonwealth's water quality programs that they propose the addition of a new section 170.B with an implementation provision strictly for POTW effluents which could be worded as follows: "Publicly Owned Treatment Works effluents discharging to freshwater streams shall be limited to a technology-based implementation level of 126 CFU monthly geometric mean."	DEQ intends to recommend retaining the current bacteria criteria. Staff does not agree with recommendation that would allow bacteria levels in state waters to be higher than allowed in treated sewage.
	9 VAC 25-260-185 Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries	
CBF	Supports clarification of water clarity criteria assessing shallow-water submerged aquatic vegetation designated use	No change indicated.
HRSD	*Section B: Submerged Aquatic Vegetation and Water Clarity*: • The last sentence of the opening paragraph of this section should be revised to state "Attainment of the shallow-water submerged aquatic vegetation designated use shall be determined using any *one* of the following criteria" (revision italicized) in order to be consistent with agency practice.	DEQ staff has included the suggested changes in the final proposal.
	• Supports removing the SAV and Water Clarity goals for MPNOH, PMKOH, and POCOH.	No change indicated.
	• Supports the removal of the Elizabeth River segments from the table. There is no shallow water SAV habitat in these areas so removal is defensible.	DEQ has received a verbal request from the Elizabeth River Project to retain these segments in the regulation since they plan on working towards restoring SAVs in the Elizabeth River.

	9 VAC 25-260-187 Nutrient Criteria for Lakes & Reservoirs	
EPA	Virginia's submission for approval to EPA of adopted nutrient criteria for lakes s must include documentation the criteria are based on a sound scientific rationale and contain sufficient parameters to protect the designated use(s).	DEQ followed the same approach used in establishing lake nutrient criteria for lakes and reservoirs and will provide this documentation concurrent with submittal of the regulatory amendments to EPA within 30 days of completion of the state regulatory process.
WVWA	Objects to special phosphorous limit assigned to lakes managed by DGIF because this limit is typically double what would be assigned to lakes not managed by DGIF, is not protective of water quality, and is an exemption the Commonwealth is affording itself so that the Commonwealth does not have to comply with the same regulations it imposes on the regulated community.	Lakes and reservoirs listed in Section 187 are assigned nutrient criteria based on fishery type and ecoregion. Fertilized fishery is one of four defined fishery types recommended by the Academic Advisory Committee for use in setting nutrient criteria; all four fishery types are defined in Section 5 of the regulation. The proposed change in designation of Lake Nelson to a fertilized fishery was made upon the recommendation of the Department of Game and Inland Fisheries which has the authority to manage a lake fertilization program and now includes this lake in that program. Therefore, the current nutrient criteria in Section 187 for Lake Nelson are proposed for change to the criteria appropriate for a fertilized lake fishery. Note that Section 9 VAC 25-260-10.C of the regulation would allow DEQ to modify the criterion if the new criteria for Lake Nelson resulted in non-attainment of the water quality standards in downstream waters.
	9 VAC 25-260-290 Tidal Water Sampling	
Navy	Supports the proposed repeal of this section because agree the sampling and assessment procedures should be addressed in the state Water Quality Assessment Guidance Manual.	No change indicated.
	9 VAC 25-260-310 Special Standards and Requirements	
ACB	Manganese special standards are appropriate.	No change indicated.
Navy	Supports cancellation of section 310.s, special standard for chlorides, which will avoid in the future erroneous impairment listings in transition waters that are naturally high in chlorides.	No change indicated.
EPA	The proposed modifications are not well explained. Therefore, it is unclear if the deletions/insertions are substantive or just editorial	DEQ will provide this information when amendments are submitted to EPA for review and approval.

	corrections/changes. Virginia's submission for approval to EPA must include a discussion and rationale for the changes to the special standards and requirements.	
	9 VAC 25-260-320. Scenic rivers	No comment received.
EPA	**9 VAC 25-260-350. Designation of nutrient enriched waters** Several water segments are deleted from the nutrient enriched water list. Virginia's submission for approval to EPA should include rationale to explain these deletions.	Chesapeake Bay drainage effluent requirements are applicable and replace nutrient enriched waters requirement for those waters, including Lake Chesdin and Rivanna Reservoir.
	9 VAC 25-260-360. Section number and description columns.	No comment received.
	9 VAC 25-260-380. Special standards column.	No comment received.
GoochCo , VDC, VDHDW	**9 VAC 25-260-390 through 540** Request remove PWS designation for intake in James R. at river mile 127.26 (Section 10a of 420) because VDOC & VDH ODW have confirmed the intake for the James R. Correctional Center has been permanently transferred to the James R. & retention of the current PWS provision will adversely affect the county's desire to construct a wastewater treatment plant near Oilville in the Beaverdam Creek drainage.	Per the EPA comment below, an existing use on or after November 28, 1975 can not be removed. Therefore, this PWS designation can not be removed as it was an existing use as recently as 2005. The locality, VDH, and VDHDW will be notified along with other commenters by e-mail or mail when SWCB materials, including amendments to the regulation, are posted at http://www.deq.virginia.gov/wqs/rule.html#TR of the fall meeting date of the SWCB and where they can find the documents related to that meeting.
EPA	In response to public water supply use removal request from Goochland County, EPA said an existing use on or after November 28, 1975 can not be removed. (The corrections institution stopped using the intake in 2005)	No change indicated.
Navy	In section 2b of 530, Classifications for York River Basin, Jones Pond is classified as a public water supply which serves the raw water intake for Cheatham Annex Navy Station. This DoD facility has closed its water treatment plant and connected to the Newport News municipal water system. Therefore, Jones Pond should no longer be classified as a public water supply.	Per the EPA comment above, an existing use on or after November 28, 1975 can not be removed.
EPA	Virginia's submission for approval to	DEQ will provide this information when

	EPA must include a discussion and rationale for each of the changes to special standards and requirements. It is unclear with some of the deletions/insertions whether they are substantive changes to the designated use or just editorial corrections/changes. Providing further clarifications will go a long way in strengthening the reasoning for these changes to this Section. EPA reminds Virginia that States may remove a designated use which is not an existing use, if the State can demonstrate that attaining the designated use is not feasible. Virginia's submission for approval should include a use attainability analysis (UAA) covering each stream or stream segment that is being removed.	amendments are submitted to EPA for review and approval.
HRSD	**Other General Comments** "HRSD does not support DEQ's economic analysis approach. It does not adequately consider the imposition of new permit limits as a result of reasonable potential analysis nor does it indicate that many of the extremely low criteria concentrations are currently undetectable with the available analytical methods. Future effluent data may demonstrate a need for great capital expenditure in order to meet new permit limits associated with these more stringent criteria. While the potential for impact in this instance is unknown and not quantifiable, the text supporting the economic analysis should reflect this possibility. An underlying theme to several of these issues is the determination of acceptable risk. DEQ must open a dialogue to establish what level of risk is acceptable to the public. DEQ should be proactive in engaging the public in this dialogue, fully explaining costs as well as the benefits associated with varying risk levels. Doing so will ensure that criteria are set with the appropriate	The economic analysis was conducted by an economist in the DEQ Office of Regulatory Affairs and was accepted and used by the Department of Planning and Budget. The comment speculates that future changes could potentially change information regarding some discharges, and this could potentially result in some additional requirements placed on some dischargers in the future. DEQ agrees with the comment that the potential impact is unknown and unquantifiable at this time

	level of protection at acceptable risk levels and will assist in prioritizing restoration efforts."	
VBWR	Bay suffering from enrichment as are many other tidal waters. Need to get dredge permits and outlets to improve tidal flushing to Linkhorn Bay and Great Neck Creek.	Comments are unrelated to proposed amendments.
WVWA (McEvoy)	The Authority supports the designation of the headwaters of the Roanoke River as an Exceptional state Water (ESW).	This rulemaking does not contain a proposal to designate the Roanoke River as an Exceptional State Water.

+ Comment organized by section of regulation amended.

***** Support VAMWA comments: AUGCo, ASA, BEDCty, Fauquier**,** Henrico, LynchCo**,** PFRWWTA**,** RICH, StafCo**,** Tapp, UOSA**,** and WVWA

List of Acronyms Used for the Organizations:

ACB = Alliance for Chesapeake Bay, Chris French, Director of Virginia Office
AUGCo = Augusta County, Jean Andrews, Regulatory Compliance Coordinator
ASA = Alexandria Service Authority, Karen L. Pallansch, General Manager
BEDCty = City of Bedford, Eric J. Rajaniemi, Coordinator of Pretreatment
Bernard = David Bernard
CBF = Chesapeake Bay Foundation Mike Gerel, Virginia Scientist
CBFM = Howard Tew, Sheryl Smith, Leigh Smith and 597 e-mails from members
Davenport = James Davenport
Dean = Archie Dean
EPA =US Environmental Protection Agency Region III, Cheryl Atkinson, US Environmental Protection Agency, Region 3, Water Protection Division
Fairfax = Fairfax County Department of Public Works and Environmental Services, Stormwater Management Division, Randolph W. Bartlett, Director
Fauquier = Fauquier County Water & Sanitation Authority, Barney E. Durrett, Jr., General Manager
FNFSR – Friends of the North Fork of the Shenandoah River, Leslie D. Mitchell-Watson, Executive Director; Ron Falyar, President; members Dennis Atwood, Roger A. Boland, Barbara Halvorson Ellen Nash and Jonathan Jay, Margaret Nelson
Goho = June Goho
GoochCo = Goochland County, Gregory K. Wolfrey, County Administrator, for the Goochland County Board of Supervisors
Hanover = Hanover County Department of Public Works, J. Michael Flagg, PE, Director
Henrico = Henrico County Department of Public Utilities, Arthur D. Petrini, PE, Director of Public Utilities
HRPDC = Hampton Roads Planning District Commission, John M. Carlock, Deputy Executive Director, Physical Planning
HRSD = Hampton Roads Sanitation District, James J. Pletl, PhD, Chief, Technical Services Division and Jamie Heisig-Mitchell
LFSW = Lord Fairfax Soil and Waters, Joan Comanor, Chairwoman and Lyle Schertz, Associate Director
LynchCo = Lynchburg County, Department of Public Utilities, Timothy A. Mitchell, PE, Director
Marzolf = Richard Marzolf
Nagelvoort = Bernard C. Nagelvoort
Navy = Department of the Navy, Christine H. Porter, Director, Regional Environmental Coordination Department by direction of the Commander

PFRWWTA = Peppers Ferry Regional Wastewater Treatment Authority, R. Charles Wallcraft, Executive Director
Poague = Peter Poague
RICH = City of Richmond, Christopher L. Beschler, Deputy Chief Administrative Officer; Robert C. Steidel, Deputy Director Department of Public Utilities; Ed Cronin, Greeley and Hansen
SELC = Southern Environmental Law Center, Mary Varson Cromer
SOS = Virginia Save Our Streams, Stacey Brown
SpotCo = Spotsylvania County, Edward Petrovitch Interim Director of Utilities
StafCo = Stafford County, Robert E. Bos, PE, Director of Utilities
Tapp = Town of Tappahannock, G. G. Belfield, Jr., Town Manager
UOSA = Upper Occoquan Sewage Authority, Charles P. Boepple, Executive Director
USFWS = United States Department of the Interior, Fish and Wildlife Service, Ecological Services, Karen L. Mayne, Supervisor, Virginia Field Office
VAMSA = Virginia Municipal Stormwater Association, Michael Schaefer, President
VAMWA = Virginia Association of Municipal Wastewater Agencies, Inc., Frank W. Harksen, Jr; Dick Sedgley; Jamie Heisig-Mitchell
VBWR – Virginia Beach Wetlands Restoration, Josh Macbon
VDC = Virginia Department of Corrections, Timothy G. Newton, Environmental Services Manger
VDCR = Virginia Department of Conservation and Recreation, Russell W. Baxter, Deputy Director
VDGIF = Virginia Department of Game and Inland Fisheries, Raymond T. Fernald, Manager, Nongame and Environmental Programs
VDHDW = Virginia Department of Health, Office of Drinking Water, Bennett K. Ragnauth
VDHSS = Virginia Department of Health, Division Shellfish Sanitation, Robert E. Croonenberghs, PhD, Director
Wallinger = Rosemary H. Wallinger
WVWA = Western Virginia Water Authority, Scott Shirley, Director of Wastewater Operations, and Michael T. McEvoy, Executive Director, Wastewater Services

Enter any other statement here

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.

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
9 VAC 25-260-10 Designation of Uses		Specifies uses for state surface waters or segment e.g., recreational uses, the propagation and growth of a balanced, indigenous population of aquatic life, wildlife; and the production of edible and marketable natural resources	Minimum effluent requirements in the antidegradation policy clarified to refer to §§ 301(b) (1) (A) and (B) and 306 of the Clean Water Act (Best Available Technology and National Performance Standards) instead of more generally to §§ 301(b) since this section also includes water quality based permit limits. This is a clarification consistent with EPA guidance. Water quality based permit limits should not be included because they are not minimum effluent requirements. The consequence is that the public clearly understands the requirement of minimum effluent requirements.
9 VAC 25-260-20 General		Provides a narrative for general criteria protective of state waters	Added a prohibition for mixing zones for bacteria and modifies subsection B.11 to match language in the

Criteria and Mixing Zones		and their designated uses. Also provides for mixing zones and their requirements for use.	antidegradation section 30.A.2 which refers to new and existing dischargers instead of new and increased dischargers. Needed to replace the disinfection requirements proposed for deletion in the bacteria section (9 VAC 25-260-170). These changes reflect existing agency permitting practice and results in consistency within the regulation and with other states.
9 VAC 25-260-30 Antidegradation Policy		Protects water quality in state surface waters at one of three levels and, at a minimum, maintains and protects existing uses and water quality conditions necessary to support such uses.	Removed words "is nominated" from Lake Drummond Exceptional State Waters designation. Lake Drummond is no longer 'nominated'. It was adopted in August 2005 as an Exceptional Water. The change will reduce confusion.
9 VAC 25-260-50 Numerical criteria for dissolved oxygen, pH, and maximum temperature		Provides numerical criteria for pH, dissolved oxygen, pH, and temperature for all classes of state waters.	Revised pH criteria for Class VII swamp waters from 4.3 – 9.0 to 3.7-8.0. Expanded narrative criteria for Class VII swamp waters to recognize natural quality for DO and pH will fluctuate and fall outside values presented and when this happens the values are not considered violations of the criteria. Site specific criteria may be developed but only when protective. VPDES limits should not cause significant changes to background levels. Currently, the VPDES requirement only addresses pH and states that permit requirements shall meet a permit limit of 6.0 – 9.0. Added a reference to other sections of the regulation that may contain site specific criteria to DO, pH and temperature. This was done in corroboration with the Department of Game and Inland Fisheries and US Fish and Wildlife Service to eliminate incorrect impairment listings for these unique waters. A narrative criterion is deemed more protective because the dissolved oxygen fluctuates in these waters (sometimes down to zero) and the other natural resource agencies did not think minimum or average numerical criteria would be protective. Removed the wording "in the lacustrine portion" from footnote *****. This is a modification of the dissolved oxygen criteria amendment (effective date of August 14, 2007) in Section 50 that was part of the rulemaking to protect the designated uses of lakes and reservoirs from the impacts of nutrients. The additional change proposed to the footnote would have the DO criteria only apply in the epilimnion throughout a lake or reservoir listed in section 187 where nutrient criteria are in place for control of eutrophication and not just limited to the lacustrine portion. Regulation was not in effect at the time the SWCB considered proposed amendments at their June 2007 meeting. This issue was included in the staff presentation at the Triennial Review public hearings. These changes will likely remove these naturally impaired waters from the 303(d) list and no clean up plan (total maximum daily load or TMDL) will be necessary. Permittees may find their pH limits adjusted slightly to better adhere to the background concentrations.
9 VAC 25-260-55 Implementation procedure for dissolved oxygen criteria in waters naturally low in dissolved oxygen		Procedure when assessing dissolved oxygen data for waters with low DO due to nonanthropogenic sources and naturally occurring physical and chemical processes.	Deleted. Procedure has been implemented and no longer needed. The section also contained a requirement to adopt site specific criteria for naturally low dissolved oxygen waters (i.e. swamps) and the natural resource agencies decided that approach was not protective so deleting the section will allow us to implement the more general narrative criterion (see section 50 above) rather than site specific criteria.
9 VAC 25-260-		Provides for exceptions to	Deleted protocol for developing site specific

90 Site Specific Temperature Requirements		temperature criteria.	temperature criteria but keeps language referring to thermal variances. The protocol has never been used and staff believes it represents guidance rather than regulation. Site specific criteria for all criteria are allowed under another section of the regulation (9 VAC 25-260-140 D). The narrative that refers to thermal variance will remain since thermal variances under the Clean Water Act have been granted. One consequence could be that the state could accept alternate methods of developing site specific temperature requirements which is preferable.
9 VAC 25-260-140 Criteria for Surface Water		Lists numeric criteria for specific pollutant parameters to maintain water quality to support designated uses. Also includes application of freshwater and saltwater criteria, water effect ratio, and provides for development of site-specific criteria and variances to water quality standards.	Added correct footnotes to opening paragraph to subsection A. Footnotes were incorrect so this change reduces confusion. Deleted opening paragraph to subsection B that says the agency may use information from the EPA to establish effluent limits as necessary until the board has completed the standards adoption process. Staff believes the general criterion is the appropriate regulatory mechanism to regulate parameters that have no criteria. This allowance has never been used so there is no direct consequence of removing it. Updated Table of Parameters to include the EPA 2000 Human Health Methodology (except for arsenic and nickel) and all updated aquatic life criteria. Fifteen of the human health criteria were published with the Relative Source Contribution (RSC) factor and these have been included. The RSC assumes 80% of exposure to the pollutant comes from other sources (food, air). The other human health parameters did not use the RSC and the main difference between them and the existing criteria is the higher fish intake value of 17.5 g fish/day. Arsenic and nickel not updated as they are under review at EPA. The table of parameters is always updated during Triennial Review to match EPA Region III recommendations and to reflect better scientific information. Postponed revisions proposed to the freshwater aquatic life criteria for cadmium and lead until recent scientific information can be considered more fully in the Technical Advisory Committee to determine whether other modifications of the criteria are warranted. Also included in the Table of Parameters is a new fish tissue criterion for methylmercury of 0.30 mg/kg. A footnote was added to the methylmercury fish tissue based criterion to clarify that it applies to edible tissue of commonly eaten species resident in the water body. This clarification follows EPA implementation guidance. Added a footnote to the table to clarify the criteria in the table are 2 significant digits and other criteria referenced in the table are the number of digits listed in their respective sections (e.g. dissolved oxygen is 2 and ammonia is 3 or 4 significant digits). This reflects existing agency practice that is currently in guidance. Two additional CAS numbers were added to the nonylphenol criteria listing to clarify that the criteria applies to forms of this compound that are identified by these three CAS numbers Radionuclide criteria updated to match drinking water regulations. The consequences resulting from these amendments are that the more stringent numerical criteria could result in economic impacts to the regulated

			communities that have any of these toxicants in their discharge. The environment may benefit from lower concentrations of toxic pollutants. Demarcation of tidal freshwater, transition zone, and estuarine boundaries altered to match Bay Program segmentation for tidal fresh (freshwater criteria apply), oligohaline (transition zone – more stringent of the two apply) and mesohaline / polyhaline (estuarine waters saltwater criteria apply). This is more technically correct and will facilitate assessments.
9 VAC 25-260-160 Fecal Coliform Shellfish Waters		Specifies bacteria criteria for designated shellfish waters.	Revised the fecal coliform criteria for shellfish waters to reflect changes VDH is making in their testing method to conform with the National Shellfish Sanitation Program. Request came from Dept of Health Division of Shellfish Sanitation.
9 VAC 25-260-170 Bacteria; Recreational waters		Specifies bacteria criteria to protect primary and secondary contact recreational use.	Fecal coliform criteria deleted since criteria no longer applicable after June 30, 2008. Included amendments to explain where the means apply (fresh vs. saltwater), how to calculate the geometric means (4 weekly samples each month), a requirement that no more than 10% of the total samples in the assessment period shall exceed 235 E. coli Colony Forming Units (CFU) in freshwater and 104 CFU in saltwater when there is not enough data to calculate a geometric mean. Also, single sample maxima of 235 (in freshwater) and 104 (in saltwater) shall be used for beach advisories and closures. The geometric mean is the environmentally relevant endpoint according to EPA. Similar amendments are proposed for secondary contact waters with the requirement that no more than 10% of the total samples in the assessment period shall exceed 1173 E. coli CFU in freshwater and 519 CFU in saltwater when there is not enough data to calculate a geometric mean. The permitting requirements are deleted. Existing practice not needed in the bacteria section since a prohibition to mixing zones (i.e. bacteria criteria are end of pipe limits) has been added to the mixing zone policy. The disinfection waiver allowance is deleted Disinfection waivers more appropriately handled via the existing variance allowances in section 9 VAC 25-260-140 E. The consequence of removing the disinfection waivers is that the permittees with disinfection waivers now must pursue a variance and it must be approved by EPA.
9 VAC 25-260-185 Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries		Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries.	Revised the open water dissolved oxygen criteria to indicate the assessment will be done in two seasons summer and non-summer. Simplified the introduction to the submerged aquatic vegetation (SAV) subsection to one sentence. Revised to state “Attainment of the shallow-water submerged aquatic vegetation designated use shall be determined using any *one* of the following criteria” (revision italicized) in order to be consistent with agency practice. Clarified that when the most recent three consecutive years of data are unavailable that the most recent three years within the data assessment window shall be used (rather than the most recent 5 years). These changes reflect existing practices and existing methods of adding or updating new SAV acreages criteria when information becomes available. Retained Elizabeth River segments in the regulation. Made in response to a request from the Elizabeth River Project to retain these segments in the regulation since they plan on working towards restoring SAVs in the Elizabeth River.

			Added a footnote to the chlorophyll criterion subsection to refer the public to section 310 which contains site specific criteria for chlorophyll. Added updated references for implementation. Consequence is that the regulation more accurately presents to the public how we assess the Bay criteria and gives the public more information on where to find site specific criteria.
9 VAC 25-260-187 Criteria for man-made lakes and reservoirs to protect aquatic life and recreational designated uses from the impacts of nutrients.		Provides criteria to protect the designated uses of lakes and reservoirs from the impacts of nutrients.	Added 5 lakes with the appropriate nutrient criteria based on fishery type. Section 187.A of the amendments effective on August 14, 2007 recognizes that additional man-made lakes and reservoirs may be added as new reservoirs are constructed or monitoring data become available from outside groups or future agency monitoring. Changed nutrient for Lake Nelson to the criteria appropriate for a fertilized lake fishery. DGIF noted that they now include Lake Nelson (Nelson County) in their lake fertilization program, so the current nutrient criteria in Section 187 for Lake Nelson are proposed for change to the criteria appropriate for a fertilized lake fishery. Also, a correction to the chlorophyll "a" nutrient criterion for Lake Prince, in the City of Suffolk, is proposed since the lake was originally assigned to the incorrect nutrient ecoregion.
9 VAC 25-260-290 Tidal Water Sampling		Section indicates on what tide samples should be taken.	Deleted. This is information best placed in guidance or standard operating procedures. Consequence is that when tide water samples are taken is no longer specified in the regulation which is preferred since some flexibility on timing is needed when working in the field.
9 VAC 25-260-310 Special Standards and Requirements		Some special standards are effluent limits and others are criteria based upon site-specific studies.	Updated special standard"a" Updated special standard "m." Deleted special standard "s." Clarified special standard "y." Revised special standard "aa." "a" update based on changes VDH is making in their testing method to conform with the National Shellfish Sanitation Program. "m" and "y" updates based on current practice. "s" originally put in regulation because of a permittee concern from the 1970's. Standard is outdated and not needed. Special standard "aa" lower pH needed because of upstream swamp waters. Added special standard "ee" to reflect higher pH values in lake fertilized to maintain a recreational fishery. Added special standard "ff" to clarify the appropriate form of manganese needed to protect the aesthetic qualities of drinking water. Added special standard "gg" to reflect subcategory of benthic aquatic life uses present below a dam. Added special standard "hh" to reflect seasonal summer temperatures in certain streams that are stocked with trout in the winter but warmwater in the summer. Consequences are that the regulation more accurately presents how we interpret these special standards. The deletion of special standard "s" may result in more reasonable permit limits for any dischargers to the stream where that special standard applied.
9 VAC 25-260-320. Scenic rivers		List of all waters designated by Department of Conservation and Recreation as "Scenic Rivers"	Deleted. Scenic rivers are listed in the Code of Virginia and have no regulatory function for DEQ. Consequence is that the public will no longer be confused as to what water quality standards apply specifically to scenic rivers (none).
9 VAC 25-260-350.		Waters determined by the Board based upon an evaluation of the	Deleted 2 lakes and a stream from the nutrient enriched designation.

Designation of nutrient enriched waters		historical water quality data for one or more of the indicators of nutrient enrichment.	Currently waters designated in this section as "nutrient enriched waters" are subject to section 30 of 9 VAC 25-40 (Regulation for Nutrient Enriched Waters and Dischargers to the Chesapeake Bay Watershed) and Bay watershed dischargers are subject to section 70 of 9 VAC 25-40. These waters are in the Bay watershed and now fall under section 70 of 9 VAC 25-40.
9 VAC 25-260-360. Section number and description columns.		Description of Virginia's river basins.	Revised James and Yadkin references to match changes made to river basin tables which results in consistency within the regulation and easier for the public to understand.
9 VAC 25-260-390 through 540		Detailed listing of Virginia waters describing Class, designated uses, and special standards where applicable.	Revised and/or deleted in the River Basin Section Tables several trout streams, added new Class VII Swamp Water, identified river basin sections containing Exceptional State Waters (ESW), deleted several pH non-limestone stream special standards and made miscellaneous corrections. Trout streams recommended by DGIF. Limestone streams previously misidentified and now corrected. Addition of special standard "hh" in special standard column for Hays Creek to recognize warm water fishery status of the creek during summer months in response to trout waters updates from DGIF. Wording change for Cedar Creek trout waters boundary description. For clarification purposes only. Consequences resulting from these amendments will mean that no TMDL will be needed for those waters. ESWs were already adopted but this new identifier in the river basin tables gives more information to the user about that water body. Addition of special standard notation in special standard column; "ee" for Lake Curtis and "gg" for a portion of the Little Calfpasture River. Boundary alteration of one existing Class VII Swampwater (Three Creek) and deletion of one proposed Class VII Swampwater in section 9 VAC 25-260-470 (White Oak Creek) in response to comment and consultation with DGIF. Boundary alteration of three proposed Class VII Swampwaters in section 9 VAC 25-260-470 (Assamoosick Swamp, Gravelly Run, Rowanty Creek) in response to regional staff recommendations. New data indicated need for boundary change. Addition of language to include tributaries within Public Water Supply (PWS) designations (17 total) and deletion of latitude/longitude coordinates for PWS intakes (15 total). In response to VDH comment regarding security concerns and inclusion of tributaries. Request from VDH was received too late to include in the proposal considered by the SWCB at their June 2007 meeting, but the request was included in the staff presentation at the public hearings.

Enter any other statement here

Regulatory flexibility analysis

Please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less

stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

Of the numerous amendments proposed, the following were determined to have substantive impact to Virginia Pollutant Discharge Elimination System (VPDES) permitted facilities: changes to 93 human health criteria resulting in more stringent criteria, addition of two new aquatic life criteria, and deletion of the disinfection waiver. Fifteen facilities have discharge levels for the specific pollutants that are within close range of the criteria being proposed. DEQ made every effort to contact these facilities and found that most of them already employ more stringent controls on the pollutants of interest than those that would be needed under the proposed criteria. For most permittees, human health criteria are not the binding constraints; it is the aquatic life criteria that drive most of the monitoring and control processes. Therefore, the proposed changes in the human health criteria are not predicted to impose very high costs on facilities since facilities will not be significantly changing much in their discharge procedure. All 15 facilities that could potentially be impacted by the proposed changes qualify as small businesses. If these facilities determine that the addition of nonylphenol and diazinon to the aquatic life criteria imposes significant cost, then that will be a cost borne by small businesses. In addition, the disallowance of disinfection waivers could also impose the cost of consultant fees on small businesses who seek an EPA variance, although DEQ believes that staff will complete the tasks for which permittees might have had to hire a consultant. There is no apparent alternative method that minimizes adverse impact while still accomplishing the intended positive policy goals. Since these small businesses are already VPDES permit holders with established reporting requirements, the additional reporting requirements should not be overly burdensome.

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