

Item 4: State law at § 62.1-44.2 provides for the protection of existing high quality state waters and restoration of all other state waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them. The adoption of water quality standards is mandated by § 61.1-44.15(3) of the Code of Virginia which authorizes the State Water Control Board to establish water quality standards and policies for any state waters consistent with the purpose and general policy of the State Water Control Law and to modify, amend, or cancel any such standards or policies. In addition, federal regulations at 40 CFR 131.6 mandate that states include narrative and numerical water quality criteria to protect designated uses of state waters. Also 40 CFR 131.10 states that each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. States may adopt sub-categories of uses, for instance, to differentiate between cold water (trout) and warm water fisheries. The amendment to the water quality standards currently being considered is mandated in that it is necessary to properly designate Stony Creek and its tributaries as nutrient enriched waters in order to hold the line on nutrient enrichment in these waters via the point source total phosphorus control requirements in the Board's Policy for Nutrient Enriched Waters (9 VAC 25-40-10 et seq.)

Item 5. The proposed regulation does not exceed the specific minimum requirements of a legally binding state or federal mandate. Rather, the proposed regulation is essential in protecting the health, safety and welfare of the citizens of the Commonwealth. It will enhance the Department's ability to protect the water quality and living resources of Stony Creek for consumption of fish, recreation uses and conservation in general.

Although nutrients such as phosphorus are necessary for the growth of algae which are an essential part of the food chain, problems occur when an overabundance of these nutrients cause excessive growths of algae. Excessive amounts of aquatic plants, particularly algae, can discolor the water, create taste and odor problems for water supply managers, reduce water clarity and block sunlight from submerged aquatic vegetation. Another side effect of excessive algal blooms is impairment of primary contact recreation due to the aesthetically displeasing appearance of the water. The most serious problem resulting from algal growth occurs when the plants die and decay; at that time they can deplete the oxygen level of the water to the point where fish and other aquatic organisms cannot survive. It is important, therefore, that there are nutrient controls so that the symptoms of nutrient enrichment, i.e., the excessive growth of plants and fluctuating levels of dissolved oxygen, be avoided.

The proposed regulation is also essential for the efficient and economical performance of an important governmental function. The amendment will establish the appropriate standards for use in calculating permit limits for point source discharges under the Virginia Pollution Discharge Elimination System Permit program.

Item 6: The State Water Control Law at §62.1-44.15(3) states that the Board shall, at least once every three years, hold hearings for the purpose of reviewing the existing standards of quality, and, as appropriate, adopt new standards or modify, or cancel existing standards. Completing the next triennial review of the water quality standards by the year 2000 (which would include a review of this particular amendment) is a measurable goal for this regulation. Obtaining EPA approval on the

proposed amendment is another goal. A final goal would be for the industrial user of the stream in question (Rocco Farm Foods) to be issued a timely Virginia Pollutant Discharge Elimination System permit that contains the appropriate water quality-based limits for total phosphorus to protect the creek and its tributaries from the effects of nutrient enrichment.

Item 7: If the water is designated nutrient enriched a companion regulation, the Board's policy for Nutrient Enriched waters (9 VAC 25-40-10) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentrations of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a design flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus. The projected cost to the discharger of installing such a control system is undetermined.

Other Items Required by Executive Order Number Twenty-five (98) not included on Regulatory Review Checklist:

Changes the proposed regulation will implement, along with citations:

The amendments to the regulation are in the State's Water Board Standards Regulation at 9 VAC 25-260-350 and 9 VAC 25-260-400 to designate Stony Creek and its tributaries in Shenandoah County as a nutrient enriched water. If the water is designated nutrient enriched a companion regulation, the Board's policy for Nutrient Enriched waters (9 VAC 25-40-10) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentrations of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a design flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus.

A statement on how the agency has considered less burdensome and less intrusive alternatives:

In compliance with the State Water Control Board's Public Participation Guidelines, 9 VAC 25-10-10 et seq., the Department considered all alternatives which were considered to be less burdensome and less intrusive for achieving the essential purpose of the proposed regulation, and any other alternatives presented during the proposed rulemaking. One alternative was to leave the regulation unchanged. This may appear to be the least intrusive approach; however, such an alternative would not provide a control strategy for the potential water quality degradation in Stony Creek from a documented excess of phosphorus. Another alternative considered was to designate only the mainstem or a portion of the mainstem of Stony Creek as a nutrient enriched water but agency monitoring data indicate that the entire watershed should be protected. The approach taken is the least intrusive alternative.

A statement that the regulation is clear and understandable:

The agency has examined public comments and proposed the changes to the regulation as clearly as possible.

ITEM 4: Summary: Water Quality Standards consist of designated uses of the water body and narrative and numeric criteria that protect those uses by describing water quality in general terms and specifically as numerical limits for physical, chemical and biological characteristics of water.

The State Water Control Board proposes to amend the State's Water Board Standards Regulation at 9 VAC 25-260-350 and 9 VAC 25-260-400 to designate Stony Creek and its tributaries in Shenandoah County as a nutrient enriched water. If the water is designated nutrient enriched a companion regulation, the Board's policy for Nutrient Enriched waters (9 VAC 25-40-10) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentrations of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a design flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus.

ITEM: 6: Public Hearings: The Board will convene a public hearing at . . .

Question and Answer Period: A question and answer period will be held one half hour prior to the beginning of the public hearing at the same location. Department of Environmental Quality staff will be present to answer questions regarding the proposed action.

Accessibility to Person with Disabilities: The hearing will be held at a public facility believed to be accessible to persons with disabilities. Any persons with questions on the accessibility of the facilities should contact Jean Gregory, Department of Environmental Quality, P. O. Box 10009, Richmond, VA 23240-0009, or by telephone at (804) 698-4113 or 1-800-592-5482 or TDD (804) 698-4161.

Persons needing interpreter services for the deaf must notify Ms. Gregory no later than . . .

ITEM 7: The agency requests comments on any aspect of the proposal and also on the costs and benefits of the proposal.

In compliance with the State Water Control Board's Public Participation Guidelines, 9 VAC 25-10-10 et. seq., the Department will consider all alternatives which are considered to be less burdensome and less intrusive for achieving the essential purpose of the proposed regulation, and any other alternatives presented during the proposed rulemaking. Several alternatives have already been considered. One alternative was to leave the regulation unchanged. This may appear to be the least intrusive approach; however, such an alternative would not provide a control strategy for the potential water quality degradation in Stony Creek from an already documented excess of phosphorus.

There may be other less intrusive alternatives to consider. For example, other alternatives would be to designate only the mainstem or a portion of the mainstem of Stony Creek as a nutrient enriched water.

ITEM 9: Other Pertinent Information: The Department has conducted analyses on the proposed action related to basis, substance, issues, need, estimated impacts, applicable federal requirements and alternative approaches and schedule for reevaluation. These analyses as well as copies of the amendments may be viewed at the Department of Environmental Quality, Valley Regional Office, 4411 Early Road, Harrisonburg, VA 22801 or obtained from Jean Gregory, Department of Environmental Quality, P. O. Box 10009, Richmond, VA 23240-0009, or by e-mail at jwgregory@deq.state.va.us

or by telephone at (804) 698-4113 or toll free at 1-800-592-5482 or TDD (804) 698-4161.

SUMMARY:

Water Quality Standards consist of designated uses of the water body and narrative and numeric criteria that protect those uses by describing water quality in general terms and specifically as numerical

limits for general, chemical and " characteristics of water.

The State Water Control Board proposes to amend the State's Water Board Standards Regulation at 9 VAC 25-260-350 and 9 VAC 25-260-400 to designate Stony Creek and its tributaries in Shenandoah County as a nutrient enriched water. If the water is designated nutrient enriched a companion regulation, the Board's policy for Nutrient Enriched waters (9 VAC 25-40-10) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentrations of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a design flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus.

STATEMENT OF BASIS, PURPOSE, SUBSTANCE, ISSUES AND IMPACTS

BASIS:

§ 62.1-44.15(3a) of the Code of Virginia, as amended, authorizes the State Water Control Board to

establish water quality standards and policies for any State waters consistent with the purpose and general policy of the State Water Control Law, and to modify, amend or cancel any such standards or policies established. Such standards shall be adopted only after a hearing is held and the Board takes into consideration the economic and social costs and benefits which can reasonably be expected to be obtained as a result of the standards as adopted, modified or canceled.

PURPOSE: Amendments to the Water Quality Standards (9 VAC 25-260-350 and 9 VAC 25-260-400 section 6) are proposed to designate Stony Creek and its tributaries as nutrient enriched waters in order to hold the line on nutrient enrichment in these waters via the point source total phosphorus control requirements in the Board's Policy for Nutrient Enriched Waters (9 VAC 25-40-10 et seq.).

The proposed regulation is essential in protecting the health, safety and welfare of the citizens of the Commonwealth. It will enhance the Department's ability to protect the water quality and living resources of Stony Creek for consumption of fish, recreation uses and conservation in general.

Although nutrients such as phosphorus are necessary for the growth of algae which are an essential part of the food chain, problems occur when an overabundance of these nutrients cause excessive growths of algae. Excessive amounts of aquatic plants, particularly algae, can discolor the water, create taste and odor problems for water supply managers, reduce water clarity and block sunlight from submerged aquatic vegetation. Another side effect of excessive algal blooms is impairment of primary contact recreation due to the aesthetically displeasing appearance of the water. The most serious problem resulting from algal growth occurs when the plants die and decay; at that time they can deplete the oxygen level of the water to the point where fish and other aquatic organisms cannot survive. It is important, therefore, that there are nutrient controls so that the symptoms of nutrient enrichment, i.e., the excessive growth of plants and fluctuating levels of dissolved oxygen, be avoided.

The proposed regulation is also essential for the efficient and economical performance of an important governmental function. The amendment will establish the appropriate standards for use in calculating permit limits for point source discharges under the Virginia Pollution Discharge Elimination System Permit program.

SUBSTANCE: The Department's evaluation of agency in-stream nutrient monitoring data for Stony Creek for the period of July 6, 1994 through May 6, 1997 indicates nutrient enriched conditions. Consequently, the Department proposes that the watershed (Stony Creek and its tributaries) qualifies for regulatory designation as a nutrient enriched water. The basis for this determination was monitoring data for total phosphorus, which is one of three indicators of nutrient enrichment used for regulatory designation of waters as nutrient enriched.

If the water is designated nutrient enriched a companion regulation, the Board's policy for Nutrient Enriched waters (9 VAC 25-40-10) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentrations of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a design flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus.

ISSUES: Total phosphorus is one of three indicators of nutrient enrichment used for regulatory

designation of waters as nutrient enriched. The Department's monitoring data indicate that total phosphorus levels in this creek are above the nutrient enrichment trigger for this parameter. Several citizens at the public meeting were concerned that we were not basing the designation on nitrogen levels in the creek, but the technical advisory committee report which we use to evaluate whether a waterbody is nutrient enriched does not consider nitrogen to be an appropriate indicator of nutrient enrichment in flowing waters.

Several citizens have inquired whether designation of Stony Creek as a nutrient enriched water will automatically place it on the 303(d) list. 303(d) refers to a section of the federal Clean Water Act that, in conjunction with a 1992 federal regulation, requires the states to notify the public and submit a list to the Environmental Protection Agency of those waters which are not meeting water quality standards or are indicating declining quality and potential problems. There are five parts to the list and Total Maximum Daily Loads (which are usually called TMDLs) are to be developed for waters placed on parts 1 and 2 which are those waters identified through monitoring or modeling to not meet water quality standards. Waters designated as nutrient enriched in the standards regulation are both identified in the 305(b) report and listed in part IV of the 303(d) list as "fully supported but threatened" for nutrients. A threatened listing does not result in the development of TMDLs, which is Total Maximum Daily Loads, but its listing does draw careful attention to the waterbody and biological and chemical monitoring will continue in these waters to determine the impact.

IMPACT: If these waters are designated as nutrient enriched, a companion regulation, the Board's Policy for Nutrient Enriched Waters (9 VAC 25-40-10 et seq.) would require certain point source dischargers to these waters with a design flow of 1.0 MGD or greater and effluents containing phosphorus to maintain a monthly average total phosphorus concentration of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a flow of 1.3 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus. The other three point source dischargers in the watershed, Stony Creek Sanitary District, Shrine Mont, and Edinburg Sewage Treatment Plant, have design flows below that covered in the Policy and thus would not be required to install phosphorus controls. New dischargers with flows greater than or equal to 50,000 gallons per day who propose to discharge to these nutrient enriched waters would be required to meet the monthly average total phosphorus effluent limitation of 2 mg/l.

Because the amendment is specific to that area and not statewide in nature, Shenandoah County could be considered "particularly affected."

FROM THE FIRST NOTICE:

Item 1: The Department's evaluation of agency in-stream nutrient monitoring data for Stony Creek for the period of July 6, 1994 through May 6, 1997 indicates nutrient enriched conditions. Consequently, the Department proposes that the watershed (Stony Creek and its tributaries) qualifies for regulatory designation as a nutrient enriched water. The basis for this determination was monitoring data for total phosphorus, which is one of four indicators of nutrient enrichment used for regulatory designation of waters as nutrient enriched.

If the water is designated nutrient enriched, a companion regulation, the Board's Policy for Nutrient Enriched Waters (9 VAC 25-40-10 et.seq.) requires certain municipal and industrial dischargers with a design flow of 1.0 MGD or greater and with effluents containing phosphorus to maintain a monthly average total phosphorus concentration of 2 milligrams per liter (mg/l) or less. Rocco Farm Foods near Edinburg - based on a flow of 1.005 MGD - would be the only point source discharger impacted by this regulatory requirement to install a phosphorus removal system to control total phosphorus.

Item 2: Statutory authority for promulgating this amendment can be found under § 62.1-44.15(3a). This regulation is mandated by State law as cited above and § 62.1-44.4 and 62.1-44(15)(14) and federal regulation under 40 CFR 131. The federal regulation mandates that the states must, at a minimum, include narrative and numerical water quality criteria to protect designated uses and an antidegradation policy. The State law provides for antidegradation of high quality waters and preservation and protection of uses of State waters as well as providing the Board the authority to establish water quality standards and policies for any State waters consistent with the purpose and general policy of the State Water Control Law, and to modify, amend, or cancel any such standards or policies. Section 62.1-44(15)(14) gives the Board the authority to establish requirements for the treatment of sewage.

Item 3: The contemplated proposed regulation is essential in protecting the health, safety and welfare of the citizens of the Commonwealth. It will enhance the Department's ability to protect the water quality and living resources of Stony Creek for consumption of fish, recreation uses and conservation in general.

Although nutrients such as phosphorus are necessary for the growth of algae which are an essential part of the food chain, problems occur when an overabundance of these nutrients cause excessive growths of algae. Excessive amounts of aquatic plants, particularly algae, can discolor the water, create taste and odor problems for water supply managers, reduce water clarity and block sunlight from submerged aquatic vegetation. Another side effect of excessive algal blooms is impairment of primary contact recreation due to the aesthetically displeasing appearance of the water. The most serious problem resulting from algal growth occurs when the plants die and decay; at that time they can deplete the oxygen level of the water to the point where fish and other aquatic organisms cannot survive. It is important, therefore, that there are nutrient controls so that the symptoms of nutrient enrichment, i.e., the excessive growth of plants and fluctuating levels of dissolved oxygen, be avoided.

The contemplated proposed regulation is also essential for the efficient and economical performance of an important governmental function. It contains the water quality standards that are used in calculating permit limits for point source discharges.

Item 4: In compliance with the State Water Control Board's Public Participation Guidelines, § 9 VAC 25-10-10 et. seq., the Department will consider all alternatives which are considered to be less burdensome and less intrusive for achieving the essential purpose of the proposed regulation, and any other alternatives presented during the proposed rulemaking. Several alternatives have already been considered. One alternative was to leave the regulation unchanged. This may appear to be the least intrusive approach; however, such an alternative would not provide a control strategy for the potential water quality degradation in Stony Creek from an already documented excess of phosphorus.

There may be other less intrusive alternatives to consider. For example, other alternatives would be to designate only the mainstem or a portion of the mainstem of Stony Creek as a nutrient enriched water.