



Virginia
Regulatory
Town Hall

Proposed Regulation Agency Background Document

Agency Name:	Department of Environmental Quality
VAC Chapter Number:	9 VAC 25-401
Regulation Title:	Sewage Treatment in the Dulles Area Watershed
Action Title:	- Adopt New Regulation (9 VAC 25-401) - Repeal of Existing Regulation (9 VAC 25-400)
Date:	

This information is required pursuant to the Administrative Process Act (§ 9-6.14:9.1 *et seq.* of the *Code of Virginia*), Executive Order Twenty-Five (98), Executive Order Fifty-Eight (99), and the *Virginia Register Form, Style and Procedure Manual*. Please refer to these sources for more information and other materials required to be submitted in the regulatory review package.

Summary*

Please provide a brief summary of the proposed new regulation, proposed amendments to an existing regulation, or the regulation proposed to be repealed. There is no need to state each provision or amendment or restate the purpose and intent of the regulation; instead give a summary of the regulatory action and alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation.

This regulatory action concerns the update and rewrite of 9 VAC 25-400, Policy for Waste Treatment and Water Quality Management for the Dulles Area Watershed. The State Water Control Board originally adopted this regulation in 1975. The existing regulation is being repealed and a new regulation is being adopted because the proposed update and rewrite is extensive. The title for the proposed regulation is Sewage Treatment in the Dulles Area Watershed.

The purpose of the regulation is to provide adequate sewage treatment for the affected area and simultaneously protect water quality at drinking water intakes on the Potomac River. The affected area is primarily northwestern Fairfax County, eastern Loudoun County, and the very north west corner of Arlington County. The regulation limits the number of sewage treatment

plants discharging to surface waters within the defined watersheds to two and requires state-of-the-science effluent requirements for the two plants.

The purpose of the update and rewrite is twofold:

1. To rewrite the regulation using regulatory language that is clear and concise so that all conditions are easily understood.
2. To update the technical requirements of the required effluent limitations so that they accurately reflect the state-of-the-science and the changes that have occurred to water quality regulations over the past 25 years.

Basis*

Please identify the state and/or federal source of legal authority to promulgate the regulation. The discussion of this statutory authority should: 1) describe its scope and the extent to which it is mandatory or discretionary; and 2) include a brief statement relating the content of the statutory authority to the specific regulation. In addition, where applicable, please describe the extent to which proposed changes exceed federal minimum requirements. Full citations of legal authority and, if available, web site addresses for locating the text of the cited authority must be provided. Please state that the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the proposed regulation and that it comports with applicable state and/or federal law.

The regulation was adopted pursuant to authority vested in the State Water Control Board by 62.1-44.15(3) and 62.1-44.15(13) of the State Water Control Law. 62.1-44.15(3a) gives the State Water Control Board the authority to establish standards of quality and policies for state waters. 62.1-44.15(13) gives the Board authority to establish policies for area-wide water quality plans and to consider the feasibility of combined sewage treatment plants with consultation from local authorities.

There is no federal or state mandate for this regulation. The requirements of the regulation exceed the minimum requirements of the Clean Water Act and the State Water Control Law.

The regulation is similar to a water quality management plan in that it limits the number of sewage treatment plants. Federal regulations require states to have a continuing planning process for water quality management of major river basins or waterbodies (40 CFR 130.5). However, federal regulations do not specify the level of detail or requirements that must be in a plan. The requirements and conditions in the regulation are very detailed, restrictive, and stringent.

The following aspects of the regulation exceed the requirements that have been set for the state generally:

- The number of sewage treatment plants are limited to two and ownership is specified;
- The two sewage treatment plants must be a minimum of 10 miles upstream of a drinking water intake or proposed intake;

- The effluent limitations are very stringent, far exceeding what might otherwise be required to protect water quality standards;

The Office of the Attorney General has certified that the State Water Control Board has the statutory authority to promulgate the proposed regulation and the it comports with applicable state and federal law.

Purpose*

Please provide a statement explaining the need for the new or amended regulation. This statement must include the rationale or justification of the proposed regulatory action and detail the specific reasons it is essential to protect the health, safety or welfare of citizens. A statement of a general nature is not acceptable, particular rationales must be explicitly discussed. Please include a discussion of the goals of the proposal and the problems the proposal is intended to solve.

The regulation addresses a significant public health, safety, and welfare issue. Its purpose is to provide additional protection of water quality in proximity to the drinking water intakes located on the Potomac River and on Goose Creek. The streams draining the Dulles area watersheds enter the Potomac River near the withdrawal points for three major Washington area water utilities, Washington Aqueduct Division, Fairfax County Water Authority, and Washington Suburban Sanitary Commission. These utilities serve over 3 million people in Washington D.C. and its surrounding suburbs in Northern Virginia and Maryland.

Sewage treatment discharges located upstream of drinking water intakes are not uncommon in Virginia. The Department of Health, Office of Water Programs (VDH) usually requires a minimum of 5 miles separation between a discharge and intake. When a discharge does occur to a public water supply the Department of Environmental Quality (DEQ) applies additional water quality standards (9 VAC 25-260-140) and may require additional wastewater treatment.

The net goal of the regulation is to provide additional assurance that the drinking water supply is protected. The affected jurisdictions believe this regulation provides an added level of protection above the statewide water quality standards used by DEQ in preparing VPDES permits to protect water quality.

Substance*

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement providing detail of the regulatory action's changes.

The DEQ received comments that the regulation be changed for two reasons.

1. To rewrite it so that it reads like a regulation. The current regulation reads like a planning document with language that requires much interpretation of its intent and instruction. As

written, it is difficult for DEQ to implement. A draft version of the new regulation contains clear and concise language.

2. To update the effluent limits prescribed by the regulation so that they reflect state-of-the-science and the experiences gained over the past 25 years in water quality management. The effluent limits in the current version of the regulation were adopted over 25 years ago and they are outdated and unachievable with even the most advanced treatment technologies. Those effluent limits do not reflect the current state of wastewater treatment and water quality management and need to be changed to match the requirements of the Occoquan Policy, 9 VAC 25-410, a regulation that has worked well in protecting the Occoquan reservoir drinking water supply for the past 25 years. The draft version of the new proposed regulation contains the effluent limitations prescribed by the Occoquan Policy.

Issues*

Please provide a statement identifying the issues associated with the proposed regulatory action. The term "issues" means: 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 include a sentence to that effect.

The primary advantage of the regulation is added protection to the drinking water supply. It is generally accepted that a few large regional sewage treatment plants provide better assurance of water quality protection than multiple smaller plants. The disadvantage is that the prohibition of other sewage treatment plants that discharge to surface waters is counter to how most of the state is managed and removes an option often used to provide sewage treatment. The regulation does not provide any advantage or disadvantage to DEQ.

Locality Particularly Affected*

Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.

The following localities have surface waters within the defined watersheds:

- | | | |
|------------------|------------------|----------------------|
| Arlington County | City of Fairfax | City of Falls Church |
| Loudoun County | Town of Leesburg | Town of Herndon |
| Fairfax County | Town of Vienna | |

Public Participation*

Please include a statement that in addition to any other comments on the proposal, the agency is seeking comments on the costs and benefits of the proposal.

In addition to any other comments, the State Water Control Board is seeking comments on the costs and benefits of the proposed regulation and the impacts of the regulation on farm or forest lands.

Anyone wishing to submit written comments for the public comment file may do at the public hearing or by mail. Written comments should be signed by the commenter and include the name and address of the commenter. In order to be considered the comments must be received by the close of the comment period. Oral comments may be submitted at the public hearing.

Fiscal Impact

Please identify the anticipated fiscal impacts and at a minimum include: (a) the projected cost to the state to implement and enforce the proposed regulation, including (i) fund source / fund detail, (ii) budget activity with a cross-reference to program and subprogram, and (iii) a delineation of one-time versus on-going expenditures; (b) the projected cost of the regulation on localities; (c) a description of the individuals, businesses or other entities that are likely to be affected by the regulation; (d) the agency's best estimate of the number of such entities that will be affected; e) the projected cost of the regulation for affected individuals, businesses, or other entities; and f) an estimate of the impact of the proposed regulation upon small businesses as defined in § 9-199 of the Code of Virginia or organizations in Virginia.

The cost to the state to implement the proposed regulation will remain unchanged from the existing regulation. All costs to the state will be part of the implementation of the VPDES permit program and will neither increase nor decrease those overall costs.

The cost of the proposed regulation to the affected localities will be unchanged from the current regulation. These costs should be negligible since the state implements the VPDES program.

The regulation will only affect those individuals, businesses, and other entities that might seek to obtain a VPDES permit for a sewage treatment system. Such individuals may instead have to seek a VPA permit from DEQ or an on-site permit from VDH for a non-discharging sewage treatment system. Because most of the affected area is already sewered, or in the process of being sewered, the number of individuals affected is expected to be small. Typically, DEQ staff will meet with 5 or so individuals in any given year that might be seeking to construct a sewage treatment plant in the affected area. Should they proceed with their plans, the costs for a non-discharging sewage treatment system are similar to those of a discharging system.

There are a couple of owners of small sewage treatment plants that currently have a sewage treatment plant discharges to the affected surface waters. The draft regulation contains language that grandfathers these facilities and they will be unaffected by the changes to the regulation.

Detail of Changes

Please detail any changes, other than strictly editorial changes, that are being proposed. Please detail new substantive provisions, all substantive changes to existing sections, or both where appropriate. This statement should provide a section-by-section description - or cross-walk - of changes implemented by the proposed regulatory action. Where applicable, include citations to the specific sections of an existing regulation being amended and explain the consequences of the proposed changes.

As stated above, the existing regulation needs to be updated and rewritten. Because the editing is so extensive, it was decided to repeal the existing regulation in its entirety and adopt a completely new version of the regulation. The following details the proposed changes.

- The proposed regulation clearly identifies the watersheds subject to the regulation.
- The proposed regulation is divided into five distinct regulatory sections that are clearly discernable. The existing regulation has only one section, 9 VAC 25-400-10.
- The proposed regulation clearly sets forth the condition that there shall only be two STPs discharging to the affected waters.
- The proposed regulation removes the non-regulatory background discussion and staff recommendation language in the existing regulation since this information is no longer applicable.
- The proposed regulation removes Attachment B - Interim Plan of the existing regulation since this language is no longer applicable.
- The most important and salient requirements of the existing regulation are in Attachment A - Long Range Policy. These requirements are maintained and made more clear in the proposed regulation. These requirements are:
 - The prohibition of new STPs discharging to surface waters within the defined watersheds except for two regional STPs.
 - The requirements that the effluent be at least 10 miles from the drinking water intake and meet very stringent maximum effluent limits for the two regional plants.
- The proposed regulation sets forth the effluent limits for the two STPs. These effluent limits are modified from the existing regulation. The effluent limits in the proposed regulation are the limits prescribed in the Occoquan Policy, 9 VAC 25-410. These changes are proposed to use the experience gained from the Occoquan Policy and to eliminate those limits in the existing regulation that are considered unachievable.
- The proposed regulation requires the owners of the two STPs to know the nitrate levels in the vicinity of the Fairfax County Water Authority intake on the Potomac River and minimize any impacts the effluents are having on those nitrate levels.
- The proposed regulation retains only those reliability, operation and maintenance, and design requirements that are not fully required by Virginia's Sewage Collection and Treatment Regulation; the other requirements in the existing regulation have been removed.
- The proposed regulation includes two exception clauses to the prohibition of other discharges. These two clauses allow (1) grandfathering of existing STPs that discharge to surface waters and cannot hook-up to a regional plant and (2) entities with failing septic drainfields to obtain

permits for a discharging STP when there are no other sewage treatment alternatives. This latter clause is to avoid having to close down a business or evicting homeowners from their homes.

- The proposed regulation retains only those reliability requirements for pump stations connected to the regional STPs that are not fully required by Virginia's Sewage Collection and Treatment Regulation.
- The proposed regulation removes the restriction on the initial capacity of the existing regulation.
- The proposed regulation requires the owners of the two STPs to conduct instream monitoring to determine what affects their effluent is having on downstream water quality.
- The proposed regulation does not include the non-point source elements of the existing regulation since these elements are redundant to the regulations the state has adopted for control of non-point sources.

Alternatives

Please describe the specific alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action.

There are three alternatives with regard to this regulatory action.

1. Leave the existing regulation in place with no changes.

This option is not acceptable since the existing regulation is difficult to interpret and implement and has regulatory and technical deficiencies that are inappropriate for a regulation.

2. Repeal the existing regulation without adopting a revised regulation.

This option was considered but DEQ recognizes that the regulation has value in that the localities have indicated their preference for the regulation. And since the proposed regulation does not conflict with other State Water Control Board regulations, DEQ has no objections to its update and rewrite.

3. Repeal the existing regulation and rewrite it as a new regulation.

As discussed above, this is the preferred option.

Public Comment

Please summarize all public comment received during the NOIRA comment period and provide the agency response.

The following comments were received during the public comment period for the Notice of Intended Regulatory Action.

1. Necessity of the regulation

One commenter questioned the need and benefits in continuing the regulation since the State Water Control Board and the Virginia Department of Health have since adopted numerous other regulations to manage sewage treatment and water quality.

DEQ believes the regulation has value and will continue to support the regulation so long as it has the backing of the affected jurisdictions and does not conflict with other state regulations.

2. Encouragement of continued gains in wastewater treatment

One commenter suggested the new regulation contain language encouraging continued gains in the treatment of wastewaters.

It is DEQ's intention to only place enforceable language into the revised Policy. The limits in the draft regulation are very stringent and there are other incentives to encourage wastewater authorities to continue progress in advancing the science of wastewater treatment.

3. Non-Point Source (NPS) Pollution Language

One person commented that the new regulation should contain language reducing non-point source pollution and a plan to develop an integrated comprehensive plan to control non-point source pollution.

The Policy was written prior to the adoption of most of the state's point source regulations. NPS controls are primarily handled by the Department of Conservation and Recreation and not the State Water Control Board, and as such, DEQ believes it is best that the revised regulation not address NPS issues.

4. Support for a new regulation

The Fairfax County Water Authority expressed their support for updating and rewriting the regulation.

5. Clear Language

The Fairfax County Water Authority commented that the new regulation should contain clear language that is easy to interpret and implement.

The language of the proposed regulation is clear.

6. State-of-the-Art Wastewater Treatment

The Fairfax County Water Authority commented that the new regulation should contain the effluent requirements of the Occoquan Policy (9 VAC 25-410).

The proposed regulation contains the same effluent limits as the Occoquan Policy.

7. Monitoring Program per Occoquan Policy

The Fairfax County Water Authority commented that the new regulation should contain language requiring an independent monitoring program like that of the Occoquan Policy.

The proposed regulation requires the owners of the regional STPs to develop and conduct an instream monitoring program but the language does not mimic the Occoquan language. DEQ's position is that the regulation should not contain language that is difficult to enforce.

8. Plant Reliability and Redundancy

The Fairfax County Water Authority commented the new regulation should require the highest standards for plant reliability and redundancy.

The proposed regulation contains language addressing reliability for the plants and pump stations in addition to that required by the Virginia Sewage Collection and Treatment Regulation.

Clarity of the Regulation

Please provide a statement indicating that the agency, through examination of the regulation and relevant public comments, has determined that the regulation is clearly written and easily understandable by the individuals and entities affected.

As discussed above, one of the prime objectives for revising the regulation is to make the requirements clear and easy to interpret. The proposed regulation achieves that goal.

Periodic Review

Please supply a schedule setting forth when the agency will initiate a review and re-evaluation to determine if the regulation should be continued, amended, or terminated. The specific and measurable regulatory goals should be outlined with this schedule. The review shall take place no later than three years after the proposed regulation is expected to be effective.

The regulation will be reviewed every three years. Comments will be sought from the affected localities to assure that they still support the regulation and have no objections to it.

Family Impact Statement

Please provide an analysis of the proposed regulatory action that assesses the potential impact on the institution of the family and family stability including the extent to which 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 existing and proposed regulations have no impact on the family.