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Proposed Regulation Agency Background Document

Agency name	State Water Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	9VAC25-210 (Primary) 9VAC25-610 (Secondary)
VAC Chapter title(s)	“Virginia Water Protection Permit Program Regulation” (Primary) “Groundwater Withdrawal Regulations” (Secondary)
Action title	Amendments establishing criteria for (i) water auditing plans and (ii) leak detection and repair plans, and requiring any water withdrawal permit application to include (i) a water auditing plan and (ii) a leak detection and repair plan.
Date this document prepared	October 26, 2022

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

Brief Summary

Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.

This regulatory proposal will establish requirements as directed by Chapter 100 of the 2021 Special Session I Acts of Assembly. The regulatory change amends the existing Virginia Water Protection Permit Program Regulation (9VAC25-210) and the Groundwater Withdrawal Regulations (9VAC25-610) to require that any application for a permit to withdraw surface water (9VAC25-210) or groundwater (9VAC25-610) include (i) a water auditing plan and (ii) a leak detection plan.

Acronyms and Definitions

Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.

"Board" means the State Water Control Board. When used outside the context of the promulgation of regulations, including regulations to establish general permits "board" means the Department of Environmental Quality.

"Groundwater" means any water, except capillary moisture, beneath the land surface in the zone of saturation or beneath the bed of any stream, lake, reservoir, or other body of surface water wholly or partially within the boundaries of the Commonwealth, whatever the subsurface geologic structure in which such water stands, flows, percolates, or otherwise occurs.

"Permit" means either: (i) an individual permit issued by the department or a general permit issued as a regulation adopted by the board under § 62.1-44.15:20 of the Code of Virginia that authorizes a surface water withdrawal, or; (ii) a groundwater withdrawal permit issued under the Groundwater Management Act of 1992 permitting the withdrawal of a specified quantity of groundwater under specified conditions in a groundwater management area.

"Surface Water Withdrawal" means a removal or diversion of surface water in Virginia or from the Potomac River for consumptive or non-consumptive use thereby altering the instream flow or hydrologic regime of the surface water. Projects that do not alter the instream flow or that alter the instream flow but whose sole purpose is flood control or stormwater management are not included in this definition.

Mandate and Impetus

Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, "mandate" has the same meaning as defined in the ORM procedures, "a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part."

Chapter 100 of the 2021 Special Session I Acts of the Assembly directs the Board to establish requirements in regulation for (i) water auditing plans and (ii) leak detection and repair plans. This act provides that every application for a Virginia Water Protection Permit for a surface water withdrawal shall include (i) a water auditing plan and (ii) a leak detection and repair plan, that both plans shall comply with requirements established by the Board in regulations, that the Board shall approve such plans that comply with regulatory requirements, that once approved such plans shall be incorporated by reference as a condition in the Virginia Water Protection Permit, and that the Board shall not issue a Virginia Water Protection Permit for a surface water withdrawal without such approved plans. This act further provides that the water conservation and management plan for a groundwater withdrawal permit shall include (i) a water auditing plan and (ii) a leak detection and repair plan that complies with requirements established by the Board in regulations, that the Board shall approve any water conservation and management plan that complies with the applicable requirements, that once approved by the Board the water conservation and management plan shall be incorporated by reference as a condition in the groundwater withdrawal permit, and that the Board shall not issue a groundwater withdrawal permit, except as provided in § 62.1-260 or 62.1-261 or subsection H of § 62.1-266, without an approved water conservation and management plan.

Virginia's water resources are under increasing pressure because of population growth, economic development, and climate change. According to information provided by localities pursuant to the Local and Regional Water Supply Planning Regulation, many localities in Virginia are not achieving industry standards for water loss. Some localities could not account for as much as 25 percent of their potable water supplies. This loss can be due to leaks in the distribution system, within the individual customer's

system, or a problem with metering. In addition to wasting money to treat water that never reaches a beneficial use or a paying customer, inefficient use of water strains limited natural resources. Both surface water and groundwater resources are constrained in various locations around the Commonwealth. The implementation of these requirements by all permitted water users through surface and groundwater withdrawal permits improves the efficiency and effectiveness of water use.

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.

Section 62.1-44.15:22 A 2 of the Code of Virginia, as amended and reenacted by Chapter 100 of the 2021 Special Session I Acts of Assembly, provides that every application for a Virginia Water Protection Permit for a surface water withdrawal shall include a (i) water auditing plan and (ii) leak detection and repair plan. Both such plans shall comply with requirements established by the Board in regulations. The Board shall approve every water auditing plan and leak detection and repair plan that complies with such regulatory requirements. Once approved by the Board, such water auditing plans and leak detection and repair plans shall be incorporated by reference as a condition in the Virginia Water Protection Permit. The Board shall not issue a Virginia Water Protection Permit for a surface water withdrawal without an approved water auditing plan and an approved leak detection and repair plan.

Section 62.1-262 of the Code of Virginia, as amended and reenacted by Chapter 100 of the 2021 Special Session I Acts of Assembly, provides that any application for a groundwater withdrawal permit, except as provided in § 62.1-260 or 62.1-261 or subsection H of § 62.1-266, shall include a water conservation and management plan approved by the Board. The water conservation and management plan shall include (i) the use of water-saving plumbing as provided under the Uniform Statewide Building Code; (ii) a water-loss reduction program; (iii) a water-use education program; (iv) a water auditing plan that complies with requirements established by the Board in regulations; (v) a leak detection and repair plan that complies with requirements established by the Board in regulations; and (vi) mandatory reductions during water-shortage emergencies, including, where appropriate, ordinances prohibiting waste of water generally and providing for mandatory water-use restrictions, with penalties, during water-shortage emergencies. The Board shall approve any water conservation plan that complies with clauses (i) through (vi). Once approved by the Board, such water conservation and management plan shall be incorporated by reference as a condition in the groundwater withdrawal permit. The Board shall not issue a groundwater withdrawal permit, except as provided in § 62.1-260 or 62.1-261 or subsection H of § 62.1-266, without an approved water conservation and management plan.

Purpose

Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.

This regulatory change is explicitly required by the second enactment clause of Chapter 100 of the 2021 Special Session I Acts of Assembly. The provisions of Chapter 100 of the 2021 Special Session I Acts of Assembly have an effective date of 30 days after the adoption by the Board of the regulations to implement the provisions of the act. The development of these amendments will provide for the efficient use and conservation of surface water and groundwater resources for future uses and are necessary to

protect the health, safety, and welfare of citizens. There are significant water losses by permitted water withdrawal users that lack adequate water auditing and leak detection and repair plans. Requiring enforceable water auditing and leak detection and repair plans achieves greater long-term conservation and sustainability of finite water resources.

Substance

Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the “Detail of Changes” section below.

Amendments to 9VAC25-210 include requirements for (i) water auditing plans and (ii) leak detection and repair plans, as well as amendments to conform the regulation to the requirements in Section 62.1-44.15:22 A 2 of the Code of Virginia, as amended and reenacted by Chapter 100 of the 2021 Special Session I Acts of Assembly.

Amendments to 9VAC25-610 include requirements for (i) water auditing plans and (ii) leak detection and repair plans, as well as amendments to conform the regulation to the requirements in Section 62.1-262 of the Code of Virginia, as amended and reenacted by Chapter 100 of the 2021 Special Session I Acts of Assembly.

Issues

Identify the issues associated with the regulatory change, 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, include a specific statement to that effect.

The Groundwater Withdrawal Regulations (9VAC25-610) currently contain an application requirement to submit a water conservation and management plan that includes a water loss reduction program. The proposed amendments supplement and provide additional transparency regarding the expectations for the existing water conservation and management plan. The Virginia Water Protection Permit Program Regulation (9VAC25-210), which applies to permitted surface water withdrawals, currently contains application requirements to provide information on existing water conservation measures and projected demand with and without conservation measures. The proposed amendments bolster existing requirements with enforceable specifications to implement water audit plans and leak detection and repair plans that strengthen existing water conservation requirements for all permitted users who withdraw groundwater and surface water.

Advantages of the proposed regulatory change for the public, including private citizens or businesses, include water loss audit plan and leak detection and repair plan requirements for groundwater and surface water withdrawals that will provide for the efficient use and conservation of the resource. Water audit plans that capture water loss in a system will be used to inform leak detection and repair plans, thereby promoting efficiency and addressing needs for infrastructure upgrades before catastrophic leaks occur. Requiring individual groundwater withdrawal permits and surface water withdrawal permits to include these plans will help ensure that both sources of water are conserved for future uses, which is necessary to protect the health, safety, and welfare of citizens. Potential disadvantages of the proposed regulatory change for the public, including private citizens or businesses, could include the need to install meters where they do not currently exist in water systems, the need to hire consultants to conduct water audits, increased time spent on the water withdrawal application process, and time spent reporting water audit results and updating leak detection and repair plans which are informed by the audit results.

Advantages to the agency and Commonwealth include the potential to effectively track the amount of water loss occurring in water withdrawal systems which will enhance water supply planning efforts. Potential disadvantages could be increased staff time spent reviewing water loss audit plans and leak detection and repair plans.

Advantages to the regulated community, including public water supply, commercial and industrial users, and agricultural users, are consistent requirements for all permitted users to address water loss and the need for leak detection and repair. The intent of the water audit process, in addition to addressing water loss, is to inform the leak detection and repair plan which will be updated to address current and future infrastructure repairs. This requirement ensures an on-going cycle of information gathering and plan updating which will achieve greater long-term conservation of the resource.

Requirements More Restrictive than Federal

Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.

There are no applicable federal requirements.

Agencies, Localities, and Other Entities Particularly Affected

Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. “Particularly affected” are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.

Other State Agencies Particularly Affected

All permittees that are state agencies will be affected by this regulatory change. There are Department of Corrections’ facilities and State Parks (Department of Conservation and Recreation) that have active water withdrawal permits. The Department of Veterans Services and the Virginia Institute of Marine Sciences also currently have water withdrawal permits. If the proposed regulatory amendments are enacted these facilities would have to comply with the requirement to submit a water auditing plan and a leak detection and repair plan with their future water withdrawal applications. These facilities would also have to comply with those plans because the plans would be incorporated into the permit as permit conditions designed to reduce water loss and to increase efficient use of water. This could result in costs necessary to comply with the permit conditions authorized by this regulation.

Localities Particularly Affected

All permittees that are counties, cities, and incorporated towns will be affected by this regulatory change, but none are expected to be particularly affected. Out of approximately 370 active Groundwater Withdrawal permits, there are 165 municipal permittees. Out of approximately 114 active Virginia Water Protection surface water withdrawal permits, there are 55 municipal permittees. If the proposed regulatory amendments are enacted these permittees would have to comply with the requirement to submit a water auditing plan and a leak detection and repair plan with their future water withdrawal applications. These

permittees would also have to comply with those plans because the plans would be incorporated into the permit as permit conditions designed to reduce water loss and to increase efficient use of water. This could result in costs necessary to comply with the permit conditions authorized by this regulation.

Other Entities Particularly Affected

All permittees that are other entities (agricultural, commercial, and industrial) will be affected by this regulatory change, but none are expected to be particularly affected. Out of approximately 370 active Groundwater Withdrawal permits, there are 72 agricultural, 68 commercial, 24 industrial, 33 irrigation, 3 manufacturing, 1 nuclear power, and 4 fossil fuel plant permittees. Out of approximately 114 active Virginia Water Protection surface water withdrawal permits, there are 2 agricultural, 26 commercial, 9 fossil fuel power, 8 hydropower, 4 irrigation, 1 manufacturing, 7 mining, and 2 nuclear power permittees. If the proposed regulatory amendments are enacted these permittees would have to comply with the requirement to submit a water auditing plan and a leak detection and repair plan with their future water withdrawal applications. These permittees would also have to comply with those plans because the plans would be incorporated into the permit as permit conditions designed to reduce water loss and to increase efficient use of water. This could result in costs necessary to comply with the permit conditions authorized by this regulation.

For purposes of "Locality Particularly Affected" under the Board's statutes

There is no locality particularly affected under the Board's statutes.

Economic Impact

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits) anticipated to result from the regulatory change. When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo.

Impact on State Agencies

<p><i>For your agency:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including: a) fund source / fund detail; b) delineation of one-time versus on-going expenditures; and c) whether any costs or revenue loss can be absorbed within existing resources.</p>	<p>It is anticipated that any fiscal impact on the Department as a result of these regulations can be absorbed within existing resources.</p>
<p><i>For other state agencies:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>There are Department of Corrections' facilities and State Parks (Department of Conservation and Recreation) that have active water withdrawal permits. The Department of Veterans Services and the Virginia Institute of Marine Sciences also currently have water withdrawal permits. If the proposed regulatory amendments are enacted these facilities would have to comply with the requirement to submit a water auditing plan and a leak detection and repair plan with their future water withdrawal applications. This could result in costs necessary to comply with the permit conditions authorized by this regulation.</p>

	<p>The requirement to submit a water loss audit plan and a report detailing the results of the water loss audit is an on-going expenditure for state agencies with water withdrawal permits, but it is possible that some facilities currently track the flow of water through their facilities and amending their current practices to the new regulatory requirement will not be burdensome. The American Water Works Association (AWWA) water loss audit software is the water loss audit methodology recommended by the Department and is free to use.</p> <p>The requirement to submit a leak detection and repair plan is an on-going expenditure, however the manner in which the water loss audit results inform the leak detection and repair will vary greatly. There could be immediate costs related to leak detection and repair, or there could be the potential for future costs.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The requirements for water audit plans and leak detection and repair plans should result in increased resource conservation for future uses which is a benefit to all agencies overall.</p>

Impact on Localities

<p>Projected costs, savings, fees, or revenues resulting from the regulatory change.</p>	<p>Out of approximately 370 active Groundwater Withdrawal permits, there are 165 municipal permittees. Out of approximately 114 active Virginia Water Protection surface water withdrawal permits, there are 55 municipal permittees. If the proposed regulatory amendments are enacted these permittees would have to comply with the requirement to submit a water auditing plan and a leak detection and repair plan with their future water withdrawal applications.</p> <p>The requirement to submit a water loss audit plan and a report detailing the results of the water loss audit is an on-going expenditure for localities with water withdrawal permits, but it is likely that some facilities currently track the flow of water through their facilities and amending their current practices to the new regulatory requirement will not be burdensome. The AWWA water loss audit software is the water loss audit methodology recommended by the Department and is free to use. Input provided by members of the Regulatory Advisory Panel (RAP) indicated that estimates for water audit plan development could cost roughly \$5,000 and conducting water loss</p>
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	<p>audits over the permit term could cost roughly \$75,000. An additional cost of hiring a consultant to conduct water loss audits could cost roughly \$20,000/year.</p> <p>The requirement to submit a leak detection and repair plan is an on-going expenditure, however the manner in which the water loss audit results inform the leak detection and repair will vary greatly. There could be immediate costs related to leak detection and repair, or there could be the potential for future costs. Input provided by the RAP indicated that rough estimates for the development of the leak detection and repair plan could be \$5,000 and initial implementation of the plan could range from \$40,000-\$50,000.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The requirements for water audit plans and leak detection and repair plans should result in increased water use efficiency and increased water available for future uses which is a benefit to all users overall.</p>

Impact on Other Entities

<p>Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.</p>	<p>Other entities that are likely to be affected by the regulatory change are agricultural, commercial, and industrial users who are permitted to withdraw groundwater and surface water.</p>
<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <ul style="list-style-type: none"> a) is independently owned and operated, and; b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million. 	<p>Out of approximately 370 active Groundwater Withdrawal permits, there are 72 agricultural, 68 commercial, 24 industrial, 33 irrigation, 3 manufacturing, 1 nuclear power, and 4 fossil fuel plant permittees. Out of approximately 114 active Virginia Water Protection surface water withdrawal permits, there are 2 agricultural, 26 commercial, 9 fossil fuel power, 8 hydropower, 4 irrigation, 1 manufacturing, 7 mining, and 2 nuclear power permittees.</p>
<p>All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to:</p> <ul style="list-style-type: none"> a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses; b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change; c) fees; d) purchases of equipment or services; and e) time required to comply with the requirements. 	<p>The requirement to submit a water loss audit plan and a report detailing the results of the water loss audit is an on-going expenditure for localities with water withdrawal permits, but it is likely that some facilities currently track the flow of water through their facilities and amending their current practices to the new regulatory requirement will not be burdensome. The AWWA water loss audit software is the water loss audit methodology recommended by the Department for private water supplies and is free to use. Input provided by members of the RAP indicated that cost estimates to conduct a water loss audit every three years and submit a report of the results of the audits may be \$5000 for agriculture and</p>

	<p>potentially as much as \$200,000 for a power provider (total over a 15 year permit term) but this would depend on the facility.</p> <p>The requirement to submit a leak detection and repair plan, included in the reporting of the water loss audit plan, is an on-going expenditure, however the manner in which the water loss audit results inform the leak detection and repair will vary greatly. There could be immediate costs related to leak detection and repair, or there could be the potential for future costs. Input provided by the RAP indicated that rough estimates for the leak detection and repair plan may be \$5000 for agriculture and potentially as much as \$300,000 for a power provider (total over a 15 year permit term) but this would depend on the facility.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The requirements for water audit plans and leak detection and repair plans should result in increased water use efficiency and increased water available for future uses which is a benefit to all users overall.</p>

Alternatives to Regulation

Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.

The amendments are mandated by Chapter 100 of the 2021 Special Session I Acts of Assembly and no alternative approaches were identified that met the requirements of state law.

This analysis has been reported on the ORM Economic Impact form in Table 1b and Table 4.

Regulatory Flexibility Analysis

Consistent with § 2.2-4007.1 B of the Code of Virginia, 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) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing 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 regulatory change.

As mandated by Chapter 100 of the 2021 Special Session I Acts of Assembly, the proposed regulation requires every application for a water withdrawal to include a water auditing plan and a leak detection and

repair plan. State law does not provide an exemption for small businesses from the requirement for a water auditing plan and a leak detection and repair plan. In developing the proposed regulation, consideration was given to minimizing requirements on all applicants for water withdrawal permits including small businesses. The agency anticipates that implementation of the requirement to include water audit plans and leak detection and repair plans in applications for water withdrawal permits will have a minimal economic impact on individual small businesses. Out of approximately 370 active Groundwater Withdrawal permits, there are 165 municipal, 72 agricultural, 68 commercial, 24 industrial, 33 irrigation, 3 manufacturing, 1 nuclear power, and 4 fossil fuel plant permittees. Out of approximately 114 active Virginia Water Protection surface water withdrawal permits, there are 55 municipal, 2 agricultural, 26 commercial, 9 fossil fuel power, 8 hydropower, 4 irrigation, 1 manufacturing, 7 mining, and 2 nuclear power plant permittees. The majority of these non-municipal permittees likely are not small businesses as defined in in § 2.2-4007.1 of the Code of Virginia.

This analysis has been reported on the ORM Economic Impact Form in Table 1b and Table 4.

**Periodic Review and
Small Business Impact Review Report of Findings**

If you are using this form to report the result of a periodic review/small business impact review that is being conducted as part of this regulatory action, and was announced during the NOIRA stage, indicate whether the regulatory change meets the criteria set out in EO 19 and the ORM procedures, e.g., is necessary for the protection of public health, safety, and welfare; minimizes the economic impact on small businesses consistent with the stated objectives of applicable law; and is clearly written and easily understandable. In addition, as required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency’s consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency’s decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

No periodic review was announced during the NOIRA stage.

Public Comment

Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency’s response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.

Commenter	Comment	Agency response
Mission H2O	Some water systems in Virginia are interconnected, meaning that the water withdrawal permit holder may be delivering water to other water systems owned and operated by different entities. It is unclear how the water auditing and	The requirement to submit a water audit plan and a leak detection and repair plan are application requirements for each permitted entity. The comment may be referencing wholesale water suppliers and there is the opportunity for these issues to be addressed over time through contractual means.

	<p>leak/detection and repair plan requirements would work in this context. It appears that the plans could be required to be submitted by the permittee, even where the permittee does not own or operate the distribution system. There are also questions about how those plans would be implemented, particularly if needed repairs are in the portion of the system that is not controlled by the permittee.</p>	<p>However, there may be customers that are not able to be addressed by the permittee in a practicable way. These issues will be addressed on a case by case manner based on the facts of each situation.</p>
Mission H2O	<p>The legislation suggests that a water withdrawal permit could not be issued until these plans are approved (in contrast to other plans, like the water conservation plan and drought management plan, that are submitted to DEQ for approval after the permit has been issued). It is unclear how this submission and approval process will work.</p>	<p>The description of the existing water conservation and management plan process is not accurate. The Groundwater withdrawal Regulation (9VAC25-610-94 2 h) is clear that a water conservation and management plan is required for a complete application. The instances that DEQ has included permit conditions that allow for approval of a water conservation plan during the permit term relate primarily to the following situations: the application is a historic use first time permit in a new Groundwater Management Area; the applicant is a brand new user that has no data on its operation to inform water conservations; and a fiscally strained applicant that has multiple special conditions that need to be spread out over the permit term. These programmatic decisions are made on a case by case basis. DEQ anticipates similar implementation for water audit and leak detection and repair plans.</p>
Mission H2O	<p>Given that the primary purpose of this legislation is to address system leakage in older drinking water systems, the requirements should differentiate between municipal water withdrawers and other types of water withdrawers that typically have far less pipe, with the withdrawal located in close proximity to the use. The regulation should also differentiate between withdrawals associated with new systems and those associated with older systems. New withdrawers may need time to learn their system and supplement or revise their plans based on the operating experience.</p>	<p>The requirement to conduct a water loss audit implement a leak detection and repair plan applies to all water withdrawal permittees regardless of the user type. The results from the audits will be used to inform the required leak detection and repair plan. This allows users, regardless of water use type, system age, or mileage of water pipe, to develop a leak detection and repair plan that is unique to their specific system and water loss audit results.</p>
Mission H2O	<p>The planning process already requires the submission and approval of a water conservation plan after the water withdrawal permit has been issued. Clarity is</p>	<p>The proposed regulatory changes incorporates the requirement of a water audit plan and a leak detection and repair plan into the existing water conservation and management plan requirement. This</p>

	needed about how these new plans relate to the water conservation plan.	requirement was revised to integrate the new requirements with the existing retained requirements of a water conservation and leak detection plan.
Mission H2O	Mission H2O requests representation on the Regulatory Advisory Panel ("RAP") established for this regulation. Mission H2O nominates Ron Harris with Newport News Waterworks to serve as its representative.	Mr. Harris was appointed as a member.
Virginia Municipal Drinking Water Association	VMDWA requests appointments of Amanda Waters, Aqualaw, and Chris Pomeroy (alternate), Aqualaw, to the RAP. VMDWA later requested to replace Amanda Waters with Mike McEvoy, Executive Director Western Virginia Water Authority.	Amanda Waters was appointed as a RAP member and Chris Pomeroy was approved as an alternate. Mike McEvoy was approved as a replacement for Amanda Waters later in the process
Cavanaugh & Associates	Cavanaugh & Associates nominated Drew Blackwell for RAP membership and nominated Steve Cavanaugh as an alternate.	Drew Blackwell was appointed as a RAP member and Steve Cavanaugh was approved as an alternate.
Virginia Manufacturers Association	It is VMA's understanding that DEQ's primary focus when seeking this legislation was on municipal water systems, which involve lengthy sections of pipe to transport water to drinking water plants and then to customers. If this understanding is correct, the water auditing and leak detection provisions should differentiate between older withdrawals and newer withdrawals. It should also differentiate between systems such as municipal drinking water systems that have large volumes of piping and water withdrawals associated with manufacturing facilities, where there is often far less piping and the location of the withdrawal is often in close proximity to where the water is used.	The changes to the statute that resulted from the legislation apply to all water withdrawal permittees regardless of water user type. The proposed regulation, based on the discussion among the RAP members, does try to account for differences based on water withdrawal user type.
Virginia Manufacturers Association	Virginia Department of Health ("VDH"), which is charged with implementation of the Safe Drinking Water Act and oversees municipal drinking water systems, should be actively involved in the development of this regulation. For example, VDH was charged with studying aging water infrastructure,	The enacting legislation amended DEQ statutes and directed DEQ to develop the water audit and leak detection and repair plan regulations. VDH was asked to participate in the RAP.

	including system leakage, by the General Assembly in 2020. The resulting report (HD13 – A Study on Virginia’s Drinking Water Infrastructure and Oversight of the Drinking Water Program) includes a number of recommendations for addressing system leakage.	
Virginia Manufacturers Association	VMA also suggests that DEQ develop a template for the required plans. There could be differing templates depending on the type of water user/amount of piping used by a permittee. Having such a template will streamline the approval process and ensure that this requirement does not lengthen the permitting timeline.	The proposed regulation requires the use of the free American Water Works Association water loss audit software or an alternate methodology approved the DEQ. Submitting water loss audit information using the American Water Works Association (AWWA) methodology results in consistent data development and format should assist in streamlining the permitting process.
Virginia Manufacturers Association	The regulation also needs to clarify how the water auditing and leak detection/repair plans will relate to the water conservation plan that is required to be developed after the permit is issued.	The proposed regulatory changes incorporate the requirement of a water audit plan and a leak detection and repair plan into the existing water conservation and management plan requirement. This requirement was revised to integrate the new requirements with the existing retained requirements of a water conservation and leak detection plan.
Virginia Manufacturers Association	VMA would like to be represented on the Regulatory Advisory Panel (“RAP”) established for this regulation. It is important to have all water users, including municipal, industrial, and agricultural, represented on the RAP due to the differing operational, locational and financial considerations that apply to each. VMA requests that DEQ invite Jennifer Rogers with Dominion Energy to serve as VMA’s representative.	Representatives were appointed to the RAP representing the identified water withdrawal user types. Jen Rogers was approved as a member of the RAP.

Public Participation

Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.

The State Water Control Board is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal, (ii) any alternative approaches, (iii) the potential impacts of the regulation, and (iv) the agency's regulatory flexibility analysis stated in that section of this background document. Also, the State Water Control Board is seeking

information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include: 1) projected reporting, recordkeeping and other administrative costs; 2) probable effect of the regulation on affected small businesses; and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall web site at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to Elizabeth Gallup Central Office, 1111 East Main St. Suite 1400, Richmond, VA 23218 Phone (804) 432-3581; E-mail: elizabeth.gallup@deq.virginia.gov. In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will not be held following the publication of this stage of this regulatory action.

Detail of Changes

List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.

If an existing VAC Chapter(s) is being amended or repealed, use Table 1 to describe the changes between the existing VAC Chapter(s) and the proposed regulation. If the existing VAC Chapter(s) or sections are being repealed and replaced, ensure Table 1 clearly shows both the current number and the new number for each repealed section and the replacement section.

Table 1: Changes to Existing VAC Chapter(s)

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
210-300		Definitions.	Addition of the term “water loss”. Addition of the term “water loss audit”. This definition clarifies what the audit is reviewing.
210-340 B	210-340 B (14)	Application requirements for surface water withdrawals.	Addition of a new requirement for surface water withdrawal applications for public water supply that includes a water auditing plan for an annual water loss audit beginning at permit issuance. The use of the AWWA methodology and free software allows for consistent data collection and added value for most users. DEQ anticipates that most public water supplies will use the AWWA free software. Another methodology can be reviewed and approved by DEQ. The requirement specifies the water loss

			audit must be conducted annually and that reporting of the results is required cumulatively, at a minimum, every three years. The RAP did not support annual reporting of results as a mandate and agreed to the three year reporting frequency. Annual reporting at the discretion of the permittee is not prohibited.
210-340 B	210-340 B (15)	Application requirements for surface water withdrawals.	Addition of a new requirement for surface water withdrawal applications for public water supply that includes a leak detection and repair plan. The requirement specifies what the plan must include and the reporting requirement. The plan is required to indicate how it will be informed by the water loss audit in prioritizing actions to address water loss; and where practicable, include a process for identifying equipment to quantify and reduce water loss and a schedule for inspection of equipment and distribution systems for actual water loss. Reporting is required to include a description of the plan's effectiveness in addressing water loss, including any changes to the plan that can be improved over the short and long term.
210-340 B	210-340 B (16)	Application requirements for surface water withdrawals.	Addition of a new requirement for surface water withdrawal applications for commercial and industrial users that includes a water auditing plan for a water loss audit. The applicant must propose a methodology to determine the water loss for the operation and quantity of water used based on the individual facility. The water audit must be conducted and results reported once every three years. The RAP did not support conducting an annual audit as a mandate and agreed to the three year audit and reporting frequency given the differences of these user facilities and public water supplies.
210-340 B	210-340 B (17)	Application requirements for surface water withdrawals.	Addition of a new requirement for surface water withdrawal applications for commercial and industrial users that includes a leak detection and repair plan. The content requirements for the plan are the same as for public water supply. The reporting is consistent with the water audit for this water user type.
210-340 B	210-340 B (18)	Application requirements for surface water withdrawals.	Addition of a new requirement for surface water withdrawal applications for agricultural users that includes a water auditing plan for an annual or periodic water loss audit based Agricultural

			<p>Management Plans or Irrigation Management Plans. The use of these types of existing agricultural best management plans is anticipated to minimize the burden to agricultural producers by basing the methodologies on crop rotations and livestock needs. The water audit must include an estimate of water loss and a description of the methodology used to determine the quantity of the water used throughout the agricultural operation. Reporting of the results is required every three years. The RAP did not support conducting an annual audit as a mandate unless warranted by existing agricultural plans and agreed to the three year audit and reporting frequency given the differences of these user facilities and public water supplies.</p>
210-340 B	210-340 B (19)	Application requirements for surface water withdrawals.	<p>Addition of a new requirement for surface water withdrawal applications for agricultural users that includes a leak detection and repair plan. The content requirements for the plan are the same as for commercial and industrial users, except the RAP decided to eliminate the expectation to establish a process for the identification of equipment needs to quantify and reduce water loss. The reporting is consistent with the water audit for this water user type.</p>
610-10		Definitions	<p>Addition of the term “public water supply”.</p> <p>Addition of the term “water loss.”</p> <p>Addition of the term “water loss audit.” This definition clarifies what the audit is reviewing.</p>
610-100	610-100 B (1)	Water conservation and management plans.	<p>610-100 B (1) is an existing requirement for the development of water conservation and management plans (WCMP) for municipal and non-municipal public water supplies. The RAP was in favor of creating consistency between the surface water and groundwater withdrawal permit requirements to the extent practicable. The proposed regulation adds a new requirement for groundwater withdrawal public water supply WCMPs that includes a water auditing plan for an annual water loss audit beginning at permit issuance. The use of the AWWA methodology and free software allows for consistent data</p>

			<p>collection and added value for most users. DEQ anticipates that most public water supplies will use the AWWA free software. Another methodology can be reviewed and approved by DEQ. The requirement specifies the water loss audit must be conducted annually and that reporting of the results is required cumulatively, at a minimum, every three years. The RAP did not support annual reporting of results as a mandate and agreed to the three year reporting frequency. Annual reporting at the discretion of the permittee is not prohibited.</p> <p>The proposed regulation adds a new requirement for groundwater withdrawal public water supply WCMPs that includes a leak detection and repair plan. The requirement specifies what the plan must include and the reporting requirement. The plan is required to indicate how it will be informed by the water loss audit in prioritizing actions to address water loss; and where practicable, include a process for identifying equipment to quantify and reduce water loss and a schedule for inspection of equipment and distribution systems for actual water loss. Reporting is required to include a description of the plan's effectiveness in addressing water loss, including any changes to the plan that can be improved over the short and long term. Other changes were made to existing language to reorganize and provide context to the new combined language.</p>
610-100	610-100 B (2)	Water conservation and management plans.	<p>610-100 B (2) is an existing requirement for the development of WCMPs for commercial and industrial users. The RAP was in favor of creating consistency between the surface water and groundwater withdrawal permit requirements to the extent practicable. The proposed regulation adds a new requirement for groundwater withdrawal commercial and industrial WCMPs that includes a water auditing plan for an annual water loss audit. The applicant must propose a methodology to determine the water loss for the operation and quantity of water used based on the individual facility. The water audit must be conducted and results</p>

			<p>reported once every three years. The RAP did not support conducting an annual audit as a mandate and agreed to the three year audit and reporting frequency given the differences of these user facilities and public water supplies.</p> <p>The proposed regulation adds a new requirement for groundwater withdrawal commercial and industrial WCMPs that includes a leak detection and repair plan. The content requirements for the plan are the same as for public water supply. The reporting is consistent with the water audit for this water user type. Other changes were made to existing language to reorganize and provide context to the new combined language.</p>
610-100	610-100 B (3)	Water conservation and management plans.	<p>610-100 B (3) is an existing requirement for the development of WCMPs for agricultural users. The RAP was in favor of creating consistency between the surface water and groundwater withdrawal permit requirements to the extent practicable. The proposed regulation adds a new requirement for groundwater withdrawal agricultural WCMPs that includes a water auditing plan for an annual or periodic water loss audit based Agricultural Management Plans or Irrigation Management Plans. The use of these types of existing agricultural best management plans is anticipated to minimize the burden to agricultural producers by basing the methodologies on crop rotations and livestock needs. The water audit must include an estimate of water loss and a description of the methodology used to determine the quantity of the water used throughout the agricultural operation. Reporting of the results is required every three years. The RAP did not support conducting an annual audit as a mandate unless warranted by existing agricultural plans and agreed to the three year audit and reporting frequency given the differences of these user facilities and public water supplies.</p> <p>The proposed regulation adds a new requirement for groundwater withdrawal agricultural WCMPs that includes a leak detection and repair plan. The content requirements for the plan are the same as for agricultural surface water</p>

			<p>withdrawals. The reporting is consistent with the water audit for this water user type. Other changes were made to existing language to reorganize and provide context to the new combined language.</p>
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Family Impact

In accordance with § 2.2-606 of the Code of Virginia, please assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one’s spouse, and one’s children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

It is not anticipated that this regulation will have a direct impact on families.