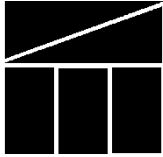


Adverse impact notification sent to Joint Commission on Administrative Rules, House Committee on Appropriations, and Senate Committee on Finance (COV § 2.2-4007.04.C): Yes¹ Not Needed

If/when this economic impact analysis (EIA) is published in the *Virginia Register of Regulations*, notification will be sent to each member of the General Assembly (COV § 2.2-4007.04.B).



Virginia Department of Planning and Budget Economic Impact Analysis

12 VAC 5-590 Waterworks Regulations
Virginia Department of Health
Town Hall Action/Stage: 4854 / 8497
April 11, 2019

Summary of the Proposed Amendments to Regulation

The State Board of Health (Board) proposes to comprehensively update the *Waterworks Regulations*.

Result of Analysis

For most proposed amendments, the benefits likely exceed the costs. For one amendment, whether the benefits exceed the costs depend on the policy views of the observer.

Estimated Economic Impact²

The regulation establishes requirements and procedures for the issuance of permits, minimum standards for water quality (including requirements for waterworks owners to submit regular analytical results of sampling for biological, chemical, radiological, physical, and other tests), requirements for recordkeeping, reporting, public notice, and consumer confidence reports, requirements for inspections, and criteria for the siting, design, and construction of waterworks. The regulation has not been significantly revised since 1993. Consequently, it contains obsolete language. The Board proposes to eliminate the obsolete language.

¹ Adverse impact is indicated if there is any increase in net cost for any entity, even if the benefits exceed the costs for all entities combined.

² All data are provided by Virginia Department of Health.

Technology and knowledge about best practices have changed over the last 26 years. Reflecting this, the Virginia Department of Health (VDH) has put some requirements and options in guidance documents (sometimes called policy), and has allowed some other activities in practice. The Board proposes to put many of the requirements and options that have been in guidance documents, or allowed in practice, into the regulation. According to VDH, there have been no problems with compliance to the rules in guidance documents. Thus, adding this language to the regulation would not have a large impact in practice.

The Board also proposes to make numerous changes to improve clarity. Eliminating obsolete language, adding text to reflect requirements and options that have been adhered to and allowed in practice, and amending language to improve clarity all would be beneficial in that there would be reduced likelihood that those affected by the regulation and other interested members of the public misunderstand or are under-informed concerning waterworks requirements and options.

Waterworks Advisory Committee

The Waterworks Advisory Committee (WAC) is formed by the State Health Commissioner (Commissioner) to provide peer review of the regulatory, policy, and legislative aspects of VDH authorities. Under the current regulation, the WAC is appointed by the Commissioner and consists of thirteen appointed members and three ex officio members, including one individual each from the following:

... a member of the Virginia Section American Water Works Association; a member of the Virginia Society of Professional Engineers; a member of the Virginia Water Well Association, Inc.; a member of the Consulting Engineers Council; a water treatment plant operator having a valid license of the highest classification in waterworks issued by the State Board for Waterworks and Wastewater Works Operators; a faculty member of a state university or college whose principal field of teaching is Environmental Engineering; a community waterworks owner; a nontransient noncommunity (NTNC) representative; a representative from Virginia Rural Water Association; a representative from Virginia Water Projects, Inc.; a representative from the Virginia Municipal League; a representative from the Virginia Association of Counties; and a citizen representative. Ex officio members shall consist of the Director, Office of Water Programs, who shall act as chairman; Director, Division of Water Supply Engineering; and Director, Division of Consolidated Laboratory Services or their designees.

The membership for the WAC under the proposed regulation are the following:

... industry professionals employed outside the department with longstanding expertise or vested interest in waterworks operations and represent a diverse group of stakeholders. Members shall be experts in the fields of water treatment technologies, public health, water quality, economics, environmental science, public utilities, community development, or industry regulations. A minimum of nine persons shall be appointed to the committee by the commissioner.

More flexibility is available for membership under the proposed language. According to VDH, some interested qualified individuals have not been able to participate under the current definition. Thus, the proposed amendment would likely be beneficial.

Permits

Amongst the Board's proposed clarifying changes is new language concerning permit requirements. Though there are no changes to current requirements, VDH believes that the clarifying of these existing requirements may increase participation in the general permit process. A general permit allows the waterworks to review and approve waterline projects in-house or by their contract engineer (on behalf of VDH), which is much simpler and quicker than sending waterline projects to VDH for review and approval. Essentially, the waterworks assumes control of the plan review process by agreement with VDH through a general permit. General permits apply only to water line extension projects.

VDH estimates that a general permit, as compared to a construction permit, would save a total of 4 hours per project for VDH and 4 hours per project for the waterworks. Assuming an estimated cost of \$60 per hour of engineering review for VDH, the agency would save \$240 per engineering review. Assuming an estimated cost of \$150 per hour for engineering review and engineering services for the waterworks, there would be a savings of \$600 per project per year for waterworks. VDH estimates that 5 to 20 additional general permit projects per year could occur with improved regulatory clarifications, resulting in a possible savings of \$3,000 to \$12,000 per year for the waterworks community and \$1,200 to \$4,800 per year for the agency.

Monitoring Requirements for Transient Non-community Waterworks

Community waterworks are waterworks that serve at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. A non-community waterworks is a waterworks that is not a community waterworks, but operates at least 60 days out of the year. A non-transient non-community waterworks is a waterworks that is not a

community waterworks and that regularly serves at least 25 of the same persons over six months out of the year. A transient non-community waterworks (TNC) is a non-community waterworks that is not a non-transient non-community waterworks. A TNC serves at least 25 persons daily for at least 60 days out of the year.

The Board proposes to add provisions to allow qualified, well-operated TNCs to reduce the bacteriological monitoring frequency from quarterly to annually. Allowing qualified well-operated TNCs to reduce the monitoring frequency for bacteriological contaminants from quarterly to annual would reduce the burden of collecting and submitting bacteriological samples for these waterworks. The savings would be approximately \$100 annually for each TNC. Assuming that there is not a significant increase in health risk with the less frequent monitoring, this amendment would likely produce a net benefit.

TNCs are owned by state and local governmental agencies, corporations, small businesses and nonprofit organizations. VDH estimates that 885 of the TNCs are privately owned.

Groundwater under the Direct Influence of Surface Water

Groundwater under the direct influence of surface water (GUDI) is defined as any water beneath the surface of the ground with (i) significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*, or *Cryptosporidium* or (ii) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH that closely correlate to climatological or surface water conditions. The regulation requires that all waterworks supplied by surface water or GUDI sources provide both disinfection and filtration.

The regulation requires that a groundwater source utilized by a waterworks, including wells, springs, and infiltration galleries, be evaluated by VDH and a determination of surface water influence be made by the agency. The waterworks owner must provide to the agency all necessary information to make this determination. In the current regulation, there is a two-step procedure to determine if there is surface water influence. The Board proposes to add a third step to provide greater assurance. If the source has been confirmed to be GUDI at the second step, the third step and its associated cost can be foregone. Groundwater sources determined to be GUDI

require significantly more treatment, monitoring, and reporting. Without treatment, water from GUDI sources can be unsafe to drink.

According to VDH, the cost for a Step 3 GUDI evaluation is approximately \$7,480. The agency estimates that up to 10 waterworks per year may trigger the Level 3 GUDI evaluation. To the extent that the Step 3 requirement makes a significant difference in detecting and treating unsafe drinking water, the benefits of this proposed amendment likely exceeds the cost.

The owners of the groundwater waterworks could include (but need not be limited to) water authorities, state agencies, county or local governments, corporations, small businesses, and nonprofit organizations. For privately owned entities, VDH estimates that this proposal potentially applies to the 854 TNC, 258 NTNC, and 305 community waterworks.

Fluoride Notification

Waterworks owners that add fluoride to drinking water are required to provide notice to the Commissioner and consumers if they intend to permanently stop their fluoridation program. They are also required to provide notice if they intend to start a fluoridation program. The Board proposes to require that waterworks owners provide the Commissioner at least 90 days prior written notice of the intent to initiate or discontinue a program to provide the optimum fluoride ion concentration. Whether the benefits exceed the costs for this proposed amendment depend on the policy views of the observer. Not allowing waterworks owners to change their fluoridation policy for at least 90 after they choose to do so reduces their flexibility to act and go forward with what they believe to be the best decision. On the other hand, it enables greater public participation in the decision-making process.

This proposal affects owners of community waterworks. VDH estimates 317 community waterworks are privately owned.

Treatment Process Selection

The Board proposes to allow point-of-use (POU) and point-of-entry (POE) water treatment devices in specified circumstances. A POU device is a water treatment device applied to a single tap for the purpose of reducing contaminants in the water at that one tap. A POE device is a water treatment device applied to the water entering a house or building for the purpose of reducing contaminants in the water distributed throughout the house or building.

According to VDH, POU and POE devices have proven effective for short-term compliance with water quality standards. Using POU and POE devices in place of centralized treatment can create significant cost savings.

The most likely waterworks to use POU and POEs would be small non-community waterworks. Based on a single POU installation at a small non-community waterworks, VDH estimates that capital cost savings of approximately \$21,800 per installation and operations and maintenance savings of \$600 per year could be achieved in comparison to a central treatment unit. Given that it is believed that these devices are effective in protecting water quality, this amendment should provide a net benefit.

Owners that could take advantage of this alternative include state and local governmental agencies, corporations, small businesses and nonprofit organizations. VDH estimates that this proposal applies to 1,115 privately owned waterworks.

Metering

The current regulation requires that all waterworks provide metering of total water production. The Board proposes to no longer require metering for non-community waterworks with design capacities less than 300,000 gallons per month and with no treatment. This change would apply only to new waterworks or new sources for existing waterworks to be constructed after the effective date of the amended regulation. The change would allow the owner of a new waterworks or an existing waterworks adding a new source (such as a well) to avoid a cost of approximately \$300 for each source.

Businesses and Entities Affected

Proposed amendments particularly affect VDH, the Department of Professional and Occupational Regulation, the Department of Transportation, the Department of Corrections, the Department of Conservation and Recreation, local governments, restaurants, convenience stores, recreation areas, golf courses, day care facilities, schools, and other businesses that own and operate community and or non-community waterworks, as well as all Virginians in that all drink water.

Localities Particularly Affected

All waterworks using groundwater sources (wells and springs) are required to complete a GUDI evaluation at least once when a source is constructed, and possibly in the future if water quality monitoring indicates a potential problem. Localities that own and operate community and/or non-community waterworks that make use of groundwater sources and are required to complete a Level 3 assessment would be particularly affected.

According to VDH, existing wells and springs serving waterworks are located in the following localities: Accomack, Albemarle, Alleghany, Amelia, Amherst, Appomattox, Augusta, Bath, Bedford County, Bland, Botetourt, Brunswick, Buckingham, Campbell, Caroline, Carroll, Charles City, Charlotte, Chesterfield, Clarke, Craig, Culpeper, Cumberland, Dickenson, Dinwiddie, Essex, Fairfax County, Fauquier, Floyd, Fluvanna, Franklin County, Frederick, Giles, Gloucester, Goochland, Grayson, Greene, Greensville, Halifax, Hanover, Henrico, Henry, Highland, Isle of Wight, James City, King and Queen, King George, King William, Lancaster, Loudoun, Louisa, Lunenburg, Madison, Mathews, Mecklenburg, Middlesex, Montgomery, Nelson, New Kent, Northampton, Northumberland, Nottoway, Orange, Page, Patrick, Pittsylvania, Powhatan, Prince Edward, Prince George, Prince William, Pulaski, Rappahannock, Richmond County, Roanoke County, Rockbridge, Rockingham, Russell, Scott, Shenandoah, Smyth, Southampton, Spotsylvania, Stafford, Surry, Sussex, Tazewell, Warren, Washington, Westmoreland, Wise, Wythe, York, Buena Vista City, Chesapeake, Franklin City, Newport News, Norfolk, Portsmouth, Roanoke City, Suffolk, Virginia Beach, Waynesboro, and Williamsburg.

Allowing qualified well-operated TNCs to reduce the monitoring frequency for bacteriological contaminants from quarterly to annual will reduce the burden of collecting and submitting bacteriological samples. This change could reduce the burden for localities that own and operate TNCs that make use of groundwater sources. This could include TNCs at local parks and recreation areas.

Projected Impact on Employment

The proposed amendments are unlikely to significantly affect total employment.

Effects on the Use and Value of Private Property

The proposals to: 1) add provisions to allow qualified, well-operated TNCs to reduce the bacteriological monitoring frequency from quarterly to annually, 2) allow POU and POE water treatment devices in specified circumstances, 3) no longer require metering for non-community waterworks with design capacities less than 300,000 gallons per month and with no treatment, and 4) clarify general permit requirements, would likely reduce costs for some privately owned waterworks, potentially altering operations and increasing net value.

The proposal to add a third step in the determination of whether groundwater sources are GUDI would increase costs for small privately owned waterworks. This would increase costs for some privately owned waterworks, potentially altering operations and decreasing net value.

Real Estate Development Costs

The proposed clarifying of existing general permit requirements that is expected to increase participation in the general permit process would reduce water line extension project costs for about 5 to 20 projects a year.

Small Businesses:

Definition

Pursuant to § 2.2-4007.04 of the Code of Virginia, small business is defined as “a business entity, including its affiliates, that (i) is independently owned and operated and (ii) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.”

Costs and Other Effects

The proposed clarifying of existing general permit requirements that is expected to increase participation in the general permit process may reduce water line extension project costs for some small privately owned waterworks. The proposals to: 1) add provisions to allow qualified, well-operated TNCs to reduce the bacteriological monitoring frequency from quarterly to annually, 2) allow POU and POE water treatment devices in specified circumstances, and 3) no longer require metering for non-community waterworks with design capacities less than 300,000 gallons per month and with no treatment, would also likely reduce costs for some small firms.

The proposal to add a third step in the determination of whether groundwater sources are GUDI would increase costs for small privately owned waterworks that are utilizing or plan to utilize a groundwater source that has not already been determined to be GUDI.

Alternative Method that Minimizes Adverse Impact

There are no clear alternative methods that both reduce adverse impact and meet the intended policy goals.

Adverse Impacts:

Businesses:

The proposal to add a third step in the determination of whether groundwater sources are GUDI would increase costs for privately owned waterworks that are utilizing or plan to utilize a groundwater source that has not already been determined to be GUDI.

Localities:

The proposal to add a third step in the determination of whether groundwater sources are GUDI would increase costs for locality owned waterworks that are utilizing or plan to utilize a groundwater source that has not already been determined to be GUDI.

Other Entities:

The proposal to add a third step in the determination of whether groundwater sources are GUDI would increase costs for waterworks owned by other entities that are utilizing or plan to utilize a groundwater source that has not already been determined to be GUDI.

Legal Mandates

General: The Department of Planning and Budget has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order 14 (as amended, July 16, 2018). Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5) the impact on the use and value of private property.

Adverse impacts: Pursuant to Code § 2.2-4007.04(C): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and

Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance within the 45-day period.

If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.