

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): Yes<sup>1</sup>  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

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**12 VAC 5-630 Private Well Regulations**  
**Virginia Department of Health**  
**Town Hall Action/Stage: 4900 / 8653**  
August 15, 2019

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### Summary of the Proposed Amendments to Regulation

As the result of a periodic review and advice from the Office of the Attorney General, the Board of Health (Board) proposes numerous amendments to the Private Well Regulations (regulation). Beyond clarifying changes and additions, the Board proposes to:

- 1) create Class IV (private wells that are not used for drinking water) well subclasses that mirror Class III (private wells that are used for drinking water) well subclasses,
- 2) change the required minimum distance for a private well from a building foundation,
- 3) provide a shorter minimum distance from a permanently abandoned sewage disposal system than from an active system,
- 4) reduce the validity time for construction permits,
- 5) shorten the time with which an appeal must be filed,
- 6) require that materials used in private wells be lead free,
- 7) require that water used during well construction be obtained from a pure water source or be disinfected,

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<sup>1</sup> Adverse impact is indicated if there is any increase in net cost or reduction in net revenue for any entity, even if the benefits exceed the costs for all entities combined.

- 8) require that when PVC casing is terminated in bedrock, the well casing be sealed using a mechanical seal or packer,
- 9) provide an additional method to abandon a bored well so that it is no longer considered a well with respect to separation distances, and
- 10) eliminate the exemption for dewatering wells from the regulation.

## **Background**

The regulation establishes the minimum location and construction requirements for private wells installed in the Commonwealth. On August 17, 2016, the Virginia Department of Health (VDH) began a periodic review of the regulation. VDH also formed a Private Well Regulations Workgroup in August 2016. The purpose of the workgroup was to assist VDH in the development of proposed revisions to the regulation.

## **Estimated Benefits and Costs**

### *Classification*

In the regulation, Class III wells are private wells constructed to be used as a source of drinking water. There are three subclasses: 1) Class IIIA - drilled wells in which the annular space around the casing is grouted to a minimum depth of 20 feet, 2) Class IIIB - drilled wells in which the casing is installed to a minimum depth of 50 feet and the annular space around the casing is grouted to at least 50 feet, and 3) Class IIIC - drilled, bored, driven or jetted wells other than Class IIIA and Class IIIB. Class IV wells are private wells constructed for a purpose other than use as a source of drinking water. The current regulation has no subclasses for Class IV.

The regulation includes minimum required distances between wells and specified structures or topographical features. These minimum distances are to help prevent contamination.

For some of the specified structures or topographical features, the minimum distance is shorter for Class IIIA and Class IIB than for Class IIIC and Class IV. The attributes of Class IIIA and Class IIB enable them to be safely closer to the specified structures or topographical features than Class IIIC can be. The Board proposes to create subclasses for Class IV that are identical in description of attributes (other than use for drinking water) to the Class III subclasses. Under the proposed regulation, Class IVA and Class IVB would have the same shorter minimum distances

that Class IIIA and Class IIB have. This would be beneficial for owners of future wells that will not be used for drinking water that have the A or B attributes in that they would have greater flexibility in locating their well. Since Class IVA and Class IVB have the same relevant attributes as Class IIIA and Class IIB wells, this should not effectively increase health risk.

#### *Minimum Separation Distance*

In the current regulation, the minimum required distance between private wells (of all classifications) and termite-treated building foundations is 50 feet. The minimum required distance between private wells (of all classifications) and building foundations that have not been termite treated is 10 feet. Based on a joint investigation conducted by VDH's Office of Environmental Health Services and Office of Epidemiology, the agency believes that the current technology used in termite treatments does not produce a contamination threat that would necessitate greater separation distances. Thus, the Board proposes to not distinguish between building foundations that have or have not been termite treated. The Board does propose to require that the minimum distance be 15 feet rather than 10 feet.

Minimum Distance between Private Well and Building Foundation

Building Foundation	Current Regulation	Proposed Regulation
Untreated	10 feet	15 feet
Termite Treated	50 feet	15 feet

The proposal to not distinguish between building foundations that have or have not been termite treated would produce much greater location flexibility for planned private wells near building foundations that have been termite treated. Increasing the minimum distance from 10 to 15 feet would moderately reduce location flexibility for planned private wells near untreated building foundations.

The current regulation applies the same required private well setback from a permanently abandoned sewage disposal system as it does to an active sewage disposal system: 100 feet for Class IIIC or IV, 50 feet for Class IIIA or B. Under the proposed regulation, the required private well setback from a permanently abandoned sewage disposal system is 25 feet, regardless of classification. This would produce much greater location flexibility for planned private wells near a permanently abandoned sewage disposal system.

*Time*

In the current regulation, construction permits for private wells are valid for 54 months. The Board proposes to have construction permits be valid for 18 months, which can be renewed once for an effective total of 36 months. The permit fee remains at \$300; there is no additional fee for renewing. VDH reports that 88 percent of private wells are installed within 18 months, and 95 percent of private wells are installed within 36 months. So most owners and water well systems providers (businesses that install wells) would not be affected. Conditions can significantly change within three years. What may have been safe conditions for a well when the permit is first issued may no longer be so more than three years later. Thus, this proposed amendment may be beneficial in that it may reduce the likelihood that wells are constructed that produce contaminated water. For approximately 5 percent of owners it may cost an additional \$300 fee and the time associated with applying for and receiving another construction permit.

The regulation allows for appeals from a denial, revocation, or avoidance of a construction permit, inspection statement, or request for variance for a private well. The current regulation requires that the appeal be made within 60 days of the date of the denial, revocation or avoidance. The Board proposes to reduce the deadline to within 30 days. This makes it more difficult for owners (or water well systems providers) to appeal in that preparing grounds for appeal may be time consuming; but it may also reduce VDH staff time expended in that there may be fewer appeals made.

*Other*

The Board proposes to specify that materials used in private wells be lead free. According to VDH, most or all water well systems providers are already using lead free materials. To the extent that any are using materials with lead, this proposed amendment may be beneficial in that it may reduce health risk associated with lead.

The Board proposes to specify that water used during well construction be obtained from a suitable source or the well being constructed. A suitable source means a pure water source, or, when a pure water source is not locally available, water taken from another source then disinfected using compounds meeting NSF/ANSI Standard 60 environmental specifications. Again, VDH believes most or all water well systems providers are already meeting this proposed

requirement. To the extent that any water well systems providers are not, this proposed amendment may be beneficial in that it may reduce the likelihood of contamination.

The Board also proposes to specify that when PVC casing is terminated in bedrock, the well casing shall be sealed using a mechanical seal or packer. According to VDH, this is standard industry practice. Not doing so risks contamination. Depending on the well diameter, the cost of a single mechanical seal or packer ranges between \$15 and \$175 retail.<sup>2</sup> To the extent that any water well systems providers are not sealing the well casing using a mechanical seal or packer when PVC casing is terminated in bedrock, this proposed amendment would be beneficial in that it would likely reduce the chance of contamination.

Under the current regulation, bored wells can only be abandoned via the clean fill method.<sup>3</sup> The Board proposes to allow an additional option, the grout abandonment method.<sup>4</sup> To the extent that the grout abandonment method is less costly or otherwise preferable for some owners and water well systems providers, this proposed amendment is beneficial.

A dewatering well is a driven well constructed for the sole purpose of lowering the water table and kept in operation for a period of 60 days or less. Dewatering wells are used to allow construction in areas where a high water table hinders or prohibits construction and are always temporary in nature. The current regulation exempts dewatering wells from construction permits and construction requirements. Pursuant to advice from the Office of the Attorney General, the Board proposes to eliminate these exemptions. This proposal would very likely increase construction costs for dewatering wells. VDH believes that fewer than ten projects would be affected per year.

### **Businesses and Other Entities Affected**

The proposed amendments potentially affect homeowners using private wells as a source of drinking water, individuals and businesses using private wells for non-potable uses, business using wells for drinking water that do not meet the definition of a waterworks,<sup>5</sup> water well

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<sup>2</sup> Source: Virginia Department of Health

<sup>3</sup> The specifics of the clean fill method can be seen here:

<https://townhall.virginia.gov/l/ViewXML.cfm?textid=13418>

<sup>4</sup> The specifics of the grout abandonment method can also be seen at

<https://townhall.virginia.gov/l/ViewXML.cfm?textid=13418>

<sup>5</sup> Code of Virginia § 32.1-167 defines “waterworks” as “a system that serves piped water for human consumption to at least 15 service connections or 25 or more individuals for at least 60 days out of the year. ‘Waterworks’ includes

systems providers that install private wells, and property owners and contractors that use dewatering wells. VDH estimates that there are approximately 700,000 homes in Virginia that rely on a private well as a source of drinking water. VDH issues approximately 500 to 600 permits per year for agricultural wells, irrigation wells, geothermal heat pump wells, and other non-potable uses. The agency estimates that there are approximately 500 water well systems providers in the Commonwealth.

### **Localities<sup>6</sup> Affected<sup>7</sup>**

The proposed regulation applies equally throughout the Commonwealth. Localities named in Virginia Code § 32.1-176.4.A (Counties of Fairfax, Goochland, James City, Loudoun, Powhatan, and Prince William and the City of Suffolk) and § 32.1-176.5.B (Counties of Albemarle, Bedford, Chesterfield, Clarke, Culpeper, Fairfax, Fauquier, Goochland, James City, Loudoun, Orange, Powhatan, Prince William, Rappahannock, Stafford, Warren, and York, and the Cities of Manassas, Manassas Park, Suffolk, and Virginia Beach) and having authority to adopt ordinances establishing standards pertaining to private well location, testing of water, and well abandonment may need to modify ordinances to be consistent with the proposed regulatory changes.

### **Projected Impact on Employment**

The proposed amendments would not likely substantially affect total employment.

### **Effects on the Use and Value of Private Property**

The proposal to create Class IV well subclasses that mirror Class III well subclasses produces greater flexibility for property owners in locating wells that are not used for drinking water. This may reduce real estate development costs. The proposed substantial decrease in minimum distance between private wells (of all classifications) and termite-treated building foundations would increase location flexibility for all types of private wells that are near termite-treated building foundations, also potentially reducing real estate development costs. The proposal to provide a shorter minimum distance from a permanently abandoned sewage disposal system than from an active system would increase location flexibility for all types of private

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all structures, equipment, and appurtenances used in the storage, collection, purification, treatment, and distribution of pure water except the piping and fixtures inside the building where such water is delivered.”

<sup>6</sup> “Locality” can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulatory change are most likely to occur.

<sup>7</sup> § 2.2-4007.04 defines “particularly affected” as bearing disproportionate material impact.

wells that are near a permanently abandoned sewage disposal system, which also may reduce real estate development costs for private wells near such systems. The proposal to allow the grout abandonment method for abandoning bored wells may reduce costs for owners of land with one or more well that they wish to abandon.

The proposal to no longer exempt dewatering wells from construction permits and construction requirements would very likely increase real estate development costs on property where such wells are necessary. The proposed 5-foot increase in minimum distance between private wells (of all classifications) and non-treated building foundations is a small increase, but may nevertheless preclude a least-costly well location.

### **Adverse Effect on Small Businesses<sup>8</sup>:**

#### Types and Estimated Number of Small Businesses Affected

The proposed amendments potentially affect the thousands of small businesses that use private wells for non-potable uses, or use wells for drinking water that do not meet the definition of a waterworks. The approximate 500 water well systems providers, most of which are likely small businesses, are also affected, as are small contractors that use dewatering wells.

#### Costs and Other Effects

The proposal to no longer exempt dewatering wells from construction permits and construction requirements would very likely increase real estate development costs on property owned by small businesses where such wells are necessary. The proposed 5-foot increase in minimum distance between private wells and non-treated building foundations may preclude a least-costly well location, increasing development costs for some small businesses. The proposal to reduce the validity time for construction permits may cause some small businesses to incur an additional \$300 fee and the time associated with applying for and receiving another construction permit.

#### Alternative Method that Minimizes Adverse Impact

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

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<sup>8</sup> 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.”

## 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(D): 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.