

Office of Regulatory Management  
Economic Review Form

<b>Agency name</b>	Virginia Department of Health
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	12 VAC 5 - 630
<b>VAC Chapter title(s)</b>	Private Well Regulations
<b>Action title</b>	Amended regulations
<b>Date this document prepared</b>	August 18, 2022

**Cost Benefit Analysis**

Table 1a must be completed for all actions. Tables 1b and 1c must be completed for actions (or portions thereof) where the agency is exercising discretion, including those where some of the changes are mandated by state or federal law or regulation. Tables 1b and 1c are not needed if **all** changes are mandated, and the agency is not exercising any discretion. In that case, enter a statement to that effect.

- (1) Direct Costs & Benefits: Identify all specific, direct economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (A direct impact is one that affects entities regulated by the agency and which directly results from the regulatory change itself, without any intervening steps or effects. For example, the direct impact of a regulatory fee change is the change in costs for these regulated entities.) 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. One bullet has been provided, add additional bullets as needed.
- (2) Quantitative Factors:
  - (a) Enter estimated dollar value of total (overall) direct costs described above.
  - (b) Enter estimated dollar value of total (overall) direct benefits described above.
  - (c) Enter the present value of the direct costs based on the worksheet.
  - (d) Enter the present value of the direct benefits based on the worksheet.
- (3) Benefits-Costs Ratio: Calculate d divided by c OR enter it from the worksheet.
- (4) Net Benefit: Calculate d minus c OR enter it from the worksheet.
- (5) Indirect Costs & Benefits: Identify all specific, indirect economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (An indirect impact is one that results from responses to the regulatory change, but which are not directly required by the regulation. Indirect impacts of a regulatory fee change on regulated entities could include a change in the prices they charge, changes in their operating procedures or employment levels, or decisions to enter or exit the regulated profession or market. Indirect impacts also include responses by other entities that have close economic ties to the regulated entities, such as suppliers or partners.) If there are no indirect costs or benefits, include a specific statement to that effect.

- (6) Information Sources: Describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.
- (7) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

**Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)**

<p>(1) Direct Costs &amp; Benefits</p>	<p><b>VDH does not anticipate that the proposed changes will alter the cost to locate, permit, design or construct a private well, or have any other direct cost for well owners or water well system providers. There is one proposed change that is anticipated to eliminate a common variance request:</b></p> <ul style="list-style-type: none"> <li>● <b>Section 380 and Table 1: reducing the separation distance from termite treated structures (reduction based on toxicological assessment of currently used termiticides).</b></li> </ul> <p>Direct Costs: The direct costs (e.g., permitting, site inspection) for the proposed change are not anticipated to change for Local Health Departments or private sector providers. The proposed change is anticipated to reduce the number of variances submitted and processed for separation distance from termite-treated foundations and for abandonment of bored/hand-dug wells.</p> <p>The direct costs incorporate time required of EH Managers (District), OEHS and OCOM personnel (Central Office) to process a variance. From 2019 to 2021, the average number of variances processed related to the separation distance from termite treated foundations was five per year. The total personnel costs to process a variance is estimated to average \$650.00 (LHD up to Commissioner of Health).</p> <p>Direct Benefits: The direct benefits of this proposed change are elimination of variances regarding the separation distance between termite treated foundations and private wells. This provides a direct benefit to builders and homeowners who would have otherwise had to wait 30 to 60 days for a variance to be processed.</p>	
<p>(2) Quantitative Factors</p>	<p>Estimated Dollar Amount</p>	<p>Present Value</p>
<p>Direct Costs</p>	<p>(a) \$0</p>	<p>(c) \$0</p>

Direct Benefits	(b) \$3,250 per year (5 per year variances at \$650 each)	(d) \$3,250	
(3) Benefits-Costs Ratio	1	(4) Net Benefit	\$28,555
(5) Indirect Costs & Benefits	<p><b>All indirect costs and benefits.</b> VDH has not identified any indirect costs that will result from the changes. The following indirect benefits of the regulatory changes have been identified.</p> <ul style="list-style-type: none"> <li>● Section 10 includes definition for lead free. The indirect benefit is protection of public health, especially for children, by reduction of the risk of exposure to lead.</li> <li>● Section 240 allows for the designation of a well area on private well construction permits. The indirect benefit is a reduction of the wells which have to be abandoned and replaced because they were installed in the wrong location.</li> <li>● Section 360 creates Class IV subclasses that mirror Class III well subclasses. The indirect benefit is to prevent abandonment or replacement of Class IV wells intended to be repurposed for potable water supply when well construction does not conform to a Class III standard.</li> <li>● Section 400 includes provisions of well construction material specifications consistent with current industry standards. The indirect benefit is enhanced protection of public health and groundwater resources via clearer and more comprehensive material specification.</li> <li>● Section 410 decreases depth when pouring of grout is acceptable in bored wells from 30 feet to 20 feet. The indirect benefit is protection of public health and groundwater resources by reducing changes of bridging or other failure during well construction.</li> <li>● Section 410 adds subsections pertaining to the well bore, filter pack well development, and well maintenance and repair. The indirect benefit is protection of public health and groundwater resources by clarification of the minimum construction standards for private wells.</li> <li>● Section 420 clarifies that test and exploration wells are not observation/monitoring wells and further clarifies that permanent abandonment of observation/monitoring wells is required following cessation of use. The indirect benefit is protection of public health and groundwater resources by encouraging abandonment of unused wells. Further, it eliminates a loophole by which certain wells bypass permitting as private wells.</li> <li>● Section 430 is amended to provide the option for an alternate method of well disinfection endorsed by the National Groundwater Association. The indirect benefit is to protect public health and</li> </ul>		

	<p>groundwater resources by allowance for well disinfection methodology consistent with site specific considerations.</p> <ul style="list-style-type: none"> <li>Section 450 includes provision that the Water Well System Provider notify VDH prior to well abandonment, identifies materials prohibited from use in well abandonment (e.g. coal ash), and identifies a method to abandon a bored well such that it no longer needs to be considered a well with respect to separation distances. The indirect benefit is enhanced protection of public health and groundwater resources by improved well abandonment practices.</li> </ul>
(6) Information Sources	<b>Section 380 and Table 1 revision to reduce the setback from termite treated structures.</b> Variance costs determined by review of agency variance tracking log, and hours expended by involved staff and average hourly rates (HR).
(7) Optional	

**Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)**

*This table addresses current requirements and the implications of not making any changes. In other words, describe the costs and benefits of maintaining the current regulatory requirements as is.*

(1) Direct Costs & Benefits	<ul style="list-style-type: none"> <li><b>Section 380 and Table 1: maintain 50 foot separation distance from all termite treated structures.</b></li> </ul> <p>Direct Costs: The direct costs of maintaining the status quo is \$3,250 per year. The direct costs incorporate time required of EH Managers (District), OEHS and OCOM personnel (Central Office) to process a variance. Based on the number of variances related to termite treatment from 2019 to 2021, the average number of variances processed related to the separation distance from termite treated foundations was five per year. The total personnel costs to process a variance is estimated to average \$650.00 per variance (LHD up to Commissioner of Health).</p> <ul style="list-style-type: none"> <li>Direct Benefits: Maintaining the status quo provides no benefits. It delays action on permits, and increases agency cost.</li> </ul>	
(2) Quantitative Factors	Estimated Dollar Amount	Present Value

Direct Costs	(a) \$3,250 per year (5 less variances at \$650 each)	(c) \$3,250	
Direct Benefits	(b) \$0.00	(d) \$0.00	
(3) Benefits-Costs Ratio	NA	(4) Net Benefit	-\$3,250
(5) Indirect Costs & Benefits	<p><b>All indirect costs and benefits.</b> There are no indirect benefits of maintaining the status quo. The indirect cost of the status quo regulations are not quantifiable because every application for a private well construction permit is unique. The specific cost incurred by each applicant is unknown until such time that a permit request is received and a site assessment conducted.</p> <p>Maintaining the status quo would eliminate the indirect benefits identified in Row (6) of Table 1a.</p>		
(6) Information Sources	<p><b>Section 380 and Table 1 revision to reduce the setback from termite treated structures.</b> Variance costs determined by review of agency variance tracking log, and hours expended by involved staff and average hourly rates (HR).</p>		
(7) Optional			

**Table 1c: Costs and Benefits under an Alternative Approach**

*This table addresses an alternative approach to accomplishing the objectives with different requirements. These alternative approaches may include the use of reasonably available alternatives in lieu of regulation, or information disclosure requirements or performance standards instead of regulatory mandates.*

(1) Direct Costs & Benefits	<p><b>Section 380 and Table 1 maintain 25 foot separation distance from all termite treated structures.</b></p> <p>Direct Costs: This alternative approach increases the safety factor for the separation distance from 50% to 150%. The direct costs (e.g., permitting, site inspection) for the alternative approach are not anticipated to change for Local Health Departments or private sector providers based on historical variances. The alternative approach is anticipated to reduce the number of variances submitted and</p>
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	<p>processed for separation distance from termite-treated foundations and for abandonment of bored/hand-dug wells</p> <p>The direct costs incorporate time required of EH Managers (District), OEHS and OCOM personnel (Central Office) to process a variance. Based on the number of variances related to termite treatment from 2019 to 2021, the average number of variances processed related to the separation distance from termite treated foundations is five per year. The total personnel costs to process a variance is estimated to average \$650.00 (LHD up to Commissioner of Health).</p> <p>Direct Benefits: The direct benefits of this proposed change is reduction of variances regarding the separation distance between termite treated foundations and private wells for these purposes. However, owners seeking to install a well between 15 feet and 24 feet from a termite treated foundation would still need a variance. This provides a direct benefit builders and homeowners that would have otherwise had to wait 30 to 60 days for a variance to be processed.</p>		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) \$3,000 (year 1)	(c) \$0	
Direct Benefits	(b) \$3,250 per year (5 less variances at \$650 each)	(d) \$3,250	
(3) Benefits-Costs Ratio		(4) Net Benefit	\$25,555
(5) Indirect Costs & Benefits	There are no additional indirect costs, as VDH is not proposing other alternatives to the status beyond those provided above.		
(6) Information Sources	<b>Section 380 and Table 1 revision to reduce the setback from termite treated structures.</b> Variance costs determined by review of agency variance tracking log, and hours expended by involved staff and average hourly rates (HR).		
(7) Optional			

**Impact on Local Partners**

- (1) Describe the direct costs and benefits (as defined on page 1) for local partners in terms of real monetary costs and FTEs. Local partners include local or tribal governments, school divisions, or other local or regional authorities, boards, or commissions. If local partners are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
  - (a) Enter estimated dollar value of total (overall) direct costs described above.
  - (b) Enter estimated dollar value of total (overall) direct benefits described above.
- (3) Indirect Costs & Benefits: Describe any indirect benefits and costs (as defined on page 1) for local partners that are associated with all significant changes. If there are no indirect costs or benefits, include a specific statement to that effect.
- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.
- (5) Assistance: Identify the amount and source of assistance provided for compliance in both funding and training or other technical implementation assistance.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

**Table 2: Impact on Local Partners**

(1) Direct Costs & Benefits	There are not anticipated direct costs or benefits to local partners. Localities having ordinances pertaining to private wells may need to revise ordinances to maintain consistency with the revised regulations. VDH anticipates that this effort will be absorbed in existing locality budgets.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) \$0
Direct Benefits	(b) \$0
(3) Indirect Costs & Benefits	There are no anticipated indirect costs or benefits to local partners.
(4) Information Sources	NA
(5) Assistance	NA

(6) Optional	
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**Economic Impacts on Families**

- (1) Describe the direct costs and benefits (as defined on page 1) to a typical family of three (average family size in Virginia according to the U. S. Census) arising from any proposed regulatory changes that would affect the costs of food, energy, housing, transportation, healthcare, and education. If families are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
  - (a) Enter estimated dollar value of direct costs.
  - (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe any indirect costs and benefits (as defined on page 1) to a typical family of three that are most likely to result from the proposed changes.
- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (5) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

**Table 3: Impact on Families**

(1) Direct Costs & Benefits	There are not anticipated direct costs or benefits to families. The cost for private well installation is not anticipated to be affected by this regulatory change.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) \$0
Direct Benefits	(b) \$0
(3) Indirect Costs & Benefits	The indirect costs and the indirect benefits of the regulatory changes on families are not quantifiable because every application for a private well construction permit is unique. The specific benefits received by a family is unknown until such time that a permit request is received and a site assessment conducted. In general, the proposed changes incorporate standard industry practice which ensure the protection of family’s health by ensuring properly constructed private wells.



(4) Information Sources	NA
(5) Optional	

**Impacts on Small Businesses**

- (1) Describe the direct costs and benefits (as defined on page 1) for small businesses. For purposes of this analysis, “small business” means the same as that term is defined in § 2.2-4007.1. If small businesses are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
  - (a) Enter estimated dollar value of direct costs.
  - (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe the indirect benefits and costs (as defined on page 1) for small businesses that are most likely to result from the proposed changes.
- (4) Alternatives: Add a qualitative discussion of any equally effective alternatives that would make the regulatory burden on small business more equitable compared to other affected business sectors, and how those alternatives were identified.
- (5) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

**Table 4: Impact on Small Businesses**

(1) Direct Costs & Benefits	There are not anticipated direct costs or benefits to small businesses. The primary small businesses using the Private Well Regulations are Water Well Systems Providers, Onsite Soil Evaluators, and Professional Engineers. The regulatory change is not anticipated to affect the cost of permitting or construction of private wells.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) \$0
Direct Benefits	(b) \$0

(3) Indirect Costs & Benefits	The indirect benefits of the regulatory changes on small businesses is not quantifiable because every application for a private well construction permit is unique. The specific benefits received by small businesses is unknown until such time that a permit request is received and a site assessment conducted.
(4) Alternatives	There are no anticipated direct costs or benefits to small businesses; therefore, alternatives other than maintaining the status quo were not considered.
(5) Information Sources	None anticipated
(6) Optional	

**Changes to Number of Regulatory Requirements**

*For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed.*

**Table 5: Total Number of Requirements**

Section number	Number of Requirements			
	Initial Count	Additions	Subtractions	Net Change
10	0	0	0	0
20	1	0	0	0
30	4	0	0	0
40	1	0	0	0
50	1	0	0	0
60	1	0	0	0
70	2	0	0	0
80	1	0	0	0
90	5	0	0	0
100	1	0	0	0
110	1	0	0	0
120	2	0	0	0
130	0	0	0	0
140	4	0	0	0
150	21	0	0	0
160	1	0	0	0
170	16	0	0	0

180	17	0	0	0
190	3	0	0	0
200	2	0	0	0
210	5	0	0	0
220	6	0	0	0
230	8	1	0	1
240	2	0	0	0
250	11	0	0	0
260	11	0	0	0
270	6	0	0	0
271	9	0	0	0
272	4	0	0	0
280	2	0	0	0
290	3	0	0	0
300	4	0	0	0
310	1	0	0	0
320	1	0	0	0
330	2	0	0	0
331	0	0	0	0
340	1	0	0	0
350	1	0	0	0
360	0	0	0	0
370	9	0	4	-4
380	26	7	0	7
390	3	0	0	0
400	10	4	1	3
410	45	9	4	5
420	2	1	0	1
430	2	1	0	1
431	0	4	0	4
440	1	0	1	-1
450	12	2	0	2
460	4	0	0	0
470	0	0	1	-1
480	1	0	1	-1
TOTAL:	276	29	12	17