

Office of Regulatory Management
Economic Review Form

Agency name	State Water Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	9VAC25-860
VAC Chapter title(s)	9VAC25-860 - Virginia Pollutant Discharge Elimination System (VPDES) General Permit Regulation for Potable Water Treatment Plants
Action title	Reissuance of a General Permit for the discharge of effluent resulting from the treatment of drinking water at potable water treatment plants.
Date this document prepared	October 5, 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.

VPDES general permit regulations expire every 5 years and must be re-issued in order for permit coverage to be available to new permittees and existing permittees that do not submit a registration statement in a timely manner. If the general permit is not re-issued, the regulated community will need to obtain an individual permit to conduct the regulated activity. For this reason, the costs associated with obtaining an individual permit are compared with the costs associated with general permit coverage. General permits provide the regulated community with a streamlined, less burdensome approach to obtain coverage for conducting a specific regulated activity.

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

<p>(1) Direct Costs & Benefits</p>	<p>9VAC25-860-60 Registration Statement – Several new items were amended (latitude/longitude, flow, and the schematic drawing) and one item was added (VDH Public Water Supply Identification (PWSID) number).</p> <p>Direct Costs: No direct economic cost to regulated entities expected beyond the additional administrative time permittees may spend to recalculate the flow values, find the PWSID number (this is online) and add more details to the schematic drawing.</p> <p>Direct Benefits: No direct economic benefit to regulated entities.</p> <p>There are currently 109 active potable water treatment plants covered under this permit. Each one would be subject to the changes described above.</p> <p>9VAC25-860-70. General Permit – New limits for total suspended solids (TSS) and total residual chlorine (TRC) were added to reverse osmosis facilities if they discharge these parameters. Whether or not they discharge these pollutants depends on how the reverse osmosis plant is designed and if these pollutants are present in the discharge. Currently there are only three water treatment plants that utilize reverse osmosis that may be subject to these new limitations. Monitoring occurs monthly and costs for TSS can range from \$13 - \$68 per sample. Therefore costs for TSS could result in \$156 to \$816 per year.</p> <p>Direct Benefits: No direct economic benefit to regulated entities.</p>
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	<p>The most common method of measurement for Total Chlorine Residual (parameter usually measured for wastewater effluents) is the DPD (N,N-diethyl-p-phenylenediamine) colorimetric procedure, and the most often used provider is Hach Company. Below are the minimum required equipment for performing the test for Total Residual Chlorine and quality assurance procedures to verify accuracy of the results:</p> <p>Hach Product #LPV445.97.00110 - DR300 Pocket Colorimeter Kit, single parameter go-anywhere portable photometer. Kit includes: carrying case, batteries, sample cells and instrument manual. Reagent are not included and must be purchased separately.</p> <p>Cost: \$589.12 (one time cost)</p> <p>Hach Product #2105669 - DPD Total Chlorine Residual Powder Pillows, 10 mL sample size, 100/pack.</p> <p>Cost: \$29.11 (estimate 2/year)</p> <p>Hach Product #2635300 - SpecCheck Secondary Gel Standards Set, DPD Chlorine low range.</p> <p>Cost: \$249.76 (estimated 2/year)</p> <p>It is likely these facilities already own this equipment and supplies to measure the disinfection level in the distribution system drinking water.</p>		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) See above	(c) n/a	
Direct Benefits	(b) None	(d) n/a	
(3) Benefits -Costs Ratio	n/a	(4) Net Benefit	n/a
(5) Indirect Costs & Benefits	None.		

<p>(6) Informat ion Sources</p>	<p>TSS costs: https://wrrc.unh.edu/analytical-services-prices \$16 https://anlab.ucdavis.edu/Prices \$45 https://www.cityoffortmorgan.com/DocumentCenter/View/4382/Wastewater-Treatment-Plant-Laboratory-Analysis-Fees?bidId= TSS = \$13 Chlorine = https://www.hach.com/colorimeters/dr300-pocket-colorimeter/family?productCategoryId=54949031368 https://www.hach.com/dpd-total-chlorine-reagent-powder-pillows-10-ml-pk-100/product?id=7640187693& bt=465292674389& bk=& bm=& bn=g&utm_id =go_cmp-11129852373_adg-104404195610_ad-465292674389_dsa-953865823099_dev-c_ext-_prd-&utm_source=google&gclid=Cj0KCCQjwnbmaBhD-ARIsAGTPcfWUVrGXUpc600fcbXIR2_xJZaQIPb-0CJ_RSuBk3nJAtpNodZdEoNEaAltTEALw_wcB https://www.hach.com/speccheck-secondary-gel-standards-set-dpd-chlorine-lr/product?id=7640204329&source=googleshopping&locale=en-US& bt=271134018450& bk=& bm=& bn=g& bt=271134018450& bk=& bm =& bn=g&utm_id=go_cmp-1411501171_adg-57078103353_ad-271134018450_pla-300840422534_dev-c_ext-_prd-2635300&utm_source=google&gclid=Cj0KCCQjwnbmaBhD-ARIsAGTPcfUQyqPvrsF5oaKInlJWMU1bRbSGjr4RGHYer1N-WKFQPXImRq3o8b8aAtghEALw_wcB</p>
<p>(7) Optional</p>	

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.

<p>(1) Direct Costs & Benefits</p>	<p>Direct Costs: Maintaining the current requirements would have no direct economic cost to regulated entities.</p>
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	Direct Benefits: Maintaining the current requirements would have no direct economic benefits to the regulated entities beyond the analytical costs saved that are mentioned in 1a.		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) None	(c) n/a	
Direct Benefits	(b) None	(d) n/a	
(3) Benefits-Costs Ratio	n/a	(4) Net Benefit	n/a
(5) Indirect Costs & Benefits	No indirect costs or benefits under the status quo.		
(6) Information Sources	n/a		
(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>Regulating industrial discharges to state waters through the reissuance of a general permit regulation is an alternative streamlined approach that is used to regulate entities that conduct similar activities. A benefit of this general permit is its lower cost to permittees relative to the cost of obtaining an individual permit. The permit fee for owners to obtain coverage under this general permit is \$600. If this general permit were not available, these owners would be required to obtain an individual VPDES permit, and the initial application fee would be \$10,200 (assumes industrial minor, no standard limits). An annual permit maintenance fee of \$4,059 would also apply (total of \$20,295 per permittee for a 5-year permit term). Additionally, a public notice would need to be published in a local newspaper twice at each reissuance. This is estimated at \$900 each 5 years.</p>
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	These costs do not account for the longer lead time to obtain an individual permit and the increased burden on DEQ staff resources that would result.		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) See above	(c) n/a	
Direct Benefits	(b) See above	(d) n/a	
(3) Benefits-Costs Ratio	n/a	(4) Net Benefit	n/a
(5) Indirect Costs & Benefits	n/a		
(6) Information Sources	n/a		
(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	<p>There are no direct costs and benefits for local partners in terms of real monetary costs and FTEs. The localities that normally hold this general permit coverage are subject to the costs and benefits presented in 1a above. FTEs at the localities would likely be the same whether or not the permit was a general permit or an individual permit.</p> <p>General permits provide the regulated community with a streamlined, less burdensome approach to obtain coverage for conducting a specific regulated activity. Without this general permit regulation, an individual permit would be required to conduct the regulated activity.</p>
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) n/a
Direct Benefits	(b) n/a
(3) Indirect Costs & Benefits	n/a
(4) Information Sources	n/a
(5) Assistance	n/a
(6) Optional	

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 is no potential impact of the proposed regulatory action on the institution of the family and family stability.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) n/a
Direct Benefits	(b) n/a
(3) Indirect Costs & Benefits	n/a
(4) Information Sources	n/a
(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	General permits provide the regulated community with a streamlined, less burdensome approach to obtain coverage for conducting a specific regulated activity. Without this general permit regulation, an individual permit would be required to conduct the regulated activity
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) n/a
Direct Benefits	(b) n/a
(3) Indirect Costs & Benefits	n/a
(4) Alternatives	n/a
(5) Information Sources	n/a

(6) Optional	
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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.

The general permit approach contains 348 requirements on the regulated community, whereas the individual permit contains 2177 requirements on the regulated community. The general permit provides a streamlined approach for the regulated community to utilize that is contains 1829 less requirements on the regulated community.

Table 5: Total Number of Requirements

Chapter number	Number of Requirements			
	Initial Count	Additions	Subtractions	Net Change
9VAC25-860	91	3	0	+3