

Office of Regulatory Management  
Economic Review Form

<b>Agency name</b>	State Water Control Board
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	9 VAC 25-720
<b>VAC Chapter title(s)</b>	Water Quality Management Planning Regulation
<b>Action title</b>	Add State Water Control Board adopted wasteload allocations (WLAs) for 2 total maximum daily load (TMDL) studies: 1) Moores and Mill Creek TMDL, and 2) Beaverdam Creek, Fryingpan Creek, Pigg River, and Poplar Branch TMDL
<b>Date this document prepared</b>	October 10, 2023- revised 1/25/2024, revised 3/6/24
<b>Regulatory Stage (including Issuance of Guidance Documents)</b>	Final Exempt Action

**Cost Benefit Analysis**

Complete Tables 1a and 1b for all regulatory actions. You do not need to complete Table 1c if the regulatory action is required by state statute or federal statute or regulation and leaves no discretion in its implementation.

Table 1a should provide analysis for the regulatory approach you are taking. Table 1b should provide analysis for the approach of leaving the current regulations intact (i.e., no further change is implemented). Table 1c should provide analysis for at least one alternative approach. You should not limit yourself to one alternative, however, and can add additional charts as needed.

Report both direct and indirect costs and benefits that can be monetized in Boxes 1 and 2. Report direct and indirect costs and benefits that cannot be monetized in Box 4. See the ORM Regulatory Economic Analysis Manual for additional guidance.

**Introduction.**

To address impaired waters, the State Water Control Board (Board) adopted amendments to the Water Quality Management Planning Regulation (9VAC25-720, WQMPR) to add total maximum daily load (TMDL) wasteload allocations (WLAs). A TMDL WLA is a calculation of

the maximum amount of a pollutant that an impaired waterbody can receive from point sources while still maintaining Virginia Water Quality Standards (9VAC25-260, WQS) and meeting its designated uses, such as recreation, aquatic life; wildlife; and producing edible and marketable natural resources.

The Board adopted amendments to 9VAC25-720-60 A for the James River Basin to incorporate sediment WLAs developed for the Benthic TMDL study for the Moores Creek and Mill Creek Watersheds TMDL located in Rockbridge County, Virginia. Additionally, the Board adopted amendments to 9VAC25-720-80 A for the Roanoke River Basin to incorporate sediment WLAs developed for the Benthic TMDL study for Fryingpan Creek, Pigg River, Poplar Branch and Beaverdam Creek in Bedford, Franklin, and Pittsylvania Counties.

Virginia’s 2022 Section 305(b)/303(d) Water Quality Assessment Integrated Report lists the streams affected by the WLA as impaired because they have too much sediment which violates the general aquatic life (benthic) water quality standard. Consequently, State Water Control Law § 62.1-44.19:7 and section 303(d) of the Clean Water Act (implemented through 40 CFR 130.7(c)) require DEQ to develop a TMDL of the pollutant (sediment) causing the impairments that may enter the water for each impaired water body. In each TMDL study, DEQ considered multiple scenarios to effectively reduce the amount of sediment in the affected streams. Feedback from stakeholders guided the selection of the preferred scenarios for each TMDL watershed. The Environmental Protection Agency (EPA) has preliminarily approved both TMDLs and associated WLAs included in this regulatory change.

WLAs adopted, amended, or repealed by the Board pursuant to the State Water Control Law are identified as final exempt actions by § 2.2-4006 A.14 of the Administrative Process Act (APA). To meet the requirements of the APA exemption for adding a WLA, the public, including impacted facilities, were invited to participate in the rulemaking process during multiple stakeholder meetings, which included two public meetings with 30-day comment periods for the stakeholders to provide comments on the TMDL development and report. No comments were received.

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

<p>(1) Direct &amp; Indirect Costs &amp; Benefits (Monetized)</p>	<p><u>Direct costs:</u> The WQMPR (9VAC 25-720) does not result in any direct monetizable costs. The regulation only lists the TMDL reports and WLAs, along with the impaired streams where it applies, but does not identify any facilities affected or mandate any direct measures that facilities must take to meet a WLA that would directly impose a cost.</p> <p><u>Indirect Costs:</u> WLAs are primarily used when DEQ issues new or modified Virginia Pollution Elimination Discharge System (VPDES) permits in the impaired watershed. Therefore, DEQ is not able to monetize indirect costs at this time because the effect of a WLA, if any, depends on the facility operations and permit being issued. The WLAs for sediment could indirectly impact facility costs if a DEQ permit needed pollutant reductions to meet the overall WLA. Sediment discharges are dependent on various industrial processes or Best</p>
---	--

Management Practices specific to facilities, which makes it difficult to estimate the costs resulting from adding a WLA to the regulation because each permittee would have different requirements and options to reduce pollutants.

DEQ does not expect existing facilities discharging to the impaired waters of the Moores Creek and Mill Creek, and the Fryingpan Creek, Pigg River, Poplar Branch and Beaverdam Creek Watersheds to incur indirect costs in this case. For this regulatory amendment, the WLA for sediment affects three existing VPDES permitted facilities in the Beaverdam Creek Watershed and one facility with an Industrial Stormwater General Permit in the Mill Creek watershed. However, for these facilities, no economic cost is anticipated because the proposed WLA was calculated using their currently allowable permitted discharge amount. Therefore, these facilities would not need to modify their current treatment system or operations since they already discharge well below their permitted amounts and the WLA.

Future facilities needing a VPDES permit to discharge sediment into the impaired waters will also need to comply with the WLA. As the WLAs were calculated using standard permit requirements for discharging sediment, facilities would be unlikely to need to manage discharges beyond typical VPDES permit requirements. Additionally, the WLAs include a buffer for future growth to allow for new facilities with sediment discharges starting operations in the watersheds. Permittees commonly monitor for sediment in existing VPDES permit requirements so in all likelihood no new monitoring would be required.

Direct Benefits: The addition of the WLA benefits the water body by ensuring that permit limits will result in improved water quality and contribute to efforts to remove the streams from the list of impaired waters. The amendment does not have any direct benefits that can be monetized since the regulation only lists the TMDL reports with the WLA amount and does not mandate any direct measures to meet the WLA.

Indirect Benefits: DEQ is not able to monetize the potential indirect benefits to implement the WLA at this time. Indirect benefits are incurred at the time VPDES permits incorporate the WLA, if necessary to manage sediment discharges to improve water quality. Improved water quality will protect human health and aquatic life, resulting in healthier fisheries, safer and reliable public water supplies, and contribute to economic benefits from tourism, economic development, and producing edible and marketable natural resources, such as by commercial and recreational fishing industries.

(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Not applicable	(b) Not applicable
(3) Net Monetized Benefit	Not applicable	
(4) Other Costs & Benefits (Non-Monetized)	<p><u>Indirect Costs:</u> Regulated entities could incur costs such as installing new equipment, changing operational procedures, or undertaking best practices if they needed to reduce pollution discharges. These cannot be monetized because of the variability in potential industrial processes and the need to review a VPDES permit application to assess if an individual facility would need to reduce sediment discharges.</p> <p><u>Direct Benefits:</u> This change to the regulation meets the legal mandate in state and federal law to incorporate the WLA into the WQMPR to meet State Water Control Law § 62.1-44.19:7. Additionally, this meets section 303(d) of the Clean Water Act and requirement in 40 CFR 130.7 to include the approved TMDL loads in the state’s waters quality management plans and VPDES permits. DEQ needs to adopt the WLA into the WQMPR to receive final EPA approval of the TMDL study, which also addresses non-point sources of sediment that need to be managed to remove the streams from the impaired waters list. The regulatory change broadly benefits the public by improving the water quality of impaired waters by identifying the maximum amount of pollutant load a stream can assimilate and meet WQS (9VAC25-260), to support all designated uses, and ultimately be removed from Virginia’s 303(d) list of impaired waters.</p> <p><u>Indirect Benefits:</u> Improved water quality will protect human health and aquatic life, resulting in healthier fisheries, safer and reliable public water supplies, and contribute to economic benefits from tourism, economic development, and producing edible and marketable natural resources, such as by commercial and recreational fishing industries.</p>	
(5) Information Sources	Moore's Creek and Mill Creek TMDL Report Fryingpan Creek, Pigg River, Poplar Branch and Beaverdam Creek TMDL Report	

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

(1) Direct & Indirect Costs &	The status quo could be maintained by not drafting or implementing the TMDL studies or incorporating the WLA into the WQMPR. However, State Water Control Law § 62.1-44.19:7 and section 303(d) of the Clean
-------------------------------	--

<p>Benefits (Monetized)</p>	<p>Water Act requires DEQ to develop a TMDL for pollutants that may enter the water for each impaired water body. DEQ needs to adopt the WLA into the WQMPR to receive final EPA approval of the TMDL study, which also addresses non-point sources of sediment that need to be managed to remove the streams from the impaired waters list. Also, this would not improve water quality in the stream segments impaired because the sediment reductions necessary to improve the water quality would not be identified and implemented in response to the TMDL study.</p> <p><u>Direct Costs</u> - There are no direct economic costs with maintaining the status quo since the regulation does not directly mandate any requirements.</p> <p><u>Indirect Costs</u> - No indirect costs can be monetized at this time. Without developing or implementing a TMDL study and WLA, DEQ will not quantify the point and non-point source sediment reductions needed to improve water quality in these watersheds. The economic costs are related to the waterbody remaining impaired and not fully providing beneficial uses to the public overall, such as diminished recreation or fishing opportunities. The potential uses are too variable to monetarily estimate the economic impact of the reduced water quality.</p> <p><u>Direct Benefits</u> - DEQ anticipates no direct economic benefits with maintaining the status quo since the proposed amendments would not have required existing permittees to take any action or incur costs to reduce sediment discharges to meet the proposed WLA. DEQ drafted the TMDL for the proposed WLAs consistent with their existing permit requirements.</p> <p><u>Indirect Benefits</u> - For the two TMDLs, there are no anticipated monetizable indirect economic benefits with maintaining the status quo since the TMDL was drafted so that the proposed WLAs used the existing VPDES permit requirements.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct &amp; Indirect Costs</p>	<p>Direct &amp; Indirect Benefits</p>
	<p>(a) Not Applicable</p>	<p>(b) Not Applicable</p>
<p>(3) Net Monetized Benefit</p>	<p>Not Applicable</p>	
<p>(4) Other Costs &amp; Benefits (Non-Monetized)</p>	<p>Maintaining the status quo would not lead to improved water quality in an impaired water body. The status quo would not meet State Water Control Law § 62.1-44.19:7 or section 303(d) Clean Water Act requirements to develop a TMDL for pollutants that may enter the water</p>	

	<p>for each impaired water body. Failing to proceed with TMDL’s to address an impairment can also create the potential for legal action for failing to meet Clean Water Act requirements (see previous case <u>American Canoe vs EPA</u>).</p> <p><u>Indirect Costs:</u> Without adopting the WLA into the WQMPR, EPA would not approve the TMDL study. Without an approved TMDL study, the non-point source reductions needed, which make up a large majority of the sediment causing the impairments, would also not be identified and addressed. Lack of an approved TMDL may prevent the public from accessing funds to develop BMPs that would reduce sediment into these impaired waters. Values are not available due to the large variability in BMPs, system sizes, locations, and beneficial uses. Indirect costs could come from the impacts of poor water quality on human health and aquatic life, resulting poor fisheries, less reliable public water supplies, and negative economic costs to tourism, economic development, and commercial and recreational fishing industries.</p>
(5) Information Sources	<p>DEQ TMDL Program procedures, documents, and staff  American Canoe vs EPA - <a href="https://law.justia.com/cases/federal/district-courts/FSupp2/30/908/2417146/">https://law.justia.com/cases/federal/district-courts/FSupp2/30/908/2417146/</a></p>

**Table 1c: Costs and Benefits under Alternative Approach(es)**

(1) Direct & Indirect Costs & Benefits (Monetized)	<p>No alternative approach to developing TMDL studies and WLA amounts was considered because State Water Control Law § 62.1-44.19:7 and section 303(d) of the Clean Water Act requires DEQ to develop a TMDL study and incorporate WLAs into the WQMPR for each impaired water body to address point source discharges of pollutants into the water.</p> <p>However, DEQ could revisit a TMDL study to look at alternate WLAs to make it have more or less stringent pollutant amounts. DEQ develops the proposed WLA amount by looking at alternative scenarios to decide how to balance the pollutant amounts among various point (permitted) sources and unregulated non-point sources.</p> <p><u>Direct Costs:</u> DEQ would incur direct costs to evaluate alternate WLA amounts and make any resulting changes to the document. These costs would likely mirror costs to model WLA scenarios when originally creating the TMDL study. For the Pigg River TMDL study, DEQ paid contractors \$35,234 to develop allocation scenarios, complete project coordination and draft the document, which would be similar costs to revisit the WLA. Assuming the Moore’s and Mill Creek project would have similar cost, then total costs to revise both TMDL studies, by doubling the Pigg River amount, could be approximately \$70,000, plus any DEQ staff time required to revise the study results. Generating a different WLA would require DEQ</p>
--	--

	<p>to coordinate with the public again and obtain EPA approval of any revision.</p> <p><u>Indirect Costs:</u> Generating a more stringent WLA amount could cause existing permittees to incur costs because the facilities may need to change their operations to reduce pollution discharges. Additionally, a TMDL and WLA is a balanced equation so allowing higher pollutant amounts from one source would cause reductions from other sources, shifting cost burdens of pollution controls to other permittees or non-point sources in the watershed.</p> <p><u>Direct Benefits:</u> No direct monetizable benefit is expected from considering alternate WLA amount. The existing permitted sources would not gain any economic benefit by generating a less stringent WLA since they are already not impacted at the proposed WLA amount. Any alternate scenario would need to have the same overall pollution reduction required to meet the WQS so other sources would need to incur the costs to reduce pollutants.</p> <p><u>Indirect Benefits:</u> No indirect monetizable benefit from this alternative approach. Any alternate scenario would make the same overall pollution reduction required to meet the WQS.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) \$70,000 plus staff time	(b) Not Applicable
(3) Net Monetized Benefit	Not Applicable	
(4) Other Costs & Benefits (Non-Monetized)	Evaluating less stringent alternative scenarios for point source pollution reduction could lessen costs and provide benefits to the permittees affected by the preferred scenario. However, those costs would be shifted to other sources or permittees to make up the pollution reductions necessary to meet the WQS. Additionally, as noted above, no additional costs for current permittees are anticipated and thus their fiscal impact would not change.	
(5) Information Sources	DEQ TMDL Program, Pigg River TMDL Scope of Work.	

**Impact on Local Partners**

Use this chart to describe impacts on local partners. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

**Table 2: Impact on Local Partners**

<p>(1) Direct &amp; Indirect Costs &amp; Benefits (Monetized)</p>	<p><u>Direct costs:</u> The WQMPR (9VAC 25-720) does not result in any direct monetizable costs to Local Partners. The regulation only lists the TMDLs and WLA, along with the impaired streams where it applies, but does not identify affected facilities or mandate any direct measures that facilities must take to meet the WLA that would directly impose a cost.</p> <p><u>Indirect Costs:</u> There are no indirect costs associated with this regulatory amendment on Local Partners. Stewartsville Elementary School in Bedford County is the only Local Partner in the affected watershed with a current VPDES permit. Since the WLA amount was calculated using their current permitted discharge amount, they would not incur any cost to change their processes to meet the new WLA.</p> <p><u>Direct Benefits:</u> The regulatory amendment does not have any monetizable direct benefits for local partners. The regulatory change broadly benefits the public by improving the water quality of impaired waters by identifying the maximum amount of pollutant load a stream can assimilate to meet WQS (9VAC25-260), support all designated uses, and ultimately be removed from Virginia’s 303(d) list of impaired waters.</p> <p><u>Indirect Benefits:</u> The regulatory amendment does not have any monetizable indirect benefits. Improved water quality will protect human health and aquatic life, resulting in healthier fisheries, safer and reliable public water supplies, and contribute to economic benefits from tourism, economic development, and producing edible and marketable natural resources, such as by commercial and recreational fishing industries.</p>	
<p>(2) Present Monetized Values</p>	<p>Direct &amp; Indirect Costs</p>	<p>Direct &amp; Indirect Benefits</p>
	<p>(a) Not Applicable</p>	<p>(b) Not Applicable</p>
<p>(3) Other Costs &amp; Benefits (Non-Monetized)</p>	<p>Local partners will benefit from improved water quality that protect human health and aquatic life, resulting healthier fisheries, safer and reliable public water supplies, and contribute to economic benefits from tourism, economic development, and commercial and recreational fishing industries utilized and enjoyed by their citizens.</p>	



(4) Assistance	N/A
(5) Information Sources	DEQ TMDL Program procedures, documents, and staff

**Impacts on Families**

Use this chart to describe impacts on families. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

**Table 3: Impact on Families**

(1) Direct & Indirect Costs & Benefits (Monetized)	This regulation is not expected to have an impact on the institution of the family and family stability.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Not Applicable	(b) Not Applicable
(3) Other Costs & Benefits (Non-Monetized)	Improved water quality will protect human health and aquatic life, resulting healthier fisheries, safer and reliable public water supplies, and contribute to economic benefits from tourism, economic development, and producing edible and marketable natural resources, such as by commercial and recreational fishing industries.	
(4) Information Sources	DEQ TMDL Program procedures, documents, and staff	

**Impacts on Small Businesses**

Use this chart to describe impacts on small businesses. See Part 8 of the ORM Cost Impact Analysis Guidance for additional guidance.

**Table 4: Impact on Small Businesses**

(1) Direct & Indirect Costs & Benefits (Monetized)	This regulatory amendment is not expected to have an impact on small businesses since the one existing small business affected would only continue operating under their current permit requirements and not need to make any changes to meet the WLA. Additionally, the WLA has a buffer built into it to account for the likelihood of future growth that
--	---

	would support new small business that may need to discharge sediment into the impaired waters.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Not Applicable	(b) Not Applicable
(3) Other Costs & Benefits (Non-Monetized)	Not Applicable	
(4) Alternatives	none	
(5) Information Sources	DEQ TMDL Program procedures, documents, and staff	

**Changes to Number of Regulatory Requirements**

**Table 5: Regulatory Reduction**

For each individual action, please fill out the appropriate chart to reflect any change in regulatory requirements, costs, regulatory stringency, or the overall length of any guidance documents.

*Change in Regulatory Requirements*

VAC Section(s) Involved	Authority of Change	Initial Count	Additions	Subtractions	Net Change
9VAC25 – 720-60*	Statutory:	0	0	0	0
	Discretionary:	0	0	0	0
9VAC25 – 720-80*	Statutory:	0	0	0	0
	Discretionary:	0	0	0	0
				<b>Total Net Change of Statutory Requirements:</b>	<b>0</b>
				<b>Total Net Change of Discretionary Requirements:</b>	<b>0</b>

*\*This regulation sets the total amount of a pollutant that a waterbody can receive and still meet water quality standards. The existence of a TMDL by itself does not impose statutory or discretionary regulatory requirements on anyone. DEQ implements TMDLs by imposing discharge limitations in permits issued in accordance with the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation (9 VAC 25 - 31), not through the Water Quality Management Planning Regulation (9VAC25-720). Discharge limitations imposed on VPDES permits are included in the regulatory baseline for the VPDES Permit Regulation (9 VAC 25 - 31). Counting these requirements here would double count regulatory requirements.*

*Cost Reductions or Increases (if applicable)*

VAC Section(s) Involved	Description of Regulatory Requirement	Initial Cost	New Cost	Overall Cost Savings/Increases
NA	0	0	0	0

*Other Decreases or Increases in Regulatory Stringency (if applicable)*

VAC Section(s) Involved	Description of Regulatory Change	Overview of How It Reduces or Increases Regulatory Burden

NA	NA	NA

*Length of Guidance Documents (only applicable if guidance document is being revised)*

<b>Title of Guidance Document</b>	<b>Original Length</b>	<b>New Length</b>	<b>Net Change in Length</b>
NA	NA	NA	NA