

Office of Regulatory Management  
Economic Review Form

<b>Agency name</b>	Department of Environmental Quality (“Department”)
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	NA
<b>VAC Chapter title(s)</b>	NA
<b>Action title</b>	NA
<b>Date this document prepared</b>	October 9, 2025
<b>Regulatory Stage (including Issuance of Guidance Documents)</b>	GM24-2001 Virginia Stormwater Management Handbook, Version 1.2, 2025

**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.

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

<p>(1) Direct &amp; Indirect Costs &amp; Benefits (Monetized)</p>	<p><b>This action updates Guidance Document GM24-2001 – Virginia Stormwater Management Handbook, by replacing Version 1.1 with Version 1.2 (“VSMH”). The updates include revisions requested by stakeholders, technical corrections, and other updates to the text, figures, and tables to increase clarity and understanding.</b></p> <p>The VSMH provides stakeholders (builders, developers, planners, and local governments that implement stormwater and/or erosion and sediment control programs) with the tools and information necessary to interpret, implement, and comply with requirements in the Virginia Erosion and Stormwater Management Act, §§ 62.1-44.15:24 et seq. of the Code of Virginia, Erosion and Sediment Control Law for Localities Not Administering a Virginia Erosion and Stormwater Management Program, §§ 62.1-44.15:51 et seq. of the Code of Virginia (collectively, the “Laws”), and Virginia Erosion and Stormwater Management Regulation, 9VAC25-875 (“VESM Regulation”). The Laws and VESM Regulation became effective July 1, 2024 (<i>see</i> 2023 Acts of Assembly Chapters 665 and 666 (HB 2390, SB 1168)).</p> <p>This action to issue updated agency guidance makes technical and substantive revisions to the VSMH to ensure it: (i) is consistent with requirements in the Laws and VESM Regulation; (ii) addresses stakeholder feedback about corrections, revisions, and updating or adding specifications for best management practices; and (iii) improves clarity and understanding through revisions to the text, figures, and tables.</p> <p>Notable revisions and updates include:</p> <ul style="list-style-type: none"> <li>- Revising typos, errors, broken document links, and new DEQ weblinks from September 2025 relaunch.</li> <li>- Updated list of VESMP Authorities from 2017 to 2025.</li> <li>- Updated sections for consistency with 9VAC25-875 (effective August 14, 2025) addressing plan modifications and enforceability of minimum standards among other minor items.</li> <li>- Making the specifications for waterbars, C-ECM-08, specific to temporary waterbars and adding a new specification, C-ECM-17 for permanent waterbars. This provides clear direction and specifications for installing, converting and maintaining the two measures and their different design standards.</li> <li>- Revising 61 Construction BMP specifications to resolve typos, conflicts, align with industry standards including material availability, and the inspection requirements of 9VAC25-880 for consistency. Details and CADD figures were revised where appropriate.</li> </ul>
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- Planting lists were updated to remove invasive species, add more native species, and refer to the most up-to-date published plant lists maintained by the state.

A summary of revisions and a .pdf of Version 1.2 with underline and strikethrough to show inserted and deleted text will be available under the “Virginia Stormwater Management Handbook, Version 1.2” banner on the DEQ website at:

<https://www.deq.virginia.gov/water/stormwater/stormwater-construction/handbooks>

Because the purpose and overall substance of Version 1.2 of the VSMH remains consistent with earlier versions (1.0 and 1.1), there is no change to the economic analysis and impact of the VSMH. Its costs, benefits, and overall impact on the regulated community and localities that implement erosion and stormwater management programs remain the same as outlined in the ORM Economic Impact Form dated September 27, 2024 and incorporated in this form.

**Direct Costs:** As guidance that provides information about and alternatives for complying with the Laws and VESM Regulation, the VSMH does not impose any direct costs on either stakeholders or the Department.

**Indirect Costs:** The primary indirect costs associated with the VSMH were additional staff time required for local authority and Department staff to attend training and gain familiarity with the VSMH. The Department conducted training (in-person and via webinar) during May and June 2024 for engineers, planners, localities, and staff to help them learn about the VSMH and its content. Version 1.1 of the VSMH has been in use since August 21, 2024. At this point, the Department expects the amount of time required for users to become familiar with Version 1.2 will be minimal. Training courses will be updated where and when appropriate.

**Direct Benefits:** As guidance that provides information about and alternatives for complying with the Laws and VESM Regulation, the VSMH has resulted in direct benefits to stakeholders, local governments, and the Department. They include:

- Reduced confusion since one guidance document, the VSMH replaced almost 9,000 pages of outdated and sometimes conflicting manuals, handbooks, and guidance;
- Up-to-date specifications for best management practices (BMPs) have allowed more efficient review of plans and permit applications since users and regulators both have the same information and expectations;

	<ul style="list-style-type: none"> <li>- The VSMH increases the number of available BMPs from 54 to over 78, giving stakeholders more alternatives, many of which are lower-cost and use improved materials and technologies compared to the BMPs in guidance that had been in use; and</li> <li>- Significant time savings for planners, applicants, and reviewers because information is in one place, it is up-to-date, and consistent with the Laws and VESM Regulation that became effective July 1, 2024.</li> </ul> <p>The VSMH has reduced confusion and uncertainty for stakeholders, Department staff, and local erosion and stormwater management program authorities about the specifications for multiple types of best management practices (i.e., their design, use, and maintenance), thereby lowering costs for site plans, plan review, and implementation. This has resulted in faster plan development and review. The Department estimates this has resulted in at least a 30-day time savings, decreasing the current average permit review and approval process, which includes time for the applicant to make revisions and resubmit plans, from 155 days to 125 days. The Department is currently reviewing and approving the majority of plans it receives in 60 days or less if they are complete at submittal. The metrics provided by the new DEQ PEEP tracking platform support this data.</p> <p><b>Indirect Benefits:</b> Moving to the VSMH for implementation of the new Laws and VESM Regulation has allowed projects to go to construction sooner and given project engineers and planner a wider selection of BMPs with current specifications.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits

	<p>(a) As guidance, there are no direct costs. Unable to monetize indirect costs associated with additional staff training to learn Version 1.2 of the VSMH.</p>	<p>(b) If a consulting firm saves an average of eight (8) hours developing a permit application for a land-disturbing activity because the VSMH is less complex and more usable than old guidance, multiplying the 8 hours by a typical billable rate of \$120/hour, for the approximately 1,200 permits the Department issues annually for land-disturbing activities across the Commonwealth, the total savings for the regulated community would exceed approximately \$1.2 million/yr. In addition, local authorities and the Department have benefited from the amount of staff time saved working with consultants on issues due to the less complex and more useable guidance.</p> <p>Since implementation of the VSMH, the Department estimates the amount of time required for plan development and review has resulted in at least a 30-day time savings. Monetized – there is approximately \$28 billion/yr in construction activity in Virginia. With an estimated 10% cost of debt and equity, this results in savings of \$233 million/yr.</p> <p>There are also indirect benefits from being able to bring projects to construction sooner, as well as completing and closing out projects faster, and having guidance that references laws and regulations that are in effect (citations in the old guidance were to laws that have been amended or repealed in many cases and regulations that have been repealed). The Department is unable to quantify these benefits.</p>
(3) Net Monetized Benefit	NA	
(4) Other Costs & Benefits (Non-Monetized)	Unknown (see discussion above).	

(5) Information Sources	Department permit records; communications with Department staff that worked for consulting firms that prepare and work with stormwater plans.
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**Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)**

(1) Direct & Indirect Costs & Benefits (Monetized)	<p><b>Direct Costs:</b> The “status quo” option would be to continue to use Version 1.1 of the VSMH. While this does not impose any direct costs on either stakeholders or the Department, it means the time and effort members of the Technical Review Committee (established under section 1.4 of the VSMH) put into keeping the VSMH up to date are not realized.</p> <p><b>Indirect Costs:</b> The “status quo” option would be to continue to use Version 1.1 of the VSMH (effective August 21, 2024). While Version 1.1 replaced existing manuals that were developed in 1992 and 1999 for the Virginia Erosion and Stormwater Management Regulations, 9VAC25-840, and Virginia Stormwater Management Program Regulation, 9VAC25-870, both of which have been repealed and replaced by the VESM Regulation on July 1, 2024, it contains outdated terminology, some editorial mistakes, and does not reflect evolving BMP specifications and products. The primary indirect costs with the “status quo” are the additional operator, consultant, Department, and local authority staff time to resolve plan review issues due to the inconsistencies. The Department is unable to quantify these costs.</p> <p><b>Direct Benefits:</b> The primary direct benefit of maintaining the “status quo” is the continued construction and implementation of BMPs which are familiar to the design community, developers, contractors, plan reviewers, and inspectors. The Department is unable to quantify these costs.</p> <p><b>Indirect Benefits:</b> The primary indirect benefits of maintaining the “status quo” option are that it would save design consultants, operators, local authorities, and Department staff time and personnel costs associated with learning updates to the VSMH. The Department is unable to quantify these costs.</p>	
	(2) Present Monetized Values	Direct & Indirect Costs
	(a) As guidance, there are no direct costs. Unable to monetize indirect costs associated with the status quo.	(b) Unable to monetize direct and indirect benefits.

(3) Net Monetized Benefit	NA
(4) Other Costs & Benefits (Non-Monetized)	NA
(5) Information Sources	NA

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

(1) Direct & Indirect Costs & Benefits (Monetized)	DEQ is not aware of any alternatives to the current proposal other than operating under the current “status quo” and not keeping the VSMH up to date.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) As guidance, there are no direct costs. Unable to monetize indirect costs associated with the status quo.	(b) Unable to monetize direct and indirect benefits.
(3) Net Monetized Benefit	NA	
(4) Other Costs & Benefits (Non-Monetized)	NA	
(5) Information Sources	NA	

**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**

(1) Direct & Indirect Costs & Benefits (Monetized)	<b>Direct Costs:</b> There are no direct costs to local partners because this action does not change the existing responsibilities of local governments to implement requirements in the Virginia Erosion and Stormwater Management Act, §§ 62.1-44.15:24 et seq. of the Code of Virginia, and Erosion and Sediment Control Law for Localities Not Administering a Virginia Erosion and Stormwater Management Program, §§ 62.1-44.15:51 et seq. of the Code of Virginia (Chapters 2.3 and 2.4 of the State Water Control Law).
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	<p><b>Indirect Costs:</b> The indirect costs associated with the guidance is additional staff time necessary for local staff to attend training associated with the VSMH. Many of the participants in the training DEQ conducted during May and June of 2024 represented localities. The Department is unable to quantify these costs.</p> <p><b>Direct Benefits:</b> The direct benefit to local partners is reduced confusion and up-to-date specifications with additional BMPs, which will result in less staff time in reviewing, inspecting, and working through issues before and during construction. The Department is unable to quantify these costs.</p> <p><b>Indirect Benefits:</b> The indirect benefits associated with this change are that construction projects will be completed faster and with fewer delays caused by uncertainty, thus supporting economic growth within localities. The Department is unable to quantify these costs.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) Unable to monetize direct and indirect costs.	(b) Unable to monetize direct and indirect benefits.
(3) Other Costs & Benefits (Non-Monetized)	NA	
(4) Assistance	NA	
(5) Information Sources	NA	

**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)	<p>Direct Costs: There are no direct costs that impact families associated with the guidance.</p> <p>Indirect Costs: There are no indirect costs that impact families associated with the guidance.</p>
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	<p>Direct Benefits: There are no direct benefits that impact families associated with the guidance.</p> <p>Indirect Benefits: There are no indirect benefits that impact families associated with the guidance.</p>	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) NA	(b) NA
(3) Other Costs & Benefits (Non-Monetized)	NA	
(4) Information Sources	NA	

**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)	Small businesses would have the same impact as described in 1a above. The Department is unable to identify the number of small businesses that have utilized (or would utilize) this guidance document.	
(2) Present Monetized Values	Direct & Indirect Costs	Direct & Indirect Benefits
	(a) As guidance, there are no direct costs. Unable to monetize indirect costs associated with additional staff training to learn the VSMH.	(b) If a consulting firm saves an average of eight (8) hours developing a permit application for a land-disturbing activity because the VSMH is less complex and more usable than earlier guidance, multiplying the 8 hours by a typical billable rate of \$120/hour per permit, the total savings for the regulated community is approximately \$960 per permit. The Department issues approximately 1,200 permits

		<p>annually, resulting in a savings to the regulated community, including small businesses, in excess of approximately \$1.2 million/yr.</p> <p>There is also an indirect benefit from projects initiating construction sooner, as well as completing and closing out projects faster. The Department is unable to quantify these benefits.</p>
(3) Other Costs & Benefits (Non-Monetized)	NA	
(4) Alternatives	NA	
(5) Information Sources	NA	

## 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	Total Net Change in Requirements
NA	(M/A):				
	(D/A):				
	(M/R):				
	(D/R):				
				<b>Grand Total of Changes in Requirements:</b>	(M/A):
					(D/A):
					(M/R):
					(D/R):

**Key:**

*Please use the following coding if change is mandatory or discretionary and whether it affects externally regulated parties or only the agency itself:*

**(M/A):** Mandatory requirements mandated by federal and/or state statute affecting the agency itself

**(D/A):** Discretionary requirements affecting agency itself

**(M/R):** Mandatory requirements mandated by federal and/or state statute affecting external parties, including other agencies

**(D/R):** Discretionary requirements affecting external parties, including other agencies

### *Cost Reductions or Increases (if applicable)*

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

### *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
The Virginia Erosion and Stormwater Management (VESM) Regulation, 9VAC25-875, has a total of 773 statutory	The VSMH streamlines the process to develop plans for compliance with the VESM Regulation. It also reduces the overall amount of time required	If a consulting firm saves an average of eight (8) hours developing a permit application for a land-disturbing activity because the VSMH is less

<p>requirements and 0 discretionary requirements.</p>	<p>for state and local approving authorities to review and approve submissions.</p>	<p>complex and more usable than earlier guidance, multiplying the 8 hours by a typical billable rate of \$120/hour per permit, the total savings for the regulated community is approximately \$960 per permit. The Department issues approximately 1,200 permits annually, resulting in a savings to the regulated community of approximately \$1.2 million/yr.</p> <p>Implementation of the VSMH has allowed faster plan development and review; which the Department estimates has resulted in at least a 30-day time savings. There is approximately \$28 billion/yr in construction activity in Virginia. With an estimated 10% cost of debt and equity, this results in a savings of \$233 million/yr.</p> <p>The average time to obtain approval has decreased from 155 days to 125 days or less, which represents a 19% reduction. The metrics provided by the new DEQ PEEP tracking platform support this data.</p>

*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>
Virginia Stormwater Management Handbook, Version 1.2 (VSMH)	1,638 pages	1,653 pages: The updates to the VSMH include adding BMP specifications for permanent waterbars, other revisions to individual BMPs and revisions based	+15 pages

		on amended 9VAC25-875 (effective 08/14/2025). The revisions improve clarity and consistency, reduce redundancy, and correct editorial mistakes.	
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