

Office of Regulatory Management
Economic Review Form

Agency name	Department of Environmental Quality (“Department”)
Virginia Administrative Code (VAC) Chapter citation(s)	NA
VAC Chapter title(s)	NA
Action title	NA
Date this document prepared	June 25, 2024
Regulatory Stage (including Issuance of Guidance Documents)	GM24-2001 Virginia Stormwater Management Handbook, Version 1.1, 2024

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 & Indirect Costs & Benefits (Monetized)</p>	<p>This action will make technical revisions to Guidance Document GM24-2001 – Virginia Stormwater Management Handbook, and replace Version 1.0 with Version 1.1 (“Handbook”)</p> <p>The Handbook 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 become 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, not substantive, revisions to the Handbook to ensure it: (i) is consistent with requirements in the Laws and VESM Regulation; (ii) contains guidance from GM22-2012 which was inadvertently left out of Version 1.0; and (iii) corrects typos, cross-references, and other editorial mistakes in Version 1.0.</p> <p>Because the revisions contained in Version 1.1 of the Handbook are technical, not substantive, there is no change to the economic analysis and impact of the Handbook. 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 January 26, 2024 and incorporated in this form.</p> <p>A full list of revisions will be available under the “Virginia Stormwater Management Handbook, Version 1.1” banner on the DEQ website at: https://www.deq.virginia.gov/our-programs/water/stormwater/stormwater-construction/handbooks</p> <p>Direct Costs: As guidance that provides information about and alternatives for complying with the Laws and VESM Regulation, the Handbook does not impose any direct costs on either stakeholders or the Department.</p> <p>Indirect Costs: The primary indirect costs associated with the new Handbook are additional staff time required for local authority and Department staff to attend training and gain familiarity with the</p>
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	<p>Handbook. 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 Handbook and its content.</p> <p>Direct Benefits: As guidance that provides information about and alternatives for complying with the Laws and VESM Regulation, the Handbook is expected to result in direct benefits to stakeholders, local governments, and the Department. They include:</p> <ul style="list-style-type: none"> - Reduced confusion since one guidance document, the Handbook, will replace thousands of pages of outdated and sometimes conflicting manuals, handbooks, and guidance; - Up-to-date specifications for best management practices (BMPs) will allow more efficient review of plans and permit applications since users and regulators will both have the same information and expectations; - The Handbook increases the number of available BMPs from 54 to over 77, giving stakeholders more alternatives, many of which are lower-cost and use improved materials and technologies compared to the BMPs in guidance that has been in use; and - 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 become effective July 1, 2024. <p>The Handbook will reduce 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 will also allow faster plan development and review. The Department estimates this could result 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.</p> <p>Indirect Benefits: Moving to a single Handbook for implementation of the new Laws and VESM Regulation will allow projects to go to construction sooner and take advantage of a wider selection of BMPs.</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 additional staff training to learn the Handbook.</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 Handbook is less complex and more usable than existing 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 will benefit from the amount of staff time saved working with consultants on issues due to the less complex and more useable guidance.</p> <p>Implementation of the Handbook will also allow faster plan development and review; which the Department estimates will result 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 a 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 existing guidance will be 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>Direct Costs: The “status quo” option would be to continue to use 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 are being repealed effective July 1, 2024, the date the Virginia Erosion and Stormwater Management Regulation, 9VAC25-875 (VESM Regulation), becomes effective. The existing manuals are guidance and do not impose any direct costs on either stakeholders or the Department.</p> <p>Indirect Costs: The “status quo” option would be to continue to use 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 are being repealed and replaced by the VESM Regulation on July 1, 2024. The existing manuals are out-of-date, to the extent that they cite regulations that are being repealed and replaced, which would lead to confusion among stakeholders and Department staff or local erosion and stormwater management program authorities that review and approve plans and permit applications for land-disturbing activities. 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 between the VESM Regulation and the existing outdated manuals. The Department is unable to quantify these costs.</p> <p>Direct Benefits: 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>Indirect Benefits: 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 the Handbook. With the “status quo” option, staff would continue to use, implement, review, and inspect the BMPs they have been using for the past 20-30 years. The Department is unable to quantify these costs.</p>
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(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	

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 replacing the existing, outdated manuals and guidance with the Handbook.	
(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)	<p>Direct Costs: There are no direct costs to local partners because this action does not change the existing responsibilities of local governments to implement erosion and sediment control and stormwater management programs consistent with requirements in the Stormwater Management Act and Erosion and Sediment Control Law (Chapters 2.3 and 2.4 of the State Water Control Law, Article 3.1 of Title 62.1 of the Code of Virginia) until July 1, 2024. Beginning on July 1, 2024, localities will be required 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 (amended Chapters 2.3 and 2.4 of the State Water Control Law).</p> <p>Indirect Costs: The indirect costs associated with the guidance is additional staff time necessary for local staff to attend training associated with the Handbook. Many of the participants in the training DEQ conducted during May and June represented localities. The Department is unable to quantify these costs.</p> <p>Direct Benefits: 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>Indirect Benefits: 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> <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)	<p>Small businesses would have the same impact as described in 1a above. The department is unable to identify the number of small businesses that would utilize this guidance document.</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 additional staff training to learn the Handbook.</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 Handbook is less complex and more usable than existing 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, 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):				
				Grand Total of Changes in Requirements:	(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 Handbook 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 Handbook 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 existing 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 Handbook will allow faster plan development and review; which the Department estimates will result 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 will decrease from 155 days to 125 days, which represents a 19% reduction.</p>
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Length of Guidance Documents (only applicable if guidance document is being revised)

Title of Guidance Document	Original Length	New Length	Net Change in Length
<p>Virginia Stormwater Management Handbook, Version 1.1 (Handbook)</p>	<p>896 pages (1992 VESCH) 1,043 pages (1999 SWM)</p>	<p>1,638 pages: The Handbook consolidates and significantly updates DEQ's existing references for erosion and sediment control, the 1992 Virginia Erosion and Sediment Control Handbook (1992 VESCH), and the 1999 Virginia Stormwater Management Manual (1999</p>	<p>-301 pages</p>

		SWM. The Handbook improves clarity and consistency, reduces redundancy, and updates and expands the number (from 54 to 77) and types of best management practices that are available for use on construction sites across the Commonwealth.	
Chesapeake Bay Preservation Act Local Assistance Manual (1989)	507 pages	0 pages: Content has been superseded by subsequent regulatory amendments, local programs, more recent guidance. Appendix C, used in version 3.0 of the Virginia Runoff Reduction Method (VRRM), is not needed/relevant for version 4.1 of the VRRM (available July 1, 2024)	-507 pages
Virginia Department of Transportation (VDOT) Drainage Manual (2002, as revised through 2021)	1,032 pages	0 pages: Commonly used designs and specifications that are not in either the 1992 VESCH or 1999 SWM have been added to the Handbook, making it unnecessary to use both.	-1,032 pages
VDOT Best Management Practices (BMP) Maintenance Manual (2016)	88 pages	0 pages: BMP maintenance practices have been incorporated in the Handbook.	-88 pages
Draft Stormwater Management Handbook (2013)	1,733 pages	0 pages: The 2013 Draft Handbook updated designs and specs for BMPs and is used by some localities and design professionals, but never became final, and therefore DEQ did not adopt it as guidance. The Handbook will replace the 2013 Draft.	-1,733 pages
Nonproprietary BMP specifications (2013 draft)	436 pages	0 pages: The draft specifications updated specifications from 2011	-413 pages

		that are cited at 9VAC25-870-66 (and carried forward at 9VAC25-875-590). The Handbook updates all of the BMP specifications.	
Annual Standards and Specifications (for 55 entities)	5,290 pages	600 pages (estimated if all 55 entities adopt the 9-page template that is in Appendix J of the Handbook).	-4,700 pages (estimated)

The Handbook also incorporates relevant information from and replaces the following guidance documents, which the Department plans to rescind effective July 1, 2025:

1. DCR-VSWCB-024 Guidance Document on VSMP Site Inspection Strategies (3 pages)
2. DCR-VSWCB-026 Guidance Document on Utilization of Nonpoint Nutrient Offsets (4 pages)
3. Guidance Memo No. 14-2002 Implementation Guidance for the 2009 General Permit for Discharges of Stormwater from Construction Activities, 9VAC25-880 (2 pages)
4. Guidance Memo No. 14-2014 Implementation Guidance for Section 47 (time limits on applicability of approved design criteria) and Section 48 (grandfathering) (5 pages)
5. Guidance Memo No. 15-2003 Postdevelopment SW Mgmt Implementation Guidance for Linear Utility Projects (4 pages)
6. Guidance Memo No. 22-2011 Streamlined Plan Review for Construction Stormwater Plans and Erosion and Sediment Control Plans submitted by a Licensed Design Professional and reviewed by a Dual Combined Administrator for Erosion and Sediment Control and Stormwater Management (16 pages)
7. Guidance Memo No. 22-2012 Stormwater Management and Erosion & Sediment Control Design Guide (65 pages)

The reason that the Department plans to rescind these documents effective July 1, 2025, is that they have been incorporated into the Handbook to reduce complexity and improve the ease of use. However, to have a transition period for stakeholders, who have been using the existing manuals and guidance for years, and to provide flexibility for projects that are already in the planning stage, there will be a one-year transition period to allow plans submitted and deemed complete between July 1, 2024 and June 30, 2025 to utilize either the existing manuals, handbooks and guidance or the Virginia Stormwater Management Handbook, Version 1.1. The Department will initiate a separate action through ORM and Town Hall to provide public notice and a 30-day public comment forum for the action to rescind the guidance and manuals noted above. This is a benefit to stakeholders and the regulated community.