



[townhall.virginia.gov](http://townhall.virginia.gov)

## Proposed Regulation Agency Background Document

<b>Agency name</b>	State Board of Health
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	12 VAC5-635
<b>VAC Chapter title(s)</b>	Rainwater Harvesting System Regulations
<b>Action title</b>	Rainwater Harvesting Regulations
<b>Date this document prepared</b>	May 2, 2022

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 19 (2022) (EO 19), any instructions or procedures issued by the Office of Regulatory Management (ORM) or the Department of Planning and Budget (DPB) pursuant to EO 19, the Regulations for Filing and Publishing Agency Regulations (1 VAC 7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

### Brief Summary

*Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.*

The Rainwater Harvesting System Regulations (Regulations) are new regulations to provide standards for the use of rainwater harvesting systems, including systems that collect rainwater for human consumption. The Regulations will promote the use of rainwater as means to reduce fresh water consumption, ease demands on public treatment works and water supply systems, and promote conservation.

The Regulations establish the relationship with the statutes and regulations applicable to other agencies, and seeks to avoid duplication of regulatory oversight for both non-potable uses of harvested rainwater and potable use for users below the threshold qualifying as a waterworks. The Regulations also establish administrative processes for permitting, inspecting, and issuing construction and operation permits for intended potable rainwater harvesting systems, along with appropriate exemptions from the regulations (e.g. rain barrels are exempt).

In order to ensure systems installed pursuant to the Regulations are protective of human health, and that the Regulations are not unduly burdensome, rainwater harvesting systems are divided into four end-tier uses. The highest end-tier use – potable water – requires the greatest level of treatment and oversight. The specified end-use will determine the minimum design, construction, and ongoing operation and maintenance standards for each system. VDH will require permits to construct and operate a rainwater harvesting system for potable use. Non-potable systems will be documented in a registry but will not be subject to permitting by VDH.

## Acronyms and Definitions

*Define all acronyms used in this form, and any technical terms that are not also defined in the “Definitions” section of the regulation.*

---

ARCSA	American Rainwater Catchment Systems Association
DHCD	Department of Housing and Community Development
DPOR	Department of Professional and Occupational Regulation
EPA	United States Environmental Protection Agency
GMP	Guidance Memorandum and Policies
ICC	International Codes Council
VDH	Virginia Department of Health
USBC	Virginia Uniform Statewide Building Code

## Mandate and Impetus

*Identify the mandate for this regulatory change and any other impetus that specifically prompted its initiation (e.g., new or modified mandate, petition for rulemaking, periodic review, or board decision). For purposes of executive branch review, “mandate” has the same meaning as defined in the ORM procedures, “a directive from the General Assembly, the federal government, or a court that requires that a regulation be promulgated, amended, or repealed in whole or part.”*

---

Chapter 817 of the 2018 Reconvened Session Virginia Acts of Assembly (House Bill 192) amended § 32.1-248.2 of the Code of Virginia (Code) to require the Board of Health (Board) to adopt regulations regarding the use of gray water and rainwater. VDH intends to address regulation of gray water in pending revision of the Sewage Handling and Disposal Regulations (12VAC5-610). Regulations regarding use of rainwater are required to (i) describe the conditions under which rainwater may appropriately be used and for what purposes; and (ii) provide standards for the use of rainwater harvesting systems, including systems that collect rainwater for use by commercial enterprises but do not provide water for human consumption, as defined in §32.1-167. House Bill 192 further instructs the Department to promote the use of rainwater as means to reduce fresh water consumption, ease demands on public treatment works and water supply systems, and promote conservation; and to consider recognizing rainwater as an independent source of fresh water available for use by the residents of the Commonwealth.

## Legal Basis

*Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory authority.*

Section 32.1-12 of the Code permits the Board to make, adopt, promulgate, and provide for reasonable variances and exemptions therefrom as may be necessary to carry out the provisions of §32.1 of the Code. Section 32.1-248.2 of the Code requires the Board to adopt regulations regarding the use of rainwater and rainwater harvesting systems, including the conditions under which rainwater may be appropriately used and for what purpose.

**Purpose**

*Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it is intended to solve.*

Rainwater has been harvested and used for centuries in the Commonwealth in the absence of guidance or regulation addressing the protection of human health. In recent years, the harvesting and use of rainwater for non-potable purposes has occurred under VDH’s March 31, 2011, Virginia Rainwater Harvesting & Use Guidelines (GMP-2011-01), and in accordance with the requirements of the Uniform Statewide Building Code (USBC), and the International Plumbing Code. VDH’s current Rainwater Harvesting & Use Guidelines recommend against the use of harvest rainwater for potable use given the lack of a robust regulatory program to ensure the safety of harvested rainwater for potable use. The goal of this proposed Regulations is to provide a mechanism for VDH to approve rainwater harvesting systems as protective of public health.

Over the past decade, rainwater harvesting systems have become more common across North America. Officials responsible for inspecting these systems have voiced their need for more detailed design parameters to ensure safe implementation of these systems to protect public health. New information and research has improved understanding of risk to public health associated with rainwater harvesting, which is addressed in the proposed Regulations. Examples of recent advancements in considerations for public health impacts include the development of standards for use of harvested rainwater developed by the American Rainwater Catchment Systems Association (ARCSA) and the International Code Council (ICC).

Water used for human consumption in Virginia is currently provided from permitted waterworks and from private wells; both programs are regulated by VDH. However, a demand for another source of water supply exists where public source and groundwater availability is limited. For example, groundwater limitations may occur as (i) a result of natural scarcity or contamination, or (ii) in coastal areas under threat of inundation or salt water intrusion. In addition, rainwater harvesting is an emerging technology with early adopters having interest in natural resource protection. The USBC relies upon VDH to provide water quality standards, including treatment standards for non-potable applications. The Regulations will allow VDH to provide certification to building officials that rainwater harvesting systems applicable to both potable and non-potable use are protective of public health.

**Substance**

*Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the “Detail of Changes” section below.*

The following substantive provisions are being considered for inclusion in the Regulations:

- Definitions as necessary for consistency with the Code of Virginia, other regulations and code documents related to rainwater harvesting and water reuse, storm water, the USBC, and current industry standards;
- Reference to administrative processes to reflect current law and to provide consistency with other VDH regulations;
- Identification of reasonable exemptions from the Regulations (e.g., rain barrels, waterworks);
- Criteria to acknowledge nationally recognized standards and certifications – including but not limited to, the American Society of Plumbing Engineers, National Sanitation Foundation, ARCSA, ICC, and American Society of Sanitary Engineering – for approval of rainwater harvesting components and certification of persons involved in the design, installation, inspection, repair, and maintenance of rainwater harvesting systems;
- Standards for rainwater harvesting performance objectives;
- Requirement that rainwater system components meet national lead-free standards;
- Standards for rainwater harvesting collection parameters;
- Standards for drought response;
- Standards for rainwater harvesting conveyance system requirements;
- Standards for rainwater pre-filtration;
- Standards for harvested rainwater storage;
- Pump and filtration parameters;
- Disinfection and other treatment parameters;
- Water quality parameters for systems used for human consumption;
- Inspection, operation, and maintenance requirements for rainwater harvesting systems;
- Cross connection prevention and backflow prevention standards;
- System permit requirements; and
- Alternate compliance pathways for rainwater to be used both for human consumption and not for human consumption applications.

## Issues

*Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.*

### Primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions

Advantages include provision of an additional source of water supply for beneficial use to all persons in the Commonwealth. The Regulations will also provide clarity to designers and builders regarding water quality standards applicable to rainwater harvesting systems as described in the USBC. It is possible that some, but not all, members of the public may consider the need to obtain a permit for a rainwater harvesting system intended for potable use to be a disadvantage. VDH had not identified other disadvantages to the public in the Regulations.

### Primary advantages and disadvantages to the agency or Commonwealth

The Regulations will assist the Commonwealth by enhancing protection of public health and the environment and provide an additional avenue to address current disparities throughout the Commonwealth by providing an additional source of water to persons with limited access. Disadvantages are that the Regulation and the Code do not provide VDH with authority to recover any cost for implementation of this new regulatory program.

Other pertinent matters to the regulated community, government officials, and the public

The Regulations provide opportunity to the regulated community, government officials, and the public to investigate and develop novel means to preserve and protect existing water supplies and other natural resources throughout the Commonwealth.

**Requirements More Restrictive than Federal**

*Identify and describe any requirement of the regulatory change which is more restrictive than applicable federal requirements. Include a specific citation for each applicable federal requirement, and a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements, or no requirements that exceed applicable federal requirements, include a specific statement to that effect.*

The federal government does not regulate the harvesting of rainwater for reuse. However, the United States Environmental Protection Agency (EPA) Office of Research and Development has developed log-reduction targets applicable to the treatment of various forms of reuse water, including rainwater. This program does not carry the force of federal regulation, but is nonetheless recognized nationally as an appropriate reference standard. EPA does not intend to develop a federal regulatory program with respect to reuse water, and intends instead that the log-reduction targets serve as reference standards for states' use. Because Virginia will base water quality standards in the Regulations on these standards, which are not federally enforceable, the use of these log-reduction targets will be more restrictive than federal requirements.

**Agencies, Localities, and Other Entities Particularly Affected**

*Consistent with § 2.2-4007.04 of the Code of Virginia, identify any other state agencies, localities, or other entities particularly affected by the regulatory change. Other entities could include local partners such as tribal governments, school boards, community services boards, and similar regional organizations. "Particularly affected" are those that are likely to bear any identified disproportionate material impact which would not be experienced by other agencies, localities, or entities. "Locality" can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulation or regulatory change are most likely to occur. If no agency, locality, or entity is particularly affected, include a specific statement to that effect.*

**Other State Agencies Particularly Affected**

Virginia Department of Environmental Quality  
 Virginia Department of Housing and Community Development  
 Virginia Department of Professional and Occupational Regulation

**Localities Particularly Affected**

VDH does not anticipate any locality to be particularly affected.

**Other Entities Particularly Affected**

VDH anticipates that the Regulation will affect realtors; builders; homeowners; plumbing, electrical, and engineering trades/professions; and manufacturers and sellers of materials and equipment subject to use in the design and installation of rainwater harvesting systems.

**Economic Impact**

Consistent with § 2.2-4007.04 of the Code of Virginia, identify all specific economic impacts (costs and/or benefits) anticipated to result from the regulatory change. 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.

**Impact on State Agencies**

<p><i>For your agency:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including:</p> <ul style="list-style-type: none"> <li>a) fund source / fund detail;</li> <li>b) delineation of one-time versus on-going expenditures; and</li> <li>c) whether any costs or revenue loss can be absorbed within existing resources.</li> </ul>	<p>VDH anticipates that there will be five cost items for which funding is not currently provided.</p> <ol style="list-style-type: none"> <li>1. There will be an estimated one-time cost of \$68,000 for VDH's database vendor to modify the internal Environmental Health Database (EHD) to incorporate a permitting program for Rainwater Harvesting Systems for Potable Use to track program permits, operation, and maintenance. There will also be an annual ongoing cost of \$54,000 to VDH's database vendor to maintain this system.</li> <li>2. There will be a one-time cost of \$34,000 to VDH's database vendor to develop an online tool for registering rainwater harvesting systems with VDH. There will also be an on-going annual cost of \$24,000 to VDH's database vendor to maintain this tool.</li> <li>3. There will be an estimated staff resource cost of \$134,000 to provide development, support, and review of the operation and maintenance of both systems described in 1 and 2 above. VDH anticipates that the development costs will decrease over time as the operation and maintenance effort increases. The annual staff resource cost will be revised as appropriate as the program becomes established.</li> <li>4. Because these are new regulations, there will be personnel costs for developing training and outreach programs and materials to familiarize VDH staff and the regulated community with the regulations. There will be an ongoing cost associated with the engineering review of permit applications, and there will be an ongoing cost for enforcement of the regulations. VDH estimates an annual staff resource cost of \$200,000 to provide the training, outreach, engineering review, and enforcement processes. VDH anticipates that the training and outreach costs will decrease over time as the engineering review and enforcement</li> </ol>
--	---

	<p>costs increase. As the program becomes established, the annual staff resource cost will be revised as appropriate.</p> <p>5. There will be a staff resource cost at local health departments to process applications for potable rainwater harvesting system permits. Costs of this nature are generally supported by permit fees; however, the Code provides no authority for VDH to charge a fee. VDH anticipates the cost to process each application will vary based on the size and complexity of the systems with a range of \$300 to \$1500 in staff resources per application.</p> <p>These costs must be supported by additional VDH general funds and cannot be absorbed by existing resources. VDH will require additional funding and authority for permit fees in order to implement the Regulations.</p>
<p><i>For other state agencies:</i> projected costs, savings, fees, or revenues resulting from the regulatory change, including a delineation of one-time versus on-going expenditures.</p>	<p>VDH has reached out to the Department of Housing and Community Development (DHCD) in order to ensure consistency between the Regulations and the USCB, and whether this would impose financial impact on that agency. DHCD confirmed that any impacts would be minimal and can be absorbed without additional funding.</p> <p>The Department of Environmental Quality (DEQ) did not identify a financial impact based on the regulations as proposed. The Department of Professional and Occupational Regulation did not identify a financial impact based on the regulations as proposed.</p>
<p><i>For all agencies:</i> Benefits the regulatory change is designed to produce.</p>	<p>The Regulations are designed to improve public health by establishing water quality standards for all uses of harvested rainwater.</p>

**Impact on Localities**

*If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a or 2) on which it was reported. Information provided on that form need not be repeated here.*

<p>Projected costs, savings, fees, or revenues resulting from the regulatory change.</p>	<p>There are no anticipated economic costs or savings to localities from the development of these Regulations. As rainwater harvesting becomes common, the regulated community may petition local governments to eliminate mandatory connection to public water supplies or reduce fees for public water for users who rely primarily on harvested rainwater. However, the economic impact of this potential action is unknown at this time.</p>
--	--

<p>Benefits the regulatory change is designed to produce.</p>	<p>There is some potential for economic benefit to localities based on a possible increase in the ability for taxable property to be developed. However, the amount of economic benefit is unknown at this time.</p>
---	--

**Impact on Other Entities**

*If this analysis has been reported on the ORM Economic Impact form, indicate the tables (1a, 3, or 4) on which it was reported. Information provided on that form need not be repeated here.*

<p>Description of the individuals, businesses, or other entities likely to be affected by the regulatory change. If no other entities will be affected, include a specific statement to that effect.</p>	<p>The Regulations will affect homeowners, builders, realtors, and property developers by clarifying potential additional sources of water supply for intended beneficial use. This will have a positive impact, allowing for additional development where existing water sources are insufficient. There are currently an estimated several hundred homeowners relying on cisterns throughout Virginia who regularly pay for hauled water to maintain their water supply (costs range from \$110 to \$150.00/1000 gallons). The Regulations will allow these individuals to reduce or discontinue reliance on that service.</p> <p>The Regulations will also positively affect manufacturers and sellers of rainwater harvesting system components and designers, installers, and inspectors of rainwater harvesting systems by establishing clear criteria for these systems, thus encouraging their use.</p>
<p>Agency's best estimate of the number of such entities that will be affected. Include an estimate of the number of small businesses affected. Small business means a business entity, including its affiliates, that:</p> <p>a) is independently owned and operated, and;</p> <p>b) employs fewer than 500 full-time employees or has gross annual sales of less than \$6 million.</p>	<p>VDH anticipates that rainwater harvesting systems represent a potential resource applicable to both new construction and renovation of virtually any structure in the Commonwealth. The Regulations would apply to small businesses that manufacture or market equipment or materials that can be used in the installation of a rainwater harvesting system, as well as those that employ plumbers, electricians, engineers, or other workers who may participate in system design, installation, operation, and maintenance, or abandonment. It is difficult to provide an accurate estimate of affected entities given this broad scope as this is a new regulatory program. There is at least one primary provider of rainwater harvesting equipment currently in operation in Virginia. VDH does not anticipate more than a small number of applicants for potable rainwater harvesting systems during the first five years of the Regulations, with increasing rates of application over time as acceptance of rainwater as a potable source of drinking water increases.</p>



<p>All projected costs for affected individuals, businesses, or other entities resulting from the regulatory change. Be specific and include all costs including, but not limited to:</p> <ul style="list-style-type: none"> <li>a) projected reporting, recordkeeping, and other administrative costs required for compliance by small businesses;</li> <li>b) specify any costs related to the development of real estate for commercial or residential purposes that are a consequence of the regulatory change;</li> <li>c) fees;</li> <li>d) purchases of equipment or services; and</li> <li>e) time required to comply with the requirements.</li> </ul>	<p>VDH anticipates the Regulations can provide a distinct avenue for water supply for both non-potable and potable use to individuals and businesses. The cost of systems will vary depending on the proposed end-use of the water; however, the Regulations are based on current industry standards and are not anticipated to increase construction costs beyond those applicable today. VDH requested a water treatment system provider to estimate the construction/installation cost of a system to provide a potable system for a single-family home based on the provisions of the draft Regulations. The estimated cost is \$10,550.00 (2021), which VDH considers comparable to the cost of a private well or connection fee to a public drinking water supply. As this represents a novel form of water supply, particularly for residential applications, VDH anticipates that system costs may experience a cycle of cost ranges until the supply and demand pattern becomes established (i.e., may be relatively high for first adopters and decrease as systems become more common). Components of rainwater harvesting systems are generally available for other water management and treatment processes, and unit costs should remain consistent with existing water conditioning and treatment systems. VDH anticipates permitting timeframes to be consistent with those for private wells. Ongoing sampling and reporting costs are included for potable uses in the Regulations, and are anticipated to cost from \$300 to \$1,200 annually, determined by the size of the system.</p> <p>The Regulations require design professionals, installers, and inspectors to undertake training and testing for certification under the American Society of Sanitary Engineering's Rainwater Catchment Systems standards. There are a variety of training providers, and the cost is typically \$400 to \$600 for online training.</p>
<p>Benefits the regulatory change is designed to produce.</p>	<p>The Regulations will provide an additional source of water supply to the people of Virginia. Further, the Regulations are designed to improve public health by establishing water quality standards for all uses of harvested rainwater.</p>

**Alternatives to Regulation**

*Describe any viable alternatives to the regulatory change that were considered, and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the regulatory change. Also, include discussion of less intrusive or less costly alternatives for small*

*businesses, as defined in § 2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulatory change.*

---

Section 32.1-248.2 of the Code requires the Board to adopt regulations regarding the use of rainwater and provide standards for the use of rainwater harvesting systems, including systems that collect rainwater for use by commercial enterprises but do not provide water for human consumption, as defined in § 32.1-167. As an alternative, VDH considered the adaptation of VDH's Virginia Rainwater Harvesting & Use Guidelines (GMP-2011-01) from guidance to Regulations. VDH concluded that although a straightforward adaptation of the existing guidelines would comply with § 32.1-248.2 of the Code, it would not fully address the goals implied in the statute. In addition, it would not represent an avenue to address the demand for potable water supply where no other water source is feasible. Further, it would not be consistent with mandates elsewhere in the Code relative to resource protection and management (for example, groundwater management areas).

This proposed action includes potential benefits for small businesses, primarily, but not limited to, manufacturers and sellers of rainwater harvesting systems and system components, plumbers, electricians, and water quality laboratories, as it will clarify requirements for system design, installation, operation and maintenance and water quality standards.

*If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.*

### Regulatory Flexibility Analysis

*Consistent with § 2.2-4007.1 B of the Code of Virginia, describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.*

---

The harvesting and use of rainwater for non-potable use currently occurs in Virginia following VDH guidelines and the USBC. The VDH guidelines were developed pursuant to Code of Virginia § 32.1-248.2 as enacted by Ch. 155 of the 1998 Acts of the Assembly, which required the Department to develop guidelines.

Chapter 817 of the 2018 Acts of Assembly amended § 32.1-248.2 to mandate VDH to adopt regulations regarding the use of rainwater. VDH assembled a group of stakeholders comprised of participants from the agency, other state agencies, environmental groups, manufacturers and designers, private citizens, and university representatives. Pursuant to the efforts of this group, the following alternative regulatory methods were adopted in the writing of the regulations:

1. The requirement for an owner to obtain a permit for a rainwater harvesting system is limited to Tier 4 systems used for potable water supply. Rainwater harvesting systems used for Tiers 1-3 non-potable purposes require registration only.
2. Performance requirements apply to the design and construction of rainwater harvesting systems in place of prescriptive design and operational standards.
3. Reporting deadlines allow flexibility for verification sampling and testing.

4. Rainwater harvesting system inspection schedules are limited to the minimum frequency needed to confirm the system is functioning in accordance with design and therefore protective of public health.
5. Compliance and reporting requirements for system performance are limited to the minimum required information to confirm the system is functioning in accordance with design and therefore protective of public health.
6. Section 12VAC5-635-20 provides exemptions for rainwater harvesting systems reliant on rain barrels, and for Tier 1-3 (nonpotable) rainwater harvesting systems used by an agricultural operation.

Public health considerations prevent the exemption of small businesses from all or any part of the requirements; however, there is no distinction between requirements for small businesses and those for homeowners or other users of rainwater harvesting systems.

*If this analysis has been reported on the ORM Economic Impact form, indicate the tables on which it was reported. Information provided on that form need not be repeated here.*

**Periodic Review and  
Small Business Impact Review Report of Findings**

*If you are using this form to report the result of a periodic review/small business impact review that is being conducted as part of this regulatory action, and was announced during the NOIRA stage, indicate whether the regulatory change meets the criteria set out in EO 19 and the ORM procedures, e.g., is necessary for the protection of public health, safety, and welfare; minimizes the economic impact on small businesses consistent with the stated objectives of applicable law; and is clearly written and easily understandable. In addition, as required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency’s consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, discuss why the agency’s decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.*

---

The Regulations are not being used to announce a periodic review or small business impact review.

**Public Comment**

*Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency’s response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.*

---

A Notice of Intended Regulatory Action (NOIRA) was published for the Regulations in the Virginia Register on March 1, 2021. No comments were received during the advertised 30 day public comment period.

## Public Participation

*Indicate how the public should contact the agency to submit comments on this regulation, and whether a public hearing will be held, by completing the text below.*

VDH is providing an opportunity for comments on this regulatory proposal, including but not limited to (i) the costs and benefits of the regulatory proposal, (ii) any alternative approaches, (iii) the potential impacts of the Regulations, and (iv) the agency's regulatory flexibility analysis stated in that section of this background document.

Anyone wishing to submit written comments for the public comment file may do so through the Public Comment Forums feature of the Virginia Regulatory Town Hall website at: <https://townhall.virginia.gov>. Comments may also be submitted by mail, email or fax to Lance Gregory, Director, Division of Onsite Sewage and Water Services, Environmental Engineering, and Marina Programs, Office of Environmental Health Services, Virginia Department of Health, 109 Governor Street, Richmond, VA 23219, [lance.gregory@vdh.virginia.gov](mailto:lance.gregory@vdh.virginia.gov), (804) 864-7491 (office), (804) 864-7475 (fax). In order to be considered, comments must be received by 11:59 pm on the last day of the public comment period.

A public hearing will not be held following the publication of this stage of this regulatory action.

## Detail of Changes

*List all regulatory changes and the consequences of the changes. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Use all tables that apply, but delete inapplicable tables.*

*If an existing VAC Chapter(s) is being amended or repealed, use Table 1 to describe the changes between the existing VAC Chapter(s) and the proposed regulation. If the existing VAC Chapter(s) or sections are being repealed and replaced, ensure Table 1 clearly shows both the current number and the new number for each repealed section and the replacement section.*

**Table 2: Promulgating New VAC Chapter(s) without Repeal and Replace**

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
Part I General Framework of Regulations			
635-10	Definitions for: Agent, ANSI, ASSE, Board, Cistern, Commissioner, Contaminant, Conveyance system, Debris excluder, Department, Disinfection, Distribution System, End use, End use tier, Filtration, First flush,	None	<p><b>INTENT:</b> The intent of the definitions is to ensure clarity.</p> <p><b>RATIONALE:</b> The definitions will provide consistency with federal guidelines, the USBC, other VDH regulations, and industry terminology.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the definitions is clarity for the regulated</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
	harvested rainwater, Human consumption, Installer, Local health department, log reduction, log reduction target, maintenance, non-potable water, NSF, Operator, Owner, Point of use, Potable water, Precipitation, Rainwater harvesting system, Screen, Secondary Water Supply, Service Connection, Stormwater, Treatment, Treatment system, USBC, Water storage unit, and Waterworks.		community regarding terms used in the chapter.
635-20	Applicability of regulations	Code of Virginia §§ 32.1-12 and 32.1-248.2 and § 32.1-167.	<p><b>INTENT:</b> The intent of the section is to clarify that the regulations do not apply to existing rainwater harvesting systems unless they are altered or rehabilitated, and to identify exclusions from the regulations.</p> <p><b>RATIONALE:</b> Section 32.1-12 of the Code of Virginia grants authority to the Board for the provision of reasonable exemptions from regulations. A further rationale for this section is to clarify to the owner of a rainwater harvesting system in existence prior to the promulgation of the Regulations that alteration or rehabilitation to the system must comply with the Regulations.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is clarity for the regulated community about which rainwater harvesting systems are regulated pursuant to 12VAC5-635.</p>
635-30	Relationship to Sewage Handling and Disposal Regulations	§ 32.1-164 12VAC5-610	<p><b>INTENT:</b> The intent of the section is to clarify that the regulations supersede 12VAC5-610-1170, which addresses cisterns.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p><b>RATIONALE:</b> This clarifies that the regulations adopted pursuant to Code of Virginia § 32.1-164 do not provide comprehensive regulatory standards for rainwater harvesting systems, only for installation of cisterns. VDH intends to repeal 12VAC5-610-1170 during the next revision of the Sewage Handling and Disposal Regulations, and until that occurs, this section will reduce confusion for the regulated community about the use of cisterns.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that cisterns used in rainwater harvesting systems will be installed, rehabilitated, and maintained pursuant to 12VAC5-635 instead of 12VAC5-610.</p>
635-40	Relation to State Water Control Board	9VAC25-31, 9VAC25-32, 9VAC25-151, 9VAC25-840, 9VAC25-870, 9VAC25-880, and 9VAC25-890	<p><b>INTENT:</b> The intent of the section is to clarify that this chapter addresses the standards for the collection and use of that portion of stormwater not regulated pursuant to DEQ's stormwater regulations.</p> <p><b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 62.1-44.15 and § 402 of the federal Clean Water Act address the regulation of most forms of stormwater</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is clarity for the regulated community and personnel of VDH and DEQ about stormwater and rainwater related regulations.</p>
635-50	Relation to Uniform Statewide Building Code	Code of Virginia § 36-98	<p><b>INTENT:</b> The intent of the section is to clarify that the chapter is independent of and in addition to the requirements of the USBC, and to present the requirements for the owner to provide rainwater harvesting system construction permits</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>and operation permits to local building officials when harvested rainwater will supply potable water systems.  <b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 36-98 addresses construction standards.  <b>LIKELY IMPACT:</b> The likely impact of the section clarity regarding the relationship between VDH permitting authority and the USBBC.</p>
60	Right of entry and inspections	Code of Virginia § 32.1-25	<p><b>INTENT:</b> The intent of the section is to specify VDH right of inspection.  <b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 32.1-25 provides the commissioner the right to enter at any reasonable time onto any property to inspect, investigate, evaluate, conduct tests, or collect samples for testing as he reasonably deems necessary in order to determine compliance with laws or regulations or conditions in a permit, license, or certificate.  <b>LIKELY IMPACT:</b> The likely impact of the section is awareness of VDH's rights of entry and inspection. The likely impact is also that the commissioner or his designee may exercise the right to inspect a rainwater harvesting system for compliance with 12VAC5-635.</p>
Part II Procedural Regulations			
70	End-use tiers for rainwater harvesting systems		<p><b>INTENT:</b> The intent of the section is to identify four end-use tiers classifying the way rainwater harvesting systems are regulated. These are:  Tier 1. Low exposure end-use: Non-potable water use where humans will rarely come into contact with the treated rainwater due to the nature of the installation that limits direct</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>or indirect contact under normal operation. Examples include trap primers, restricted access spray irrigation, surface and subsurface irrigation, and ice rinks. In this context, restricted access spray irrigation means spray irrigation in fenced or remote locations where human visitation is controlled or prevented;</p> <p>Tier 2. Medium exposure end-use: Non-potable water use where human contact with treated rainwater is indirect or limited. Examples include toilet and urinal flushing, clothes washing, HVAC evaporative cooling, and rooftop thermal cooling;</p> <p>Tier 3. High exposure end-use: Non-potable water use where human contact with treated rainwater is direct. Examples include hose bibs, pressure washing, fire fighting or protection and fire suppression, decorative fountains, vehicle washing, and non-restricted spray irrigation; and</p> <p>Tier 4. Potable water end-use: intended for human consumption.</p> <p><b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to provide standards for the use of rainwater harvesting systems. The Department selected the end-use tiers based on the International Code Council end-use tiers to help categorize the various types of uses for harvested rainwater and to provide clear distinctions for public protections for the various uses.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is clarity for the regulated community</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			about the end-use of harvested rainwater and whether permitting or registration is required for a rainwater harvesting system.
80	Reserved		.
90	Permits for rainwater harvesting systems; general		<p><b>INTENT:</b> The intent of the section is to provide registration and permitting requirements for rainwater harvesting systems. Permits are required for Tier 4 end-use. Registration is required for Tier 1, 2, or 3 end-use.</p> <p><b>RATIONALE:</b> The rationale of the section is to ensure that public health is protected by means of a permitting program by the Department for rainwater harvesting systems for Tier 4 (potable) end-use, and to provide means of tracking total rainwater harvesting throughout the Commonwealth by means of a registry of rainwater harvesting systems for Tier 1, 2, and 3 (non-potable) end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is to reduce the risk of adverse public health outcomes for users, including future users, of permitted rainwater harvesting systems. Owners of rainwater harvesting systems for Tier 4 end-use will begin to obtain permits for the systems and owners of rainwater harvesting systems for other tier end-use will register the systems with VDH.</p>
100	Application procedures for a construction permit for a rainwater harvesting system for Tier 4 end-use		<p><b>INTENT:</b> The intent of the section is to outline the minimum requirements to apply for a construction permit for a rainwater harvesting system for Tier 4 end-use.</p> <p><b>RATIONALE:</b> The rationale is to protect public health by ensuring that construction applications address</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>ownership, contact information, location, separation distances, materials and equipment specifications, operation and maintenance requirements, and site specific information as warranted so that VDH can properly process requests for permits.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners of Tier 4 end-use systems will follow the application procedures for construction permits.</p>
110	Issuance of the construction permit		<p><b>INTENT:</b> The intent of the section is establish the conditions under which the Commissioner will issue a construction permit for a Tier 4 end-use rainwater harvesting system.</p> <p><b>RATIONALE:</b> The rationale of the section is Code of Virginia § 32.1-12 grants authority to the Board, the Commissioner, or the Department to carry out provisions of regulations. This also establishes a timeframe in which the agency will act upon request for permits.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that the commissioner will approve construction permits for owners who follow the application procedures and meet the appropriate qualifications for a permit.</p>
120	Denial of a construction permit		<p><b>INTENT:</b> The intent of the section is to establish the conditions under which the commissioner will deny a construction permit for a Tier 4 end-use rainwater harvesting system.</p> <p><b>RATIONALE:</b> The rationale of the section is Code of Virginia § 32.1-12 grants authority to the Board, the Commissioner, or the Department to carry out provisions of regulations. This</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>section also clarifies an owner's right to appeal a case decision of the Department.  <b>LIKELY IMPACT:</b> The likely impact of the section is that the commissioner will deny permits to applicants that do not meet the qualifications for a permit or if approval would pose a public health threat.</p>
130	Revisions of approved plans		<p><b>INTENT:</b> The intent of the section is to outline the conditions under which a designer, with the consent of the owner, may make design changes following issuance of a valid construction permit for a Tier 4 end-use rainwater harvesting system without prior approval of the department. Further, the section states that the commissioner may suspend or revoke a construction permit if a design change does not comply with the chapter.  <b>RATIONALE:</b> The rationale of the section is to simplify the process of minor design changes to a rainwater harvesting system intended for Tier 4 end-use when such changes do not alter the conditions established in the construction permit. This section also clarifies that the Commissioner may suspend or revoke a permit when the design is changed in such a way that it no longer complies with the public health protections outlined in the Regulations.  <b>LIKELY IMPACT:</b> The likely impact of the section is that designers will make minor changes to rainwater harvesting system designs without having to go through an approval process with VDH.</p>
140	Installation, inspection, and correction		<p><b>INTENT:</b> The intent of the section is to describe the</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>responsibilities of the installer and designer of a Tier 4 end-use rainwater harvesting system to submit statements that certify the work performed, including procedures related to correction of deficiencies, and actions that the department will take if deficiencies are not corrected.</p> <p><b>RATIONALE:</b> The rationale of the section is to obtain documentation of the actions of the installers and designers of rainwater harvesting systems for Tier 4 end-use for use by the Commissioner in determining the issuance of an operation permit for the system. This allows the Department to verify the system was installed in accordance with the Regulations prior to placing the system into operation, which will reduce the risk of adverse public health outcomes for users, including future users, of permitted rainwater harvesting systems.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will perform any required inspections and repairs to VDH after installation of the rainwater harvesting system is complete.</p>
150	Requirement for easement		<p><b>INTENT:</b> The intent of the section is to describe necessary actions in the event that a rainwater harvesting system for Tier 4 end-use, or part thereof, is proposed to be installed on a property other than the owner's.</p> <p><b>RATIONALE:</b> The rationale of the section is to document, for the benefit of owners of properties on which all or part of a rainwater harvesting system for Tier 4 end-use serving another property is</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>installed, and of owners of such systems, and of future owners, that an easement exists and conditions associated with the easement apply. The rationale is also that the requirement to obtain an easement ensures that rainwater harvesting systems are not installed on someone else’s property without their permission.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is owners will seek an easement when it is required and follow the procedures for obtaining and recording the easement. This requirement will also minimize the risk of future disputes when rainwater harvesting systems are placed on adjoining properties.</p>
160	Land records		<p><b>INTENT:</b> The intent of the section is to require recordation and documentation of an instrument describing annual water quality testing and system maintenance requirements of a rainwater harvesting system for Tier 4 end-use in the land records of circuit court, and that the instrument be transferred with the title to the property upon sale or other transfer.</p> <p><b>RATIONALE:</b> The rationale of the section is to provide future owners of a property served by a rainwater harvesting system for Tier 4 end-use the documentation necessary to operate and maintain the system in accordance with its operation permit.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is increased awareness of operation and maintenance requirements for those purchasing homes with Tier 4 rainwater harvesting systems.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			The impact is also that owners will begin to record the instruments with their local circuit court.
170	Issuance of operation permit		<p><b>INTENT:</b> The intent of the section is to establish the conditions under which the commissioner will issue an operation permit for a Tier 4 end-use rainwater harvesting system.</p> <p><b>RATIONALE:</b> The rationale of the section is that the commissioner will only issue an operating permit for a system meeting the criteria established in Regulations.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is to reduce the risk of adverse public health outcomes for users, including future users, of permitted rainwater harvesting systems.</p>
180	Variances	Code of Virginia § 2.2-4000 et seq.	<p><b>INTENT:</b> The intent of the section is to establish the process for the owner of a rainwater harvesting system for Tier 4 end-use to request a variance, the commissioner's ability to approve or deny the request for a variance, and disposition of an approved variance under certain conditions.</p> <p><b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 32.1-12 grants authority to the Board to provide for reasonable variances to regulations.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is owners will request reasonable variances from the Regulations when the hardship imposed by the Regulations outweighs the benefit that might be received by public health.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
190	Enforcements, notices, informal conferences, appeals	Code of Virginia § 2.2-4000 et seq.	<p><b>INTENT:</b> The intent of the section is to establish conditions under which the commissioner may suspend or revoke a permit for a Tier 4 end-use rainwater harvesting system, and the owner's responsibilities and rights in response to the suspension or revocation of a permit.</p> <p><b>RATIONALE:</b> The rationale of the section is that Code of Virginia § 2.2-4000 et seq. supplements present and future basis laws conferring authority on agencies to make regulations or decide cases as well as to standardize court review thereof. This section also clarifies the conditions under which the Commissioner can suspend or revoke a permit to ensure public health is protected.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will be aware of and will exercise their rights and responsibilities with regard to enforcement, notices, informal conferences, and appeals.</p>
<b>Part III Design and Installation</b>			
200	Cross connection abatement	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for rainwater harvesting systems intended to ensure that cross-connection abatement equipment and methods conform to the USBC.</p> <p><b>RATIONALE:</b> The rationale of the section is that cross connection abatement protects public health by providing appropriate means to prevent flow from two otherwise separate piping systems where a physical connection or arrangement is present.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that designers and installers of rainwater harvesting systems</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			will adhere to cross connection abatement requirements.
210	Backflow prevention	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for rainwater harvesting systems intended to ensure that backflow prevention equipment and methods conform to the USBC.</p> <p><b>RATIONALE:</b> The rationale of the section is that backflow prevention protects public health by restricting reversal of the normal direction of flow in piping systems.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that designers and installers of rainwater harvesting systems will adhere to backflow prevention requirements.</p>
220	Water storage unit location	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for the construction and location of rainwater harvesting systems to establish separation distance from potential sources of risk and to ensure that equipment and methods of water storage conform to the USBC.</p> <p><b>RATIONALE:</b> The rationale of the section is that safe location and construction of water storage units protects public health.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that designers and installers of rainwater harvesting systems will adhere to water storage unit construction and location requirements.</p>
230	Materials and equipment	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for materials and equipment used to construct rainwater harvesting systems and to ensure that materials, equipment, and methods conform to the USBC.</p>



New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p><b>RATIONALE:</b> The rationale of the section is to protect public health by ensuring that materials used for the collection, storage, and treatment of harvested rainwater meet appropriate standards relative to the end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is reduced risk of adverse public health outcomes for users of permitted rainwater harvesting systems because materials and equipment will be appropriate for the end use of the harvested rainwater.</p>
240	Design and installation	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for the design and installation of rainwater harvesting systems intended to ensure conformance to the USBC.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect public health by the establishment of criteria for design and installation of rainwater harvesting systems relative to the end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is reduced risk of adverse public health outcomes for users of permitted rainwater harvesting systems because the design and installation of rainwater harvesting systems will be appropriate to the end use of the harvested rainwater.</p>
250	Filtration	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for materials and equipment used for filtration as part of rainwater harvesting systems and to ensure conformance to the USBC.</p> <p><b>RATIONALE:</b> The rationale of the section is that filtration is a necessary step to removing particulate matter from</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p>harvested rainwater for purposes of contaminant removal and protection of the integrity of additional treatment processes and equipment.  <b>LIKELY IMPACT:</b> The likely impact of the section is reduced risk of adverse public health outcomes for users of permitted rainwater harvesting systems because filtration materials and equipment used in rainwater harvesting systems will be appropriate to the end use of the harvested rainwater.</p>
260	Disinfection	USBC	<p><b>INTENT:</b> The intent of the section is to provide standards for materials and equipment used for disinfection as part of rainwater harvesting systems and to ensure conformance to the USBC.  <b>RATIONALE:</b> The rationale of the section is that disinfection is a necessary step to protect public health by inactivating or destroying pathogenic organisms to a level consistent with the end-use of the water from a rainwater harvesting system.  <b>LIKELY IMPACT:</b> The likely impact of the section is reduced risk of adverse public health outcomes for users of permitted rainwater harvesting systems because disinfection materials and equipment used in rainwater harvesting systems will be appropriate to the end use of the harvested rainwater.</p>
270	General certification		<p><b>INTENT:</b> The intent of the section is to provide standards for the labeling of materials and equipment used as part of rainwater harvesting systems and certification standards for designers, installers, and inspectors of rainwater harvesting systems.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			<p><b>RATIONALE:</b> The rationale of the section is that public health is protected by certification to recognized industry standards of materials, equipment, and training associated with the design, installation, and operation and maintenance of a rainwater harvesting system.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will ensure the general certification of materials, equipment, designers, installers, and inspectors pursuant to the Regulations.</p>
280	Temporary removal from service		<p><b>INTENT:</b> The intent of the section is to provide standards for temporary removal from service of rainwater harvesting systems when structures are not occupied.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect public health and property by establishing criteria to secure a rainwater harvesting system not in current use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that rainwater harvesting systems will be protected when not in service.</p>
<b>Part IV Performance Requirements</b>			
290	Performance requirements; general		<p><b>INTENT:</b> The intent of the section is to identify overall performance requirements applicable to rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect public health by the establishment of performance requirements that set out the technical criteria in accordance with which rainwater harvesting systems are to be designed, installed, operated, and maintained.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will ensure operation of their permitted rainwater</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			harvesting systems operate in compliance with these performance requirements, reducing the risk of adverse public health outcomes for users of the systems.
300	Performance requirements; continuity of water supply		<p><b>INTENT:</b> The intent of the section is to provide performance requirements for the continuity of water supply such that rainwater harvesting systems are not compromised by lack of sufficient precipitation.</p> <p><b>RATIONALE:</b> The rationale of the section is that natural precipitation patterns cannot be relied upon for a permanent water supply source, and therefore a secondary means of water supply is necessary to ensure a continuous supply is available as a basic need and to protect public health.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that rainwater harvesting systems will have a reliable source of water when precipitation levels are insufficient to meet demand.</p>
310	Performance requirements; water quality standards	42 U.S.C. § 300f	<p><b>INTENT:</b> The intent of the section is to provide standards for water quality rainwater harvesting systems, based on both the Safe Drinking Water Act (potable systems) and end-use Tier.</p> <p><b>RATIONALE:</b> The rationale of the section is that water quality standards, categorized by end-use, are necessary to protect public health.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is reduced risk of adverse public health outcomes for users of rainwater harvesting systems because all rainwater harvesting systems will meet water quality standards</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
			appropriate to the end use of the harvested rainwater.
Part V Operation and Maintenance Requirements			
320	Operator requirements; minimum frequency of visits.		<p><b>INTENT:</b> The intent of the section is to identify the frequency of inspection of rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to ensure that operators maintain a schedule of inspection of rainwater harvesting systems, based on the end-use of the water, sufficient to protect the health of the system users.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that operators will visit inspect permitted rainwater harvesting systems pursuant to this section, increasing the likelihood of identifying and completing needed repairs or alterations, reducing the risk of adverse public health outcomes for users of the systems.</p>
330	Operation and maintenance; Operator responsibilities		<p><b>INTENT:</b> The intent of the section is to identify the responsibilities for operators of rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect the health of the users of the system by clarifying the minimum operation and maintenance responsibilities of the operator responsible for the system. If not properly maintained, the rainwater harvesting system may produce water that is not safe for the intended end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that operators will know and comply with requirements necessary to ensure rainwater harvesting systems operate in accordance with the Regulations.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
340	Operation and maintenance; owner's responsibilities		<p><b>INTENT:</b> The intent of the section is to identify the responsibilities for owners of rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect the health of the users of a rainwater harvesting system by listing the responsibilities that the owner must meet. If not properly maintained, the rainwater harvesting system may produce water that is not safe for the intended end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will understand and comply with their responsibilities for operation and maintenance of rainwater harvesting systems.</p>
350	Operation and maintenance manual		<p><b>INTENT:</b> The intent of the section is to identify the minimum necessary contents of operation and maintenance manuals for rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect public health by providing the owners, operators, and users of rainwater harvesting systems a document that describes essential details about the system and its upkeep. If not properly maintained, the rainwater harvesting system may produce water that is not safe for the intended end-use.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that owners will include all required information in the operation and maintenance manuals for their rainwater harvesting systems, which will ensure the systems are operated and maintained in such a way that complies with this chapter and protects the health of those who rely on the system for potable water.</p>

New chapter-section number	New requirements to be added to VAC	Other regulations and laws that apply	Change, intent, rationale, and likely impact of new requirements
360	Mandatory visits; inspection requirements		<p><b>INTENT:</b> The intent of the section is to identify the minimum inspection requirements for rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is to protect public health by establishing minimum standards, based on end-use, for actions to be taken during the inspection of a rainwater harvesting system.</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is operators who inspect rainwater harvesting systems will adhere to a consistent standard.</p>
370	Reports		<p><b>INTENT:</b> The intent of the section is to identify the information to be documented following inspection of rainwater harvesting systems.</p> <p><b>RATIONALE:</b> The rationale of the section is that documentation of required inspections of rainwater harvesting systems protects public health and establishes baseline data in the event that the system is later determined to be out of compliance</p> <p><b>LIKELY IMPACT:</b> The likely impact of the section is that inspection reports will be consistently prepared and provided to the required recipients, including VDH.</p>