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Final Regulation Agency Background Document

Agency name	Virginia Department of Health
Virginia Administrative Code (VAC) Chapter citation(s)	12 VAC5-635
VAC Chapter title(s)	Rainwater Harvesting System Regulations
Action title	Final Regulations
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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.

To develop the regulations, the Virginia Department of Health (VDH) assembled a group of stakeholders for the purpose of incorporating a variety of viewpoints. The stakeholder group included:

Name	Representing
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Anthony Creech	VDH Office of Environmental Health Services (OEHS)
Aaron Moses	VDH Office of Drinking Water (ODW)
Angela King	Virginia Coastal Policy Center
Benjamin Sojka	Rainwater Management Solutions (Industry)
Evan Branosky	Home Builders Association of Virginia
David Sample	Virginia Tech
Lance Gregory	VDH OEHS
Jay Ford	Chesapeake Bay Foundation
Jay Otto	Otto Sales (Industry)
Jeffrey Brown	Virginia Department of Housing and Community Development (DCHD)
Kathy DeBusk Gee	Longwood University
Michael Redifer	City of Newport News Code Compliance
Michelle Ashworth	Virginia Municipal Stormwater Association
Nelson Daniel	VDH ODW
Robert Cooper	Virginia Department of Environmental Quality (DEQ)
Robert Edelman	VDH ODW
Seana Ankers	Mission H2O (Legal)
Skip Harper	DHCD
Trip Perrin	Lindl Corporation (Industry)
Tyrone Jarvis	Go Green Auto Care (Industry)
Valerie Rourke	DEQ

In addition, the Virginia Association of Counties, the Virginia Municipal League, and the Virginia Association of Realtors were invited to provide representatives to the stakeholders.

To develop the Regulations, the stakeholders reviewed national and international rainwater harvesting standards and rainwater harvesting system (and other water reuse) regulations in other states and jurisdictions including the cities of San Francisco and Seattle. This effort allowed the stakeholders to collaborate to develop regulations that are consistent in scope and requirements with similar regulations throughout the country. Based on this effort, VDH considers the Regulations to meet an appropriate and reliable level of public health protection which is not overly burdensome to the regulated community.

The Regulations are Virginia’s second set of regulations addressing private water supply, with the first being the Private Well Regulations (12VAC5-630). The Private Well Regulations address only the location and construction of wells (pursuant to § 32.1-176.4. of the Code of Virginia). Post well construction activities, including water quality and well maintenance, are at the discretion of the well owner. In comparison, the rainwater harvesting system regulations address water quality and system operation and maintenance. VDH attributes this distinction to (i) the known reliability of groundwater quality in the Commonwealth, and (ii) the necessity to filter and disinfect harvested rainwater in order to ensure it meets the required quality dependent its intended use.

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).

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.

ARCSEA	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
LRT	Log Reduction Target
OEHS	Office of Environmental Health Services
VAHWQP	Virginia Household Water Quality Program
VDH	Virginia Department of Health
USBC	Virginia Uniform Statewide Building Code

Statement of Final Agency Action

Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.

The State Board of Health approved these Final Rainwater Harvesting System Regulations (12VAC5-635) on April 10, 2024.

Mandate and Impetus

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding the mandate for this regulatory change, and any other impetus that specifically

prompted its initiation. If there are no changes to previously reported information, include a specific statement to that effect.

Chapter 817 of the 2018 Acts of Assembly (HB 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. The Virginia Department of Health (VDH) intends to address regulation of gray water in a 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.

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 Title 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 harvested 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 regulation 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 have improved understanding of risks to public health associated with rainwater harvesting, which is addressed in the final 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 saltwater 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 assurance 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 in 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, or necessary requirements, to obtain a permit for a rainwater harvesting system intended for potable use to be a disadvantage. VDH has 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 enhanced 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 of 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

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any requirement of the regulatory change which is more restrictive than applicable federal requirements. If there are no changes to previously reported information, include a specific statement to that effect.

The federal government does not regulate the harvesting of rainwater for reuse. However, the 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 to 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

List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any other state agencies, localities, or other entities that are particularly affected by the regulatory change. If there are no changes to previously reported information, 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; the 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.

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.

Draft Regulations were published in the Virginia Register on October 9, 2023. A number of comments were received during the advertised 60 day public comment period.

Commenter	Comment	Agency response
Jody Frymire IDEXX Water	IDEXX commends the Virginia Department of Health (Department) on the provisions under consideration for the Rainwater Harvesting System Regulation (12VAC5-635). At this time, IDEXX	In developing the regulations, VDH and the stakeholder panel relied on national and international standards organizations including ARCSA, EPA, and ICC. The log reduction targets (LRTs) adopted for use in the regulations measure the effectiveness of the decontamination process

<p>would like to request the Department to consider the following comment. We support the inclusion of adding water quality parameters that address pathogenic bacteria, such as total coliform and <i>Escherichia coli</i> (<i>E. coli</i>), in rainwater harvesting systems intended for drinking water. As rainwater systems become an alternative source for drinking water, it is vital to ensure that these systems meet strict water quality standards, especially when they can be a source of potential risk associated with pathogenic bacteria. However, in addition to such bacteria parameters, rain harvesting systems not intended as a source for human consumption should also include public health safeguards to pathogenic bacteria. Mitigation efforts aimed at <i>Legionella pneumophila</i>, an aerosolized waterborne pathogen that causes Legionnaires' Disease, should also be considered for non-potable rainwater harvesting systems. We recommend reducing the public risk of Legionnaires' disease by recommending the routine monitoring for <i>L. pneumophila</i>.</p> <p><i>Legionella</i> occurs naturally in water under certain conditions and has been identified as occurring within rainwater harvesting and recycled water systems [1-2]. <i>Legionella pneumophila</i> is the bacteria linked to most clinical cases of Legionnaires' disease reported from US disease outbreaks 2009-2012 [3]. People become ill from Legionnaires' Disease when <i>Legionella pneumophila</i> is aerosolized from the water and inhaled or aspirated from areas such as: shower heads, irrigation mists, cooling tower aerosols, hot tubs, air-conditioning units. The bacteria can then infect the macrophages within a person's lungs, producing a severe pneumonia [4-7]. Provisions on treatment options for <i>L. pneumophila</i>, in premise plumbing systems and recycled water have been researched and identified for effectiveness of <i>Legionella</i> control [2,8]. With <i>Legionella</i> being found in</p>	<p>in reducing the concentration of contaminants. In general <i>n</i>-log reduction means the concentration of remaining contaminants is only 10⁻ⁿ times that of the water prior to decontamination. LRTs represent a risk-based approach that is scientifically defensible and focus on reduction of virus, protozoa, and bacteria.</p> <p>The recommended standard for pathogen removal and/or inactivation is a treatment process in which unit processes are collectively credited to meet the selected LRTs.</p> <p>The LRTs identified in the regulations are based on infection-based benchmarks recognized in the EPA's 2017 guidance. Since the regulations were drafted, the US EPA Office of Research and Development drafted an updated set of LRTs based on the World Health Organization's disability-adjusted life years (DALYs) measure of overall disease burden. The 2022 EPA DALYs for roof runoff water recognize 3.5 LRT for indoor non-potable use. The regulations require 6 LRT for potable use. The primary exposure pathway for <i>L. pneumophila</i> is inhalation from an aerosolized source (e.g., from a showerhead).</p> <p>VDH agrees with the commenter that <i>L. pneumophila</i> is a significant pathogen, especially via the aerosolized exposure pathway. The LRTs adopted into the regulation address this pathogen along with the other viruses, protozoa, and bacteria considered in the LRT determination process. For this reason, VDH has not singled out <i>L. pneumophila</i> out for testing or other reason in the regulations.</p> <p>Nothing in the regulation prevents a system designer or installer from utilizing a higher LRT in response to the risk of any pathogen, including <i>Legionella</i>.</p>
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	<p>water sources that are both natural and man-made, if these water sources contain other organisms and/or biofilms that could help the bacteria’s survival, <i>L. pneumophila</i> can be found in drinking water, even after water supplies have been centrally treated [8-10]. Additionally, monitoring residual disinfectants is not an effective way to monitor the pathogenic risk of <i>L. pneumophila</i> [11,12], in a recent study on drinking water distribution systems, <i>L. pneumophila</i> was detected in a distribution water sample containing 0.72 mg/L free chlorine [11].</p> <p>The current proposed regulation includes mitigating exposure to certain pathogens; however, a more protective regulation would include testing and mitigation efforts for <i>L. pneumophila</i> in rainwater harvesting systems. IDEXX encourages and hopes the Department will consider these comments for strengthening the Rainwater Harvesting Systems Regulations and to better protect the public against the potential exposure to <i>Legionella</i> from harvested rainwater.</p>	
<p>Lynn Broaddus Broadview Collaborative</p>	<p>Statutory Authority: typo needs correcting. Where it refers to “Sections 32.1-12 and 32.248.2” this should be amended to read “32.1-12 and 32.1-248.2.”</p>	<p>This is corrected in the final regulations.</p>
<p>Lynn Broaddus Broadview Collaborative</p>	<p>In general, I encourage the Commonwealth to consider cost of implementation as currently drafted. The complexity of the building and design review, ongoing testing, etc. is considerable and out-of-proportion with the expectations of private wells. I fear that if implemented as written the regulations will be overly burdensome for VDH staff and homeowners alike without a proportional increase in public health. History tells us that when people are faced with what they perceive as unreasonable regulations they will simply skirt the law (e.g. Prohibition), which defeats most of the purpose of the effort to codify RHW.</p>	<p>With respect to comparison to the private well program, VDH has found that the capital costs for design and installation between wells and rainwater harvesting systems are comparable. Depending on well depth, a private well may in fact exceed the cost of a rainwater harvesting system.</p> <p>There is a distinction with respect to water quality testing. VDH does not have authority under the Code of Virginia to require ongoing water quality testing of private wells. The Virginia Household Water Quality Program (VAHWQP) has assisted well owners with water quality testing since the 1990s and publishes annual reports of findings. VAHWQP has consistently found that – among other exceedances – approximately 50% of private wells tested fail bacteriological tests annually and approximately 10% of private wells exceed lead standards annually. This represents a public health risk. VDH does not therefore agree that the</p>

		<p>requirement for ongoing testing of rainwater harvesting system performance is without proportional increase in public health protection. Further, the permitted use of harvested rainwater will be a new program and a reasonable level of caution is warranted. The Commonwealth of Virginia requires periodic review of regulations every four years, so there is a built-in mechanism to revise the regulations should actual performance indicate that less stringent standards can be considered.</p>
<p>Lynn Broaddus Broadview Collaborative</p>	<p>12VAC5-635-20. I support the exclusion / grandfathering of previously installed RWH systems. However, it is not clear to me how the exclusion is verified. Does the owner need to apply for the exclusion to have it properly recognized? Is this equally true for auxiliary systems? Are they excluded from other aspects of the regulations (e.g. testing, notification when modifications are made)?</p>	<p>The owner of an existing rainwater harvesting system will not need to apply for the exclusion. This includes auxiliary systems. Existing systems are excluded from other aspects of the regulations. Changes to existing systems will be subject to the regulations at such time as the changes are made.</p>
<p>Lynn Broaddus Broadview Collaborative</p>	<p>12VAC5-635-80 Permits - general. The terms "install, alter, or rehabilitate" are not defined. Does this include routine maintenance? Does this include making modest changes, like adding a water-level indicator? Perhaps the regulation needs to be amended to add "Routine inspection and maintenance, including cleaning, UV bulb or filter replacement, pipe or tank repair, etc. does not require permission from or notification to the commissioner."</p>	<p>This question is addressed in the definition of Maintenance in 12VAC5-635-10.</p>
<p>Lynn Broaddus Broadview Collaborative</p>	<p>12VAC5-635-100. It strikes me that the requirements are overly burdensome, adding costs with very little added health benefit. I think this comes from the Commonwealth's discomfort with the technology, and it is creating a burden greater than what is expected for connecting to well water or municipal water. It would be good to run these requirements past an architect who has worked with homeowners building with RWH systems to get a sense of how much of a burden this would be. David Day, an architect based in Charlottesville VA, has designed a number of homes that incorporated RWH systems and may be a good person to solicit input from.</p>	<p>Construction permits are required only for potable water (End Use Tier 4) systems. The materials required for submission under 12VAC5-635-100 are for the most part likely to be manufacturer's literature.</p>

Lynn Broaddus Broadview Collaborative	12VAC5-635-150. The requirement for a permanent easement seems extreme, especially because most buildings have a limited lifespan.	The purpose of a permanent easement is to protect both landowners, particularly if one of the parcels transfers to new owners.
Lynn Broaddus Broadview Collaborative	12VAC5-635-160 Land Records. This requirement also seems overly burdensome. There is no similar requirement for private wells, yet they are likely to be much more subject to bacterial and viral contamination.	The purpose is to provide a mechanism to inform the purchaser of a property served by a rainwater harvesting system of the permit requirements for operation and maintenance of the system, including water quality testing. This is not an issue for structures provided with water from private wells.
Lynn Broaddus Broadview Collaborative	12VAC5-635-240 - Design and Installation. The requirement that the system be designed to withstand freezing temperatures should be waived for seasonally used systems.	A seasonal waiver would subject a system to potential failure should the seasonally used system not be properly safeguarded during cold weather months.
Lynn Broaddus Broadview Collaborative	12VAC5-635-290 - Performance requirements, 6B. The requirement that the system be capable of providing 150 gallons per bedroom-day is excessive. According to a 2016 study by the Water Research Foundation, the median U.S. household water use was 125 gallons per household-day. It doesn't state how many bedrooms that represents, but even a conservative estimate of two bedrooms would suggest that a design standard of 60-gallons per bedroom-day is more in keeping with need, especially considering that domestic water use has been steadily decreasing since the 1980s.	VDH agrees with the premise of this comment. The draft regulations identify 150 gallon per bedroom per day to be consistent with other VDH regulations. VDH agrees that this usage rate, which dates to the mid-20 th century, is not consistent with improvements in plumbing fixtures and other factors pertaining to current residential water use. Even so, it is important to note that regulatory design standards address a system's capability to handle short term peak demand rather than simply meet median rates. It is also important to note that rainwater harvesting system components may be susceptible to damage if allowed to run out of water. Section 290 of the regulations is revised in the final regulations to account for current water use trends.
Lynn Broaddus Broadview Collaborative	12VAC5-635-320. Testing every 180 days for a typical house or cottage is excessive, especially given that there are no testing requirements for private wells after initial commissioning. I suggest an alternative that allows for the elimination of testing) after the first 18 months of successful operation.	As noted in the response to previous comments, the lack of testing requirements for private wells following initial commissioning comes with a demonstrated risk to public health. Notwithstanding, the idea of a reduction or elimination of testing of rainwater harvesting systems after the confirmation of successful operation has merit and can be considered during periodic review of the regulations after they are promulgated.

Detail of Changes Made Since the Previous Stage

*List all changes made to the text since the previous stage was published in the Virginia Register of Regulations and the rationale for the changes. 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. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. * Put an asterisk next to any substantive changes.*

Current chapter-section number	New chapter-section number, if applicable	New requirement from previous stage	Updated new requirement since previous stage	Change, intent, rationale, and likely impact of updated requirements
10, 20, 70, 100, 110, 120, 140, 160, 170, 180, 240, 290, 350, 360, 370			Various minor grammatical and punctuation changes that do not alter the meaning or intent of the previous stage of the regulations.	<p>CHANGE: To improve the grammar and correct punctuation within the Regulations.</p> <p>INTENT: To clarify and simplify the text of the Regulations.</p> <p>RATIONALE: To improve readability and avoid confusion within the Regulations.</p> <p>LIKELY IMPACT: Will provide clarity to the regulated community.</p>
10 200 210		<p>Added definitions for “backflow,” “cross-connection,” and “variance.”</p> <p>The definition for “backflow” was deleted from Section 210, and the definition of cross connection was deleted from Section 200</p>		<p>CHANGE: Moved the definition for backflow and cross connection from within the text of the Regulations to the definition section and added a definition for variance.</p> <p>INTENT: To conform with the style guide for regulatory documents; when a term is used multiple times the term should be defined within the definition section.</p> <p>RATIONALE: The purpose of definitions are to provide clarity regarding the terms used multiple times during the chapter.</p> <p>LIKELY IMPACT: Will provide clarity to the regulated community.</p>
90 D*		D. An owner may install and operate a rainwater harvesting systems intended for Tier 1, 2, or 3 end use without a permit. The owner of a Tier 1, 2, or 3 end use rainwater harvesting system shall file a registration form with the department	<p>Eliminate D.2, which requires owner to file a registration form with VDH indicating a change of ownership. Current D.3 (“permanently closing a rainwater harvesting system”) becomes D.2 and D.3 is eliminated.</p> <p>Revised former D.3 (now D.2) to clarify</p>	<p>CHANGE: Elimination of requirement for owners to notify VDH of a change of ownership for a Tier 1, 2 or 3 end use rainwater harvesting system.</p> <p>INTENT: To reduce the regulatory burden on owners purchasing homes with existing Tier 1, 2, or 3 end use rainwater harvesting systems.</p> <p>RATIONALE: The purpose of registration is to provide</p>

		<p>within 30 days of the following:</p> <ol style="list-style-type: none"> 1. Installing a rainwater harvesting system; 2. Change of ownership of a rainwater harvesting system; or 3. Permanently closing a rainwater harvesting system. 	<p>the intended meaning of permanently closing a rainwater harvesting system.</p>	<p>the Commonwealth with knowledge of the number and location of systems state-wide. The name of the owner is not relevant to the number and location of systems installed; therefore, it is not necessary to track change in ownership of rainwater harvesting systems. LIKELY IMPACT: Will simplify real estate transactions for properties served by a Tier 1, 2, or 3 end use rainwater harvesting system, and avoid future owners from unknowingly violating the Regulations if the change of ownership were not submitted.</p>
<p>100 E</p>		<p>E. An application shall be deemed complete upon receipt by the local health department of a signed and dated application on the approved application form.</p>	<p>Modify E to state “An application shall be deemed complete upon receipt by the local health department of a signed and dated application on the approved application form,”</p>	<p>CHANGE: Removed unnecessary language referencing the approved application form.</p> <p>INTENT: Simplifies regulatory text for the public.</p> <p>RATIONALE: The approved application form is already incorporated as a form for the regulations; therefore, the additional reference is unnecessary.</p> <p>LIKELY IMPACT: Will simplify regulatory language for the public.</p>

180*			Updates the variance process and requirements.	<p>CHANGE: Clarifies that the commissioner doesn't propose denial of a variance before denying the variance. Removes the requirement to physically attach the variance to the permit.</p> <p>INTENT: To clarify and simplify the text. To eliminate an unnecessary burden from the proposed regulations.</p> <p>RATIONALE: Simpler text is more readable. Permit management is likely largely performed digitally, so the physical requirement isn't necessary.</p> <p>LIKELY IMPACT: The regulations will be clearer and permit holders won't need to print out and attach variances and permits.</p>
190 E*		E. Within 10 days of receipt of a notice of denial of an application or suspension of a permit, the owner may request an informal conference in accordance with § 2.2-4019 of the Code of Virginia. The owner must file the request for an informal conference in writing with the local health department within the locality that the rainwater harvesting system is located. If a request for an informal conference is not filed within 10 working days, the	Modify E to state "Within 10 <u>working</u> days of receipt of a notice of denial of an application or suspension of a permit, the owner may request an informal conference in accordance with § 2.2-4019 of the Code of Virginia. The owner must file the request for an informal conference in writing with the local health department within the locality that the rainwater harvesting system is located. If a request for an informal conference is not filed within 10	<p>CHANGE: Clarifies the references to "days" in this section indicate "working days" as opposed to calendar days.</p> <p>INTENT: To clarify that owners have 10 working days after receipt of a denial to request an informal hearing. Remove requirement to attach a plan of correction to the permit.</p> <p>RATIONALE: To clarify that "days" means "working days" (i.e. Monday to Friday) and not calendar days. Permit management is likely largely performed digitally, so the physical requirement isn't necessary.</p>

		denial or suspension is sustained.	working days, the denial or suspension is sustained. Removes requirement that a plan of correction be attached to the operation permit.	LIKELY IMPACT: Will afford owners more time to submit their request for informal hearings. Plans of correction will be maintained but not physically attached to the permit.
290*		Requires design standard of 150 gallons per bedroom per day for residential Tier 4 end use rainwater harvesting system.	Provides for a design standard of 100 gallons per day per bedroom for residential Tier 4 end use rainwater harvesting systems when an existing private well or public water supply is the designated continuity of water supply.	CHANGE: This modification provides for the sizing of rainwater harvesting systems consistent with current knowledge of residential water use rates, while maintaining continuity of water supply to assure that systems do not run dry. This addresses one of the comments submitted by Broadview Collaborative. INTENT: To provide flexibility to designers in recognition of the use of water saving devices and similar plumbing improvements RATIONALE: A review of information from sources including American Water Works Association supported reducing the estimated volume of water used per bedroom from 150 gallons per day to 100 gallons per day. LIKELY IMPACT: Will provide more design options to the regulated community and reduce cost of equipment – such as storage tanks - based on lower total design volumes for systems.
310 B 5*		Included a testing requirement for protozoan cysts and cryptosporidium	Eliminates the requirement for testing for protozoan cysts and cryptosporidium	CHANGE: Removes the testing requirement for protozoan cysts and cryptosporidium. INTENT: To ensure consistent between the

				<p>Rainwater Harvesting Regulations and the Safe Drinking Water Act, which identifies the Treatment Technology in place of a maximum contaminant limit.</p> <p>RATIONALE: Consistency with nationally used water quality protection practices.</p> <p>LIKELY IMPACT: Will simplify implementation of the Regulations by maintaining consistency with existing drinking water regulations used by the regulated community.</p>
310 C*		<p>Included requirement for testing of all Safe Drinking Water Act (SDWA) primary and secondary drinking water standards prior to issuance of operating permit for rainwater harvesting system.</p>	<p>Reduces the requirement for SDWA based water quality testing to inorganic primary drinking water standards.</p>	<p>CHANGE: Reduces testing requirements to inorganic primary US EPA drinking water standards which are: antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, copper, cyanide, fluoride, lead, mercury, nitrate, nitrite, selenium, and thallium.</p> <p>INTENT: To eliminate required testing for potential contaminants not anticipated to be found in harvested rainwater.</p> <p>RATIONALE: Eliminate unnecessary cost and burden to the regulated community to test for constituent not likely to be found in harvested rainwater and focus on constituents likely to be found or that would have significant public health effects.</p> <p>LIKELY IMPACT: This will reduce the cost of complying with the Regulations and simplify the process for necessary sample collection.</p>

FORMS		Included an Inspection Report form for Tier 4 Rainwater Harvesting Systems.	Deleted the Inspection Report form.	<p>Intent: Remove an unnecessary form</p> <p>Rationale: Inspection reports will be submitted to VDH via an online portal to improve timeliness, reduce paper waste, and minimize the burden of report submission.</p> <p>Likely Impact: System inspectors will not need to print and mail or deliver paper reports to VDH. Online portal will be more user-friendly.</p>
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Detail of All Changes Proposed in this Regulatory Action

List all changes proposed in this action and the rationale for the changes. 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. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. ** Put an asterisk next to any substantive changes.*

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of updated requirements
Part 1 General Framework of Regulations			
N/A	635-10. Definitions	Definitions for: Agent, ANSI, ASSE, Backflow Board, Cistern, Commissioner, Contaminant, Conveyance system, Debris excluder, Department, Disinfection, Distribution System, End use, End use tier, Filtration, First flush, harvested rainwater, Human consumption, Installer, Local health department, log reduction, log reduction target, maintenance, non-potable water, NSF, Operation and maintenance manual, Operator, Owner, Point of use, Potable water, Precipitation, Rainwater harvesting system, Screen, Secondary Water Supply, Service Connection, Stormwater, Treatment, Treatment system, USBC,	<p>INTENT: The intent of the definitions is to ensure clarity.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires regulations for the harvesting of rainwater include standards for the use of rainwater harvesting systems. The definitions will provide consistency with federal guidelines, the USBC, other VDH regulations, and industry terminology.</p> <p>LIKELY IMPACT: The likely impact of the definitions is reduced confusion for the regulated community regarding terms used in the chapter.</p>

		Water storage unit, and Waterworks.	
N/A	635-20. Applicability of Regulation	Adds circumstances in which certain rainwater systems or equipment may be exempt from this chapter.	<p>INTENT: 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires regulations for the harvesting of rainwater include standards for the use of rainwater harvesting systems. Further, § 32.1-12 grants authority to the Board for the provision of reasonable exemptions from regulations.</p> <p>LIKELY IMPACT: The likely impact of the section is reduced confusion for the regulated community about which rainwater harvesting systems are regulated pursuant to 12VAC5-635.</p>
N/A	635-30. Relationship to Virginia Sewage Handling and Disposal Regulations.	Clarifies that this section supersedes 12VAC5-610-1170	<p>INTENT: The intent of the section is to clarify that the regulations supersede 12VAC5-610-1170, which addresses cisterns.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires regulations for the harvesting of rainwater; whereas Code of Virginia § 32.1-164 does not.</p> <p>LIKELY IMPACT: The likely impact of the section is (i) that VDH intends to repeal 12VAC5-610-1170 during the next revision of the Sewage Handling and Disposal Regulations, and (ii) until that occurs, this section will reduce confusion for the regulated community about the use of cisterns</p>
N/A	635-40. Relationship to the State Water Control Board.	Clarifies that this chapter addresses the standards for the collection and use of that portion of storm water not regulated pursuant to DEQ's storm water regulations.	<p>INTENT: The intent of the section is to clarify that this chapter addresses the standards for the collection and use of that portion of storm water not regulated pursuant to DEQ's storm water regulations.</p> <p>RATIONALE: 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 storm water</p>

			LIKELY IMPACT: The likely impact of the section is reduced confusion for the regulated community and personnel of VDH and DEQ about storm water and rainwater related regulations.
N/A	635-50. Relationship to the Uniform Statewide Building Code	Clarifies that the chapter is independent of and in addition to the requirements of the USBC, and to present the requirements for the furnishing rainwater harvesting system construction permits and operation permits to local building officials when harvested rainwater will supply potable water systems.	INTENT: 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 furnishing rainwater harvesting system construction permits and operation permits to local building officials when harvested rainwater will supply potable water systems. RATIONALE: The rationale of the section is that Code of Virginia § 36-98 addresses construction standards. LIKELY IMPACT: The likely impact of the section is reduced confusion for the regulated community about the relationship between VDH permitting authority and the USBC.
N/A	635-60. Right of entry and inspections.	Allows for the inspection pursuant to this chapter by the commissioner or designee	INTENT: The intent of the section is to express VDH right of inspection. RATIONALE: 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. LIKELY IMPACT: The likely impact of the section is reduced confusion for the regulated community about rights of entry and inspection.
Part II Procedural Regulations			
N/A	635-70. End use tiers for rainwater harvesting systems.	Provides for the identification of four End Use tiers to classify the way rainwater harvesting systems are regulated.	INTENT: 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 or indirect contact under normal operation. Examples include trap

			<p>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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to promote the use of rainwater, consider recognizing rainwater as an independent source of fresh water available for use by the residents of the Commonwealth, and adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about the end use of harvested rainwater.</p>
N/A	635-80. Reserved.	Section Reserved	N/A
N/A	635-90. Permits for rainwater harvesting systems; general.	Includes general permitting and registration requirements for rainwater harvesting systems.	<p>INTENT: The intent of the section is to inform the regulated community about 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1 grants authority to the Board to</p>

			<p>make, adopt, promulgate, and enforce regulations.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding permitting and registration of rainwater harvesting systems.</p>
N/A	635-100. Application procedures for a construction permit for a rainwater harvesting system for Tier 4 end use.	Provides procedures for Tier 4 end use permit applications	<p>INTENT: The intent of the section is to instruct owners of Tier 4 end use rainwater harvesting systems about the requirements to apply for a construction permit.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion among the regulated community regarding application procedures for construction permits.</p>
N/A	635-110. Issuance of a construction permit.	Provides for conditions required for approval of a Tier 4 end use rainwater harvesting systems construction permit.	<p>INTENT: The intent of the section is to inform the regulated community the conditions under which the commissioner will issue a construction permit for a Tier 4 end use rainwater harvesting system.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to provide clarity about the permitting process.</p>
N/A	635-120. Denial of a construction permit.	Provides for conditions in which a construction permit for a Tier 4 end use rainwater harvesting system may be denied.	<p>INTENT: The intent of the section is to inform the regulated community the conditions under which the commissioner will deny a construction permit for a Tier 4 end use rainwater harvesting system.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about denial of a construction permit.</p>

N/A	635-130. Revision of approved plans.	Provides for conditions under which changes may be made to a Tier 4 end use rainwater harvesting system without prior approval. Authorizes the commissioner to suspend or revoke a construction permit under certain circumstances.	<p>INTENT: 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.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about design changes.</p>
N/A	635-140. Installation inspection and correction.	Describes the 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>INTENT: The intent of the section is to describe the 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding documentation of work performed.</p>
N/A	635-150. Requirement for an easement.	Provides for 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 owners.	<p>INTENT: 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 owners.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall</p>

			<p>provide standards for the use of rainwater harvesting systems. LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the conditions when an easement is required and the procedures to follow.</p>
N/A	635-160. Land records.	Requires that certain records and documentation related to water quality be included in land records of a circuit court.	<p>INTENT: 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. RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems. LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about necessary land records.</p>
N/A	635-170. Issuance of operation permit.	Provides for conditions under which an operational permit for a Tier 4 end use rainwater harvesting system may be obtained.	<p>INTENT: The intent of the section is to inform the regulated community the conditions under which the Commissioner will issue an operation permit for a Tier 4 end use rainwater harvesting system. RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems. LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about the permitting process.</p>
N/A	635-180. Variances.	Provides for processes by which an owner may request and the Commissioner may approve or deny variances for a Tier 4 end use rainwater harvesting system.	<p>INTENT: 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1 grants authority to the Board to provide for reasonable variances to regulations.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community about variances.</p>
N/A	635-190. Enforcements, notices, informal conferences, appeals.	Establishes 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>INTENT: 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>RATIONALE: 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 with to make regulations or decide cases as well as to standardize court review thereof.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding enforcement, notices, informal conferences, and appeals.</p>
Part III Design and Installation			
N/A	635-200. Cross connection abatement.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to cross-connection abatement equipment and methods.	<p>INTENT: 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 Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding cross connection control and abatement.</p>

N/A	635-210. Backflow prevention.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to backflow prevention.	<p>INTENT: 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 Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding backflow prevention.</p>
N/A	635-220. Water storage unit location.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to the location of a water storage unit.	<p>INTENT: 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 Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding water storage unit construction and location.</p>
N/A	635-230. Materials and equipment.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to the materials and equipment used to construct rainwater harvesting systems.	<p>INTENT: 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 Unified Statewide Building Code.</p>

			<p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding materials and equipment used in rainwater harvesting systems.</p>
N/A	635-240. Design and installation.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to design and installation of a rainwater harvesting system.	<p>INTENT: The intent of the section is to provide standards for the design and installation of rainwater harvesting systems intended to ensure conformance to the Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the design and installation of rainwater harvesting systems.</p>
N/A	635-250. Filtration.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to materials and equipment used for filtration of a rainwater harvesting system.	<p>INTENT: 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 Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and</p>

			<p>promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding filtration materials and equipment used in rainwater harvesting systems.</p>
N/A	635-260. Disinfection.	Provides standards to ensure compliance with the Unified Statewide Building Code with regard to materials and equipment used for disinfection as part of a rainwater harvesting system.	<p>INTENT: 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 Unified Statewide Building Code.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems and § 36-98 directs and empowers the Board of Housing and Community Development to adopt and promulgate a statewide building code.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding disinfection materials and equipment used in rainwater harvesting systems.</p>
N/A	635-270. General Certification.	Provides 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>INTENT: 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> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding general certification of materials, equipment, designers, installers, and inspectors.</p>
N/A	635-280. Temporary removal from service.	Provides standards for temporary removal from service of rainwater harvesting systems	<p>INTENT: The intent of the section is to provide standards for temporary removal from service of rainwater</p>

		when structures are not occupied.	<p>harvesting systems when structures are not occupied.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding temporary removal form service of rainwater harvesting systems.</p>
Part IV Performance Requirements			
N/A	635-290. Performance requirements; general.	Provides applicable performance requirements for rainwater harvesting systems.	<p>INTENT: The intent of the section is to identify overall performance requirements applicable to rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding performance requirements rainwater harvesting systems.</p>
N/A	635-300. Continuity of water supply.	Provides requirements for the continuity of water supply for rainwater harvesting systems.	<p>INTENT: 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding continuity of water supply requirements.</p>
N/A	635-310. Water quality standards.	Provides standards for water quality rainwater harvesting systems, based on both the Safe Drinking Water Act (potable systems) and end use Tier.	<p>INTENT: 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>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding water quality standards for rainwater harvesting systems.</p>
Part V Operation and Maintenance Requirements			
N/A	635-320. Operator requirements; frequency of inspection.	Provides for the required frequency with which rainwater harvesting systems must be inspected.	<p>INTENT: The intent of the section is to identify the frequency of inspection of rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the frequency of inspection of rainwater harvesting systems.</p>
N/A	635-330. Operation and maintenance; operator's responsibility.	Identifies the responsibilities for operators of rainwater harvesting systems.	<p>INTENT: The intent of the section is to identify the responsibilities for operators of rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the responsibilities of operators of rainwater harvesting systems.</p>
N/A	635-340. Operation and maintenance; owner's responsibilities.	Identifies the responsibilities for owners of rainwater harvesting systems.	<p>INTENT: The intent of the section is to identify the responsibilities for owners of rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p>

			<p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the responsibilities of owners of rainwater harvesting systems.</p>
N/A	635-350. Operation and maintenance manual.	Provide for the minimum necessary contents of operations and maintenance manuals for rainwater harvesting systems.	<p>INTENT: The intent of the section is to identify the minimum necessary contents of operation and maintenance manuals for rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding the information to be included in operation and maintenance manuals for rainwater harvesting systems.</p>
N/A	635-360. Inspection requirements.	Provides minimum inspection requirements for rainwater harvesting systems.	<p>INTENT: The intent of the section is to identify the inspection requirements for rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding what is to be covered during inspections of rainwater harvesting systems.</p>
N/A	635-370. Inspection reports	Provides information required to be documented following an inspection of a rainwater harvesting system.	<p>INTENT: The intent of the section is to identify the information to be documented following inspection of rainwater harvesting systems.</p> <p>RATIONALE: The rationale of the section is that Code of Virginia § 32.1-248.2 requires the board to adopt regulations which shall provide standards for the use of rainwater harvesting systems.</p> <p>LIKELY IMPACT: The likely impact of the section is to reduce confusion for the regulated community regarding reporting requirements</p>

			associated with inspection of rainwater harvesting systems.
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