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## Emergency Regulation and Notice of Intended Regulatory Action (NOIRA) Agency Background Document

<b>Agency name</b>	Board of Health
<b>Virginia Administrative Code (VAC) citation</b>	12 VAC 5-610
<b>Regulation title</b>	Sewage Handling and Disposal Regulations
<b>Action title</b>	Amend the regulations to establish requirements for the physical construction, design, and installation of gravelless material including chambers and bundled expanded polystyrene; and establish requirements for the physical construction, design, and installation of drip dispersal.
<b>Date this document prepared</b>	July 24, 2013

This form is used when an agency wishes to promulgate an emergency regulation (to be effective for up to one year), as well as publish a Notice of Intended Regulatory Action (NOIRA) to begin the process of promulgating a permanent replacement regulation.

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 14 (2010) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

### Preamble

*The APA (Code of Virginia § 2.2-4011) states that agencies may adopt emergency regulations in situations in which Virginia statutory law or the appropriation act or federal law or federal regulation requires that a regulation be effective in 280 days or less from its enactment, and the regulation is not exempt under the provisions of subdivision A. 4. of § 2.2-4006.*

- 1) Please explain why this is an emergency situation as described above.
- 2) Summarize the key provisions of the new regulation or substantive changes to an existing regulation.

Chapter 202 of the 2013 Acts of Assembly (HB 1726) requires the Board of Health to promulgate regulations for chamber and bundled expanded polystyrene effluent systems. The Board may promulgate regulations for other distribution technologies. HB1726 specifies that

regulations must be effective within 280 days of enactment (on or before December 12, 2013). The Board is using the emergency rulemaking process authorized by the Administrative Process Act to promulgate regulations within 280 days.

The Sewage Handling and Disposal Regulations (12 VAC 5-610-20 et. seq., the Regulations) contain construction, design, and installation requirements for gravel and pipe effluent absorption trench, low pressure distribution, elevated sand mound, and sand-on-sand systems. The Regulations, as amended, will establish construction, design, and installation requirements for gravelless material and drip dispersal systems.

### Legal basis

*Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant citations to the Code of Virginia or General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., agency, board, or person. Your citation should include a specific provision authorizing the promulgating entity to regulate this specific subject or program, as well as a reference to the agency/board/person's overall regulatory authority.*

HB 1726 mandates the Board promulgate regulations for chamber and bundled expanded polystyrene systems, and other effluent distribution system technologies for onsite sewage systems as deemed necessary by the Board.

Additionally, the Board is authorized pursuant to Title 32.1-12 of the Code of Virginia to promulgate and enforce regulations. Title 32.1-164 of the Code authorizes the Board to promulgate regulations governing the collection, conveyance, transportation, treatment, and disposal of sewage by onsite sewage systems to protect public health and required to exercise due diligence to protect the quality of both surface water and ground water.

Title 2.2-4011 of the Code states that agencies may adopt emergency regulations when Virginia statutory law or the appropriation act or federal law or federal regulation requires that a regulation be effective in 280 days or less from enactment and the regulation is not exempt under the provisions of subdivision A. 4. of Title 2.2-4006.

### Purpose

*Please describe the subject matter and intent of the planned regulatory action. Also include a brief explanation of the need for and the goals of the new or amended regulation.*

The amended Regulations establish the following:

- 1) Specifications for the physical construction of gravelless material including minimum exterior width, height, effluent storage capacity, and structural capacity.
- 2) Requirements for a permeable interface between gravelless material and trench sidewall soil surfaces for the absorption of wastewater.

- 3) Criteria for the allowable slope, maximum length, minimum sidewall depth, and minimum lateral separation of gravelless material absorption trenches.
- 4) Criteria for determining the minimum absorption area required when utilizing gravelless material.
- 5) Criteria for the substitution of gravelless material in place of gravel for gravity percolation lines and low pressure distribution systems.
- 6) Specifications for the physical construction of drip dispersal system components.
- 7) Minimum requirements for the design of drip dispersal systems.
- 8) Minimum installation requirements for drip dispersal systems.

The need for the regulations is to address HB 1726 and incorporate requirements for technology not presently included in the regulations. The Sewage Handling and Disposal Regulations do not include construction, design, and installation requirements for gravelless material or drip dispersal systems. Since 2002, VDH has recognized through policies that gravelless material is an acceptable means of dispersing wastewater. Since 1995, VDH has also recognized through policies that drip dispersal is an acceptable means of transmitting wastewater. The goal of the amended Regulations is to move the construction, design, and installation standards for gravelless material and drip dispersal from VDH policies into the Regulations.

### Need

*Please detail the specific reasons why the agency has determined that the proposed regulatory action is essential to protect the health, safety, or welfare of citizens. In addition, delineate any potential issues that may need to be addressed as the regulation is developed.*

This regulatory action is mandated by HB1726. The Regulations were initially intended to establish construction and location requirements primarily for gravel and pipe effluent absorption trenches, low pressure distribution, elevated sand mound, and sand-on-sand systems. The Regulations allow the use of experimental or provisionally approved sewage treatment and disposal methods and provide a mechanism for provisionally approved systems to receive general approval. However, the Regulations have not been extensively updated since 2000.

The Regulations lack construction, design, and installation requirements for gravelless material, including chamber and bundled expanded polystyrene, and drip dispersal systems. To keep up with emerging technologies VDH has issued four GMPs for gravelless materials and five GMPs for drip dispersal to set physical construction, design, and installation standards. With the growing number of gravelless materials approved under these policies, and the increasing use of gravelless material and drip dispersal in Virginia, amendments to the Regulations are necessary.

Regulatory requirements for gravelless material in other states were considered. Health department staff conducted a review of regulations for gravelless material and drip dispersal systems from other states as part of this regulatory action. Potential issues may develop with how the emergency regulations are similar or different to requirements in other states or how the regulations might impact the work of licensed professionals in the Commonwealth of Virginia.

## Substance

*Please detail any changes that will be proposed. Please outline new substantive provisions, all substantive changes to existing sections, or both where appropriate.*

No substantive changes were made to existing requirements of the Regulations. However, the term “soil gravel or sand interface” used in section 920 and 950(A) of the Regulations was modified to ensure inclusion of gravelless material and drip dispersal within these sections.

The new requirements contained in sections 930(F), 940(D), 950(D), Table 5.4, and 955 of the emergency regulations address the mandates of HB1726. HB1726 requires the regulations to include the following:

- 1) Specifications for the physical construction of chamber and bundled expanded polystyrene effluent distribution systems including:
  - a. Minimum exterior width.
  - b. Minimum height.
  - c. Minimum effluent storage capacity.
  - d. Minimum structural capacity.
- 2) Requirements for a permeable interface between chamber and bundled expanded polystyrene effluent distribution systems and trench sidewall soil surfaces for the absorption of wastewater.
- 3) Specifications for the installation of chamber and bundled expanded polystyrene effluent distribution system trenches including:
  - a. Allowable slope of a trench.
  - b. Maximum length of a trench.
  - c. Minimum sidewall depth of a trench.
  - d. Minimum lateral separation of trenches.
- 4) Criteria for substituting chamber and bundled expanded polystyrene effluent distribution systems for gravity percolation trenches and gravel and crushed stone low pressure systems.
- 5) Criteria for determining the minimum area requirements for chamber and bundled expanded polystyrene effluent distribution system absorption trenches.
- 6) Regulations for other effluent distribution system technologies for onsite sewage systems as may be deemed necessary by the Board.

To meet these requirements, the emergency regulations contain the following provisions, which are new:

A definition of gravelless material, which means:

*“A product specifically manufactured to disperse effluent within the absorption trench of an onsite sewage system without the use of gravel. Gravelless material may include chambers, bundled expanded polystyrene, and multi-pipe systems.”*

A definition of drip dispersal, which means:

*“[A system that] applies wastewater in an even and controlled manner over an absorption area. Drip system components may include treatment components, a flow equalization pump tank, a filtration system, a flow measurement method, supply and return piping, small diameter pipe with emitters, air/vacuum release valves, redistribution control, and electromechanical components or controls.”*

This definition uses language currently found in GMP 107 and is intended to cover all components essential to the proper design and operation of drip dispersal systems.

Section 930(F)(1) creates a process that allows gravelless material currently approved under Guidance, Memoranda, and Policy (GMP) 116, 127, and 135 to retain general approval status. The regulations provide a process for future technologies to apply for general approval. Although the regulations currently provide a means for receiving general approval (Experimental or Provisional Approval), the Board has created a separate approval process for gravelless materials similar to the current approval process under GMP 116, 127, and 135.

Section 930(F)(2)(a) creates a minimum exterior width requirement for gravelless material based on current requirements contained in GMP 127. This is intended to meet minimum exterior width as required by Part 1(i) of HB 1726.

Section 930(F)(2)(b) creates a minimum height requirement for gravelless material based on current requirements contained in GMP 127. This is intended to meet minimum height as required by Part 1(i) of HB 1726.

Section 930(F)(2)(c) creates a requirement for a permeable interface between gravelless material and the trench sidewall as required by Part 1(ii) of HB 1726.

Section 930(F)(2)(d) creates a minimum storage capacity for gravelless material based on current requirements used to approve products under GMP 116, GMP 127, and GMP 135. The required storage capacity is equivalent to the storage capacity below the pipe in a gravel trench. This is intended to meet minimum storage capacity as required by Part 1(i) of HB 1726.

Section 930(F)(2)(e) and 930(F)(2)(f) create minimum structural capacity requirements for gravelless material based on current requirements contained in GMP 127. This is intended to meet minimum structural capacity as required by Part 1(i) of HB 1726.

Section 930(F)(3) requires that effluent be dispersed evenly throughout a gravelless system and that the trench bottom be protected from erosion. These requirements are based on current requirements in the Regulations and comments received from the Chamber and Bundled Expanded Polystyrene Technical Advisory Committee (CBEP TAC). The Board deems these requirements necessary in accordance with Part 1(vi) of HB 1726.

Section 930(F)(4) requires gravelless material be designed and installed in compliance with existing requirements contained in the Regulations, including current requirements for minimum installation depth, allowable slope, maximum length, minimum sidewall depth, and minimum lateral separation of absorption trenches. This proposed section also provides a provision for gravelless material installations to deviate from the requirements of the Regulations if approved by the Division as part of the general approval or if granted an exception pursuant to 12 VAC 5-610-660. This is intended to meet the requirements of Part 1(iii) of HB 1726.

Section 930(F)(5) and 940(D) set minimum requirements for low pressure distribution systems which use gravelless material to bed the pressure percolation lines. These minimums are based on current requirements from GMP 127 and recommendations from the CBEP TAC. This is intended to meet requirements of Part 1(iv) of HB 1726.

Section 930(F)(6) and 930(F)(7) set minimum requirements for pump-to-gravity, open-bottom gravelless material such as chambers. These requirements are intended to assure that effluent velocity is reduced prior to entering the absorption trench to prevent erosion of the trench bottom and assure proper distribution when enhanced flow distribution is utilized. Dosing volume requirements are based on the current requirements for gravel trench systems contained in 12VAC5-610-890(C). The requirement for percolation piping in open bottom gravelless systems is based on requirements contained in the “Comparison of Gravelless Absorption System GMPs” chart under GMP 116, 127, and 135 and comments from CBEP TAC members. The Board deems these requirements necessary in accordance with Part 1(vi) of HB 1726.

Section 930(F)(8) sets criteria for the substitution of gravelless material for gravel when gravelless material is not specified as part of the system design. The intent of section 930(F)(8) is to reference section 310 and 330; substitution of gravelless material does not require a new permit and requires approval by the certifying professional engineer or onsite soil evaluator that substitution is completed in accordance with the approved evaluation and design, and the Regulations. This is intended to meet criteria for substitution required by Part 1(iv) of HB 1726.

Revisions to section 950(D)(2) and Table 5.4 set criteria for determining the minimum area requirements for gravelless material. The revisions are based on minimum area requirements contained in GMP 127 and discussion among CBEP TAC members. This is intended to meet criteria for minimum area requirements required by Part 1(v) of HB 1726.

Section 955 sets minimum physical construction, design, and installation requirements for drip dispersal components and systems as a whole. Requirements include:

1. Standards for physical construction of drip tubing.
2. Minimum linear feet of tubing in the system.
3. Minimum installation depth and cover of drip systems.
4. Minimum soil absorption area and maximum loading rate requirements for drip dispersal.
5. Consideration of landscape linear loading rates.
6. Air/vacuum release valve location.
7. Minimum emergency storage and equalization volume requirements.
8. Minimum dosing volume requirements and prohibition on the use of demand dosing.

- 9. Minimum filtration and forward flushing requirements.
- 10. Electrical component requirements.
- 11. Minimum start up inspection requirements.

These requirements were based on GMP 107 and commentary from the Drip Dispersal Technical Advisory Committee (DD TAC). The Board deems these requirements necessary in accordance with Part 1(vi) of HB 1726.

Additionally the Department of Environmental Quality requested language be modified and added in section 30 to clarify areas of responsibilities between the two agencies.

### Alternatives

*Please describe all viable alternatives to the proposed regulatory action that have been or will be considered to meet the essential purpose of the action. Also describe the process by which the agency has considered or will consider, other alternatives for achieving the need in the most cost-effective manner.*

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HB1726 mandates the Board promulgate these regulations; therefore there are no alternatives to this regulatory action.

### Public participation

*Please indicate the agency is seeking comments on the intended regulatory action, to include ideas to assist the agency in the development of the proposal and the costs and benefits of the alternatives stated in this notice or other alternatives. Also, indicate whether a public meeting is to be held to receive comments on this notice.*

*Please also indicate, pursuant to your Public Participation Guidelines, whether a panel has been used in the development of the emergency regulation and whether it will also be used in the development of the proposed regulation.*

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In response to HB 1726, the Office of Environmental Health Services (OEHS) convened two technical advisory committees to identify stakeholder concerns and to provide input on development of the emergency regulations. Members of the committees included manufacturers of currently approved gravelless material, manufacturers of drip dispersal components, representatives from the Virginia Onsite Wastewater Recycling Association (VOWRA), representatives from the Virginia Association of Professional Soil Scientist (VAPSS), Virginia Society of Professional Engineers (VSPE), American Council of Engineering Companies of Virginia (ACECVA), Alternative Onsite Sewage System Operators, Onsite Sewage System Installers, and VDH district staff.

The committees advised and assisted in the development of the emergency regulations. OEHS held a series of five meetings. Meeting summaries can be found on the Townhall website at:

<http://www.townhall.virginia.gov/L/Viewmeeting.cfm?meetingid=19782> (April 16<sup>th</sup> CBEP TAC)

<http://www.townhall.virginia.gov/L/Viewmeeting.cfm?meetingid=19834> (April 23<sup>rd</sup> CBEP TAC)

<http://www.townhall.virginia.gov/L/Viewmeeting.cfm?meetingid=19835> (May 8<sup>th</sup> CBEP TAC)

<http://www.townhall.virginia.gov/L/Viewmeeting.cfm?meetingid=19781> (April 16<sup>th</sup> DD TAC)

<http://www.townhall.virginia.gov/L/Viewmeeting.cfm?meetingid=19863> (May 10<sup>th</sup> DD TAC)

Documents reviewed by the technical advisory committees included the following: [HB 1726](#), VDH [GMP #116](#), VDH [GMP #127](#), VDH [GMP #135](#), list of [approved non-gravel manufacturers and products](#), and VDH [GMP #107](#).

The agency is seeking comments on the regulation that will permanently replace this emergency regulation, including but not limited to 1) ideas to be considered in the development of the permanent replacement regulation, 2) the costs and benefits of the alternatives stated in this background document or other alternatives and 3) the potential impacts of the regulation.

The agency is also seeking information on impacts on small businesses as defined in Title 2.2-4007.1. Information may include 1) projected reporting, recordkeeping and other administrative costs, 2) the probable effect of the regulation on affected small businesses, and 3) the description of less intrusive or costly alternatives for achieving the purpose of the regulation.

Anyone wishing to submit comments may do so via the Regulatory Town Hall website (<http://www.townhall.virginia.gov>), or by mail, email, or fax to **Dwayne Roadcap, Acting Director of the Division of Onsite Sewage and Water Services, 109 Governor Street, Richmond, VA 23218, (804) 864-7462 (phone), (804) 864-7476 (fax)** or email [dwayne.roadcap@vdh.virginia.gov](mailto:dwayne.roadcap@vdh.virginia.gov). Written comments must include the name and address of the commenter. In order to be considered, comments must be received by midnight on the last day of the public comment period.

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

### Family impact

*Assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.*

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This regulatory action has no impact on the institution of the family or family stability.