

# Virginia Regulatory Town Hall

## Notice of Intended Regulatory Action Agency Background Document

<b>Agency Name:</b>	Virginia Department of Health
<b>VAC Chapter Number:</b>	12 VAC 5-610-950
<b>Regulation Title:</b>	Sewage Handling and Disposal Regulations
<b>Action Title:</b>	Revise system sizing and design to incorporate new technology
<b>Date:</b>	June 19, 2000

This information is required prior to the submission to the Registrar of Regulations of a Notice of Intended Regulatory Action (NOIRA) pursuant to the Administrative Process Act § 9-6.14:7.1 (B). Please refer to Executive Order Twenty-Five (98) for more information.

### Purpose

*Please describe the subject matter and intent of the planned regulation. This description should include a brief explanation of the need for and the goals of a new or amended regulation.*

The proposed amendments will include new site and soil requirements for systems utilizing secondary and advance secondary wastewater treatment and new design and construction criteria based on the concept of a minimum footprint. The amendments will also include requirements for operating, maintaining and monitoring all onsite wastewater systems.

### Basis

*Please identify the state and/or federal source of legal authority to promulgate the contemplated regulation. The discussion of this authority should include a description of its scope and the extent to which the authority is mandatory or discretionary. The correlation between the proposed regulatory action and the legal authority identified above should be explained. Full citations of legal authority and web site addresses, if available, for locating the text of the cited authority must be provided.*

Section 32.1-164 of the *Code of Virginia* gives the Board of Health authority to establish standards for siting, designing, and operating onsite sewage systems.

### Substance

*Please detail any changes that would be implemented: this discussion should include a summary of the proposed regulatory action where a new regulation is being promulgated; where existing provisions of a regulation are being amended, the statement should explain how the existing regulation will be changed. The statement should set forth the specific reasons the agency has determined that the proposed regulatory action would be essential to protect the health, safety or welfare of citizens. In addition, a statement delineating any potential issues that may need to be addressed as the regulation is developed shall be supplied.*

Before 1993 onsite sewage systems in Virginia relied exclusively on the septic tank to provide initial treatment of wastewater before discharging to a soil absorption field. The septic tank provides limited, anaerobic treatment of the wastewater. The soil in the absorption field is expected to provide the remaining treatment and to act as a dispersal vehicle for the treated effluent. Secondary and advanced secondary treatments are attained through aerobic processes and produce higher quality effluents than a septic tank. Higher quality effluents, because they are less likely to cause soil clogging and because the soils are not expected to perform as much of the treatment as in a conventional septic system, make it possible to use soils for absorption fields that are not suitable for conventional septic systems. The Department believes that with proper maintenance and monitoring, secondary and advanced secondary systems can be used on many sites that have been considered unsuitable for conventional septic systems while providing levels of public health and environmental protection equal to or exceeding current levels.

In 1993 the Department began to permit systems utilizing secondary or advanced secondary treatment in soils that did not meet the minimum requirements of the *Regulations*. Permits were issued under variances granted by the Commissioner (GMP #20). Final amendments to the *Regulations* published on August 16, 1999 in the Virginia Register incorporated the conditions of the Commissioner's variance.

In 1999, a private company, Bord na Mona Environmental Products U.S., Inc., successfully completed experimental testing of its Puraflo™ system in accordance with §370 of the *Regulations*. The Puraflo™ system utilizes advanced secondary treatment and performed successfully in site and soils conditions less restrictive than those contained in the *Regulations* and used by policy since 1993. When a system or process has successfully met the requirements of §370 of the *Regulations* the Department is required to develop design and construction criteria in the *Regulations*. The proposed amendments will revise the site and soil requirements for a treatment and disposal system when higher quality effluent treatment is utilized and will establish minimum design, construction, and performance requirements for such systems.

To assure that public health and the environment are protected from the adverse affects of improperly treated sewage, the proposed amendments will also establish requirements for maintenance, monitoring, and operation of all onsite systems. This proposal is based in part on public comments received during the recent revision to the *Regulations*.

The amendments will also establish a minimum area of suitable soil (a “footprint”) required to obtain a site approval. Within the footprint area a professional engineer (or other approved system designer) would have flexibility to design a soil absorption field that does not meet the minimum requirements currently contained in Part IV of the *Regulations*.

## Alternatives

*Please describe, to the extent known, the specific alternatives to the proposal that have been considered and will be considered to meet the essential purpose of the action.*

The current regulations do not fully recognize the benefits of increased levels of pretreatment, which include the option to use sites with more restrictive soil conditions and utilizing less land area than conventional septic systems. The essential purpose of the new regulation is to recognize the benefits of pretreatment. The only way to accomplish this is to modify the *Regulations*.

The *Sewage Handling and Disposal Regulations* establish prescriptive design criteria for generic type systems (typically gravel trench system but also including enhanced flow systems, low pressure distribution, Wisconsin Mounds, and sand-on sand). These criteria are based on data available in late 1970s and early 1980s when the current design criteria were adopted. These criteria while generally consistent with other states and industry requirements, do not recognize the full range of design assumptions in use today. In addition, recent changes to the *Code of Virginia* encourage the use of private sector professionals to independently site and design sewage disposal systems. The current regulations do not provide the flexibility necessary to utilize design criteria other than those used by the Department of Health. Professional Engineers, Authorized Onsite Soil Evaluators or other certified designers, using conventional or proprietary technology may find it advantageous to their clients to apply design criteria other than that used by the Department. The essential purpose of the new regulation is to allow alternative design criteria in a manner that provides essential public protection. The only way to accomplish this is to modify the *Regulations*.

The proposed amendments will include monitoring and maintenance requirements for all systems. These requirements were suggested during the adoption process of the final *Regulations* published August 16, 1999 in the Virginia Register. The essential purpose of this regulation is assuring that maintenance is provided for all systems on a schedule appropriate for the complexity and component reliability of the regulated system. Other options considered were public education and maintenance entities. Public education is an essential component of operation and maintenance but by itself does not provide sufficient incentive to assure compliance. Maintenance entities or utilities may be a viable alternative to assure O&M of onsite systems but the current infrastructure is not capable of handling residential onsite systems. The Department is evaluating what changes are necessary to empower existing utilities to take on this function.