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Notice of Intended Regulatory Action (NOIRA) Agency Background Document

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| Agency name | Department of Health |
| Virginia Administrative Code (VAC) citation | 12 VAC 5-611 (proposed) |
| Regulation title | Onsite Sewage Regulations |
| Action title | New performance-based regulations pertaining to locating, designing, constructing, and operating onsite sewage systems. |
| Date this document prepared | December 13, 2007 |

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

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 Board of Health (Board) proposes to repeal 12 VAC 5-610, the *Sewage Handling and Disposal Regulations (SHDR)*, and promulgate a new chapter, 12 VAC 5-611, the *Onsite Sewage Regulations*. This Notice of Intended Regulatory Action rescinds and replaces the previous Notice published September 18, 2006. The planned regulatory action will update and re-incorporate much of the current *SHDR*, including requirements for the location, design, construction, and operation of onsite sewage systems. Onsite sewage systems treat sewage from homes, businesses, and other structures and distribute the effluent from the treatment process in the soil, usually for additional treatment. Onsite sewage systems include conventional systems (septic tank and drainfield systems), alternative systems, privies and portable toilets, and mass sewage disposal systems (MSDS). The planned regulatory action will also include requirements for the transportation of sewage (pump and haul) and the removal and transportation of residual materials removed from onsite sewage systems. The planned regulatory action will also include a number of subject areas that are not covered by the current *SHDR*.

The Board amended the *SHDR* in 2000, introducing changes needed to improve public health and environmental protection. However, those changes did not adequately address the needs of the public and the onsite wastewater industry with respect to available onsite technologies and practices, nor did they address emerging needs for long term management of onsite sewage systems and options for fulfilling those needs. Legislation approved in 2007 requires the Board of Health to establish a program

“for the operation and maintenance of alternative onsite systems” and to promulgate regulations “governing the requirements for maintaining alternative onsite sewage systems.”

The new chapter will attempt to capture the latest technological advances and will also introduce specific performance standards intended to protect public health and water quality. The regulations will establish prescriptive site, design, and construction criteria for conventional and alternative onsite sewage systems and will offer opportunities for engineers to design systems according to performance standards with relatively few prescriptive design and construction requirements. This regulatory action will also make a number of changes that are necessary to conform to changes in the *Code of Virginia* and to other related regulations.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

Va. Code § 32.1-164.A provides that the Board of Health shall have supervision and control over the safe and sanitary collection, conveyance, transportation, treatment, and disposal of sewage by onsite sewage systems and treatment works as they affect the public health and welfare. In discharging that responsibility, the Board shall exercise due diligence to protect the quality of both surface water and ground water. Va. Code § 32.1-164.B requires the Board to have regulations to govern the collection, conveyance, transportation, treatment and disposal of sewage by onsite sewage systems.

Va. Code §§ 32.1-163 through 32.1-166.10 provide additional detail regarding the Board’s authorities and responsibilities for administering Virginia’s onsite sewage program. Legislation approved in 2007 (2007 Acts of Assembly, Chapters 892, 924) requiring the Board to regulate the operation and maintenance of alternative onsite sewage systems and promulgate regulations for that purpose will be effective July 1, 2009, and has been codified at §§ 32.1-164.H and -164.I.

Va. Code § 32.1-248.2 requires the Board to develop guidelines regarding the use of gray water and rainwater.

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.

1) Items withdrawn from the Board’s SHDR amendments that were effective July 1, 2000. The 1991 *Report of the Task Force on Septic Regulations* recommended that the Board of Health (i) consider requiring treatment for nitrogen where clusters of systems or large systems create high loading rates in a limited geographic area; (ii) establish clear requirements for maintenance and oversight for systems serving multiple dwellings; and (iii) examine the definition of rock and adequacy of the current regulations regarding separation distances to rock. Onsite sewage systems of all sizes have the potential to adversely affect ground and surface waters and thereby potentially affect public health. Onsite systems handling more than 1,000 gallons per day (gpd) present greater risks to ground and surface waters than

conventional onsite systems serving individual homes because they tend to discharge treated wastewater into the soil at higher rates and with higher site densities (gallons per day/acre).

When the Board of Health published final amendments to the *SHDR* on August 16, 1999, (effective July 1, 2000) those amendments contained requirements for mass sewage disposal systems and soils containing greater than 50% rock. The regulatory process was suspended September 16, 1999, to allow additional time for public comments. Final amendments were published again on April 24, 2000. At that time the requirements for soils containing greater than 50% rock had been removed because of concerns from residents in southwestern Virginia, however the mass sewage disposal system requirements remained. In June, 2000, due to concerns from legislators and property owners primarily in the Smith Mountain Lake area, the State Health Commissioner withdrew the mass sewage disposal system rules prior to the effective date of the 2000 amendments. The Board announced its intention to promulgate rules for mass sewage disposal systems and soils containing greater than 50% rock in a NOIRA published July 17, 2000. The July 17, 2000, NOIRA was later superseded by a NOIRA published June 4, 2001, in which the Board reiterated its intention to promulgate rules for mass sewage disposal systems and for soils containing greater than 50% rock. The June 4, 2001, Notice was replaced by one published September 18, 2006.

This regulatory action is a continuation of the agency's efforts to find consensus among stakeholders on issues related to mass sewage disposal systems and soils containing more than 50% rock.

2) Updates to make the onsite sewage regulations current with technology and public health/water quality protection needs. The Board amended the *SHDR* in 2000, introducing changes needed to improve public health and environmental protection. The 2000 amendments continued a longstanding tradition in onsite regulatory communities of establishing detailed prescriptive site and design criteria; they did not, however establish specific (regulatory) performance expectations, other than the requirement that onsite sewage systems must not "fail" by backing up into plumbing fixtures, by breaking out on the ground surface, or by contaminating ground water. According to many stakeholders, the 2000 amendments were not adequate to keep pace with changes in the onsite sewage industry which include: (i) new and rapidly changing wastewater treatment technologies; (ii) new and rapidly changing dispersal methods and practices; (iii) new onsite wastewater management requirements and schemes; and (iv) information showing that some onsite sewage systems, even those that are thought to be properly functioning, contribute to surface and ground water degradation. Stakeholders include Authorized Onsite Soil Evaluators (AOSE), Professional Engineers (PE), onsite system installers, onsite sewage system maintenance providers, local governments, regulators, environmental and watershed protection groups, manufacturers of onsite sewage systems and equipment, and owners wishing to develop property in areas not served by centralized, public sewers. In 2006 VDH convened a series of public meetings to seek input and guidance from interested parties regarding revisions to the *SHDR*. A summary of those meetings is available at <http://www.vdh.state.va.us/EnvironmentalHealth/Onsite/newsinterest/documents/Stakeholder%20Minutes.pdf>.

The Board's regulations must be updated to include design, construction, and operational criteria for several new types of onsite systems. Beginning in about 1994 several manufacturers and system designers engaged in experimental and provisional testing under the *SHDR* for systems that provide better treatment of wastewater than the conventional septic system and disperse the treated effluent into the soil environment in ways that are much different from and more efficient than the conventional septic tank and drainfield system. These new technologies typically utilize less land area than conventional systems and can operate on sites that have shallower depths to limiting features such as seasonal water tables or rock. The Virginia Department of Health (VDH) has used guidance documents to establish permitting criteria and procedures for these new systems. The guidance documents allowed the agency to bridge the gap between the time that the systems were being tested and approved to the time that design and operational requirements could be incorporated into the Board's regulations. There is nearly unanimous agreement among stakeholders that the Board must incorporate the various design, construction, and operating requirements for these systems in its onsite sewage regulations and eliminate the current patchwork of guidance documents pertaining to these systems.

The participants in the 2006 public meetings recommended that the Board adopt a performance-based regulation that sets standards for critical constituents of sewage. Many experts, including state and federal public health and water quality agencies, believe that onsite sewage systems, both conventional and alternative systems, are contributing significantly to degradation of ground water and important surface waters such as the Chesapeake Bay and its tributaries. This degradation comes from onsite systems that are obviously failing and from those that do not show outward signs of failure. Contaminants of concern include nitrogen (primarily as nitrate), phosphorus, and fecal coliform bacteria. These contaminants are contained in the effluent from onsite sewage systems and their movement into surface waters occurs either when effluent breaks out on the surface, or as the effluent migrates along the surface of the water table or a confining layer until it eventually mixes with the nearest surface water body or stream, typically during low flow conditions. A performance-based onsite sewage regulation would address nitrogen, phosphorus, fecal coliform bacteria, BOD (biochemical oxygen demand), and TSS (total suspended solids) both as risks to health and as risks to general ground and surface water quality.

The new chapter will attempt to capture the latest technological advances and will also introduce specific performance standards intended to protect public health and water quality. The regulations will establish prescriptive site, design, and construction criteria for conventional and alternative onsite sewage systems and it will offer opportunities for engineers to design systems according to performance standards with relatively few prescriptive design and construction requirements.

A performance standard for nitrogen from onsite sewage systems may be controversial. According to the *Bay Journal* (March, 2005, Volume 15, Number 1), the Bay Program's Watershed Model estimates that approximately 3.4 million pounds of nitrogen reaches the Bay each year from Virginia's onsite sewage systems. This amount represents approximately 1% of the estimated total nitrogen loading for the Bay from all sources, according to the model. The model assumes that 40% of the total nitrogen from onsite sewage systems reaches a surface water body and then the Bay. All stakeholders and experts do not necessarily agree on this estimate.

The Board of Health is not responsible for estimating nitrogen loading in the Bay, nor is protecting ground and surface water quality a primary mission for the Board of Health. However, a 1990 amendment to Va. Code § 32.1-164 required the Board to "exercise due diligence to protect the quality of both surface water and ground water". There may be some debate as to whether (i) the Board should regulate nitrogen discharges into the soil as a *water quality* issue, and (ii) if it so, whether regulating nitrogen from onsite sewage systems is a cost-effective way to go about reducing the nitrogen loading in the Chesapeake Bay. In the alternative, if the Board does not consider the impacts of nitrogen on surface and ground waters, it stands to be criticized by those who are concerned about degradation of important surface waters such as the Chesapeake Bay. Achieving nitrate reductions in onsite systems today can be expensive, increasing the cost of an individual single family system significantly. There are options for reducing the unit costs of nitrogen reduction, such as using cluster systems that utilize nitrogen reducing designs and technologies. The public health standard for nitrate nitrogen is 10 mg/l, a drinking water standard. Simply regulating nitrogen concentration may address public health concerns, but would do little to reduce the total amount of nitrogen estimated to reach ground and surface waters from onsite sewage systems.

Performance standards for onsite sewage systems in general may be controversial. As mentioned above, the only performance standards for onsite sewage systems in Virginia today are those that exist in the *SHDR*- sewage cannot back up into plumbing fixtures or break out on the surface, nor may a system contaminate ground water. To date the Board has not established a regulatory definition for ground water contamination. The State Water Control Board has promulgated groundwater quality requirements which are found at 9 VAC 25-280-20 through 9 VAC 25-280-50. The participants in the 2006 meetings suggested that the Board refer to those regulations in establishing performance standards for nitrogen, phosphorus, fecal coliform bacteria, BOD, and TSS. The very concept of regulatory performance standards for onsite sewage systems runs contrary to the common perception that septic systems

function properly as long as there is no sewage coming to the surface of the ground or backing up into the plumbing fixtures.

Many local governments and watershed protection groups have expressed concerns about the long term operation and maintenance of onsite sewage systems, particularly alternative systems, because of their potential to impact public health and water quality. Several local governments have adopted local ordinances to regulate operation and maintenance of alternative systems, others have prohibited or limited the use of alternative systems or are considering such measures. These concerns led to legislation in the 2007 session that requires the Board to regulate the operation and maintenance of alternative onsite sewage systems.

3) Subjects and practices not currently contained in the *SHDR* and changes needed to conform to Va. Code and other regulations.

Evaluating existing systems for building permits and other purposes. Va. Code § 32.1-165 requires a local government to obtain the prior written approval of the Department (Commissioner) before issuing a building permit for a building designed for human occupancy. The VDH gives its approval only after finding that “safe, adequate, and proper” sewage disposal is available or will be available to the building. Evaluating these requests for new construction is typically not a problem because nearly all cases involve a construction permit for a new onsite sewage system. However, evaluating building permit requests when there is an existing structure with an existing onsite system, or where an onsite system exists without a structure, presents some potential problems. Examples of these types of situations include structures damaged or destroyed by fire or disaster, building additions and expansions, changes of use where the change will affect the strength or amount of wastewater from the structure, situations where the owner wishes to demolish an existing dwelling and rebuild a new one, and lots that are vacant because a mobile home or other dwelling has been removed. The primary difficulties stem from systems permitted under prior regulations, systems that are very old, and system designs, construction, and site and soil conditions that are not compliant with current standards for onsite sewage systems. At present the *SHDR* contain no procedures or requirements for evaluating existing onsite sewage systems to determine if they are safe, adequate, and proper.

Local health departments implement this requirement using their best judgment and accumulated knowledge and experience. A Memorandum of Agreement signed in 2004 between VDH and the Department of Housing and Community Development (DHCD) outlines several principles: (i) for new construction VDH’s approval is to be communicated to the building official only in the form of a valid construction permit or operating permit, a certification letter, or subdivision lot approval; (ii) for existing structures where the building permit will result in an increase in the wastewater flow or the capacity of the existing structure, the VDH’s approval may only be given in the form of a valid construction permit for expanding the existing onsite sewage system; and (iii) VDH will use the standards of the *SHDR* for evaluating these applications. As noted, difficulties often arise when systems, either by design and construction or because regulatory requirements for site and soil conditions have changed, are not compliant with current regulations. Local health departments are hesitant to issue what amounts to a new approval for a system that is often decades old and may be situated in site and soil conditions that do not conform to the Board’s standards for protecting public health and the environment as set forth in the *SHDR*. Owners often do not understand the reasons a request is denied, and argue, if the system was good enough for the previous use (or structure) why then is it not satisfactory for the new use (or structure)? This issue is particularly poignant when a dwelling has been destroyed by fire or disaster and VDH’s review finds that the existing system is not “safe, adequate, and proper” nor can it be made so using conventional septic system technology. New and emerging onsite technologies can offer some options for these situations and this regulatory action will seek to strike a balance between the public health and environmental benefits that represent the current state of the art and the economic and other issues involved in the public’s expectations and desires regarding the uses of property.

In addition, lending institutions often require inspection of an existing system as part of a mortgage application. Private parties currently perform these inspections without any regulatory standards.

Gray water use, reuse of treated wastewater, and rainwater. As the demand for potable water continues to increase due to development and population increases, greater interest is being focused on finding ways to reduce the use of potable water for purposes other than consumption. Diversion of gray water for underground irrigation is allowed in some jurisdictions. Treatment and reuse of gray water for above ground uses is another way to reduce the use of potable water. Treatment of gray water, or of the combined wastewater flow, and reuse for toilet flushing is yet another example. Rainwater may be collected and used in a number of beneficial ways, including toilet flushing, as makeup water in wastewater recycling systems, and with proper design as a source of potable water where no other supplies exist. This regulatory action will seek to address strategies to reduce the uses of potable water in the context of onsite sewage systems.

Designs that conform to standard engineering practice which may not be compliant with prescriptive criteria for design, construction, and location. The *SHDR* rely upon prescriptive requirements to assure that onsite systems are properly located, designed, and constructed. For years consulting engineers have complained that the *SHDR* are slow to adapt to changing practices and technologies and that they do not allow a PE to 'practice engineering.' The proposed regulatory action would establish rules for designing an onsite system to achieve certain performance goals (i.e. performance standards) in lieu of, or as an alternative to, many of the prescriptive requirements contained in the regulation. A bill introduced in the 2007 General Assembly was intended to mandate this change. The bill was referred to the Housing Commission and VDH has continued to work with the constituents on many of the concepts. This regulatory action will attempt to incorporate in regulation procedures and permitting requirements to facilitate this need. Systems that are designed outside of prescriptive regulatory criteria should be required to meet the performance standard at a "compliance boundary" and operating permits should contain monitoring and other criteria necessary to verify performance.

Systematic approach to residuals management. Residuals from onsite sewage systems include the materials pumped from septic tanks ("septage"), sludge removed from aerobic treatment devices, and depleted media from attached growth media filters. The *SHDR* contain procedures and permitting requirements for residuals management practices that are outdated and even prohibited by law. These and other inconsistencies require the Board to revise its onsite sewage regulations in a comprehensive fashion with respect to residuals management.

Performance-based permitting and lessons learned from demonstration projects. As mentioned elsewhere, the *SHDR* is a prescriptive regulation which focuses on proper location, site evaluation, design, and construction. As a result, few resources are directed at determining what happens after a system is placed into use. There are approximately one million onsite sewage systems in use in the Commonwealth. Most of these are poorly managed because owners usually know little or nothing about proper operation and maintenance of onsite sewage systems. This problem is only exacerbated when advanced treatment and dispersal technologies are employed. VDH has partnered with several local governments, DHCD, and others to participate in several demonstration projects. Three projects (Charles City County, Caroline County/Dawn, and the Town of Claremont) are based on a model in which the local government owns and operates one or more community or cluster onsite systems. Through waivers and written agreements, the local governments were given authority and responsibility to deviate from the *SHDR*'s prescriptive requirements and locate, design, construct, and operate onsite systems according to agreed-upon performance standards and monitoring requirements.

Several non-governmental entities (private utilities or similar entities) have approached VDH about standards and requirements for owning and operating onsite sewage systems as utilities. There are currently several projects in the Commonwealth where such entities are operating systems without specific regulatory requirements. This regulatory action will seek to address what, if any, regulatory requirements should be applied to governmental or non-governmental entities operating onsite sewage systems, either as an owner, or as a contractor for the owner.

Changes necessary to conform to the Administrative Process Act. The *SHDR* do not fully conform to the Administrative Process Act (APA) as it exists today with respect to hearings and informal proceedings.

Changes necessary to incorporate requirements of 32.1-164.1:1. Legislation approved in 2005 (Acts of Assembly 2005, Chapter 469) requires the Commissioner to grant a waiver to an owner with a failing system if the repair of that system will require secondary treatment or pressure dosing. The waiver is void upon transfer of the property. The new regulations will contain procedures for implementing this requirement.

Changes needed because the Sewage Collection and Treatment Regulations have been transferred to the State Water Control Board. The SHDR are supplemental to the *Sewage Collection and Treatment Regulations (SCAT Regulations)*. The *SCAT Regulations* were originally promulgated by the Board of Health, however the authority for those regulations has been transferred to the State Water Control Board. A number of changes are required so that those requirements pertaining to onsite sewage systems contained in the *SCAT Regulations* can be incorporated into the Board's regulations for onsite sewage systems.

4) Mandates from the 2007 General Assembly. Legislation approved in 2007 requires the Board of Health to establish a program "for the operation and maintenance of alternative onsite systems" and to promulgate regulations "governing the requirements for maintaining alternative onsite sewage systems." The legislation, effective on July 1, 2009, requires that the Board's program include requirements: 1) that the owner of an alternative onsite sewage system have that system operated by a licensed operator and visited by the operator as required in the operating permit; 2) that the licensed operator provide reports utilizing a web-based system; and 3) that VDH establish a statewide web-based reporting system to track the operation, monitoring, and maintenance requirements of each alternative onsite sewage system with capability for pre-notification of operation, maintenance, or monitoring requirements. This regulatory action will incorporate these requirements.

Substance

Please detail any changes that will be proposed. For new regulations, include a summary of the proposed regulatory action. Where provisions of an existing regulation are being amended, explain how the existing regulation will be changed.

VDH anticipates that the new regulations will establish prescriptive design, construction, and location requirements for onsite systems in three basic categories: conventional systems with flows of 1000 gpd or less, alternative systems with flows of 1,000 gpd or less, and systems with flows over 1,000 gpd. Many of the familiar prescriptive requirements of the SHDR for conventional systems will be carried over into the new regulations. The new regulations will replace a number of guidance documents dealing with onsite sewage system designs.

The regulations will establish operation and maintenance requirements for systems over 1,000 gpd and for systems serving multiple dwellings or multiple connections. The regulations may also establish requirements for management of these systems by a Responsible Management Entity (RME). The new regulations will replace existing guidance documents.

The regulations will establish prescriptive site and design criteria pertaining to soils containing more than 50% rock.

The regulations will establish prescriptive site, design, and construction criteria for many new alternative systems which will include effluent loading rates for soils that are based upon the quality of the effluent being applied. Horizontal and vertical separation distance requirements will reflect the degree of treatment provided by the treatment device. These new regulations will assimilate and incorporate VDH's guidance documents pertaining to these types of systems.

The regulations will establish performance standards for onsite sewage systems. The wastewater constituents being considered include nitrogen, phosphorus, fecal coliform bacteria, BOD, and TSS. Individual systems with flows less than 1,000 gpd designed and constructed according to the prescriptive requirements will likely not require routine monitoring to verify performance. The Department is contemplating managing these systems via a statistical sampling method designed to determine whether, as a group, the systems are achieving the desired performance. Routine inspections of all onsite systems permitted under the new regulation are being contemplated. All onsite systems located in Chesapeake Bay localities are currently subject to a requirement to pump-out or inspect once every 5 years. If the new regulations require inspections of all systems and also require existing systems to come under the new regulations (i.e. when repaired, replaced, or perhaps at time of transfer) the regulations will need to address whether systems installed under prior regulations are subject to the performance standards or whether a different standard should apply.

The regulations will contain procedures and requirements for evaluating existing onsite sewage systems when such evaluations are required for the issuance of building permits and in other cases. The regulations may also address other evaluations that are performed for non-regulatory purposes, such as those that occur when property is bought and sold.

The regulations will contain procedures and requirements pertaining to the use of gray water, treated wastewater, and rainwater to reduce the use of potable water for uses other than for consumption. These may include diversion of gray water for underground irrigation and the use of treated gray water or other treated effluents for uses such as above ground irrigation and toilet flushing. The new regulations will replace VDH's gray water and rainwater guidelines.

This regulatory action may establish methods and procedures allowing a system designer to deviate from the prescriptive criteria and design an onsite sewage system using standard engineering practices and innovative designs and technologies to achieve the regulatory performance standards. Specific setback distances, such as the horizontal separation between an onsite system and a neighboring well, may be imposed. Monitoring would be required to verify performance at a 'compliance boundary.' The regulation will determine the required monitoring and inspection frequencies which will become conditions of the operating permit.

The regulations will contain requirements for the removal and transport of residuals from onsite sewage systems, including spent media from media filters. The regulations may contain requirements for treating these residuals. The regulations may require sewage handlers to keep records of all pump-outs and report these to VDH, perhaps using a web-based reporting system.

The regulations will address management of systems serving multiple dwellings and those systems with flows greater than 1,000 gpd. The regulations may establish operational requirements for RMEs such as type of business entity, monitoring and reporting, and complaint procedures. Additional requirements may address matters such as fiduciary responsibilities, rates, and the RME's responsibilities to its customers and local governments.

The regulations will contain changes from the *SHDR* intended to align them with the current requirements of the APA. One example pertains to case decisions. The *SHDR* defines two types of hearings, informal and formal, and states that an owner has a right to both types. In contrast, the APA only defines and requires one type of hearing which is expressly defined as being different from informal fact finding processes.

Other administrative changes will include updated enforcement procedures, procedures for the issuance of certification letters, and procedures for reviewing subdivision proposals when requested by local governments.

The regulations will contain procedures for granting waivers to owners when the repair of a failing onsite system requires additional treatment and/or pressure dosing. These waivers are intended to provide

temporary economic relief to the owner and are void when the property is transferred (with some exceptions). These requirements are currently being implemented via a guidance document which will be rescinded upon adoption of the new regulations.

The regulations will contain provisions for sewers, pump stations, and other regulatory requirements that were included in the *SHDR* by virtue of the fact that the *SHDR* is supplemental to the *SCAT Regulations*. Now that the *SCAT Regulations* have been transferred to the Water Control Board, the Board of Health will need to identify those elements of the *SCAT Regulations* that are essential for proper regulation of onsite sewage systems and incorporate them in the new regulations.

The regulations will establish a program for operation and maintenance of alternative onsite sewage systems. The owner of an alternative onsite sewage system will be required to have that system operated by a licensed operator and visited by the operator as required in the operating permit. The regulation will establish minimum frequencies for these visits. The licensed operator will be required to provide reports utilizing a web-based system. The web-based reporting system must be able to track the operation, monitoring, and maintenance requirements of each alternative onsite sewage system with capability for pre-notification of operation, maintenance, or monitoring requirements. The regulation may require an owner of an alternative onsite sewage system to give notice of these requirements to future purchasers by recording an appropriate statement or restriction in the land records.

In drafting the new regulations, VDH will review the *SHDR*, including subjects not specifically listed herein, to determine whether those aspects of the Board's regulations should be continued, modified, or abandoned.

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, please describe the process by which the agency has considered or will consider other alternatives for achieving the need in the most cost-effective manner.

As discussed above, a number of VDH's operational procedures and requirements are contained in guidance documents. These guidance documents have served reasonably well in the short term for implementing *Code* changes, approving new products, or for allowing permits to be issued for systems that have successfully passed experimental or provisional testing. However, guidance documents do not go through the formal public participation process and do not carry the force of law. The use of multiple guidance documents has led to some inconsistency and confusion as local health departments and onsite consulting professionals have implemented and interpreted them. Examples of specific subject areas where existing guidance documents are no longer adequate include permitting of the many types of alternative onsite systems and in the permitting of mass drainfields. In each of these cases there is nearly unanimous agreement among stakeholders that there should be operation and maintenance requirements. However, there is not universal agreement as to what those requirements should be. This regulatory action is necessary to replace the existing guidance documents and in the process, all stakeholders will have an opportunity to comment on the proposed site, design, construction, and operation and maintenance requirements for these systems.

Many of the proposed changes are necessary to conform the Board's regulations to the *Code of Virginia* and therefore there are no viable alternatives.

In drafting the proposed regulations, VDH will attempt to simplify the regulations by including in regulation standards necessary to protect public health and the environment. Where details of design or procedure are advisory in nature or are determined largely by professional practice, the agency plans to develop manuals of practice and to publish those as guidance documents.

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 hearing is to be held to receive comments on this notice.

The agency is seeking comments on the intended regulatory action, including but not limited to 1) ideas to assist in the development of a proposal, 2) the costs and benefits of the alternatives stated in this background document or other alternatives and 3) potential impacts of the regulation. The agency is also seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include 1) projected reporting, recordkeeping and other administrative costs, 2) probable effect of the regulation on affected small businesses, and 3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments may do so by mail, email or fax to: Donald J. Alexander, Office of Environmental Health Services, 109 Governor Street, Fifth Floor, Richmond, Virginia 23219, (804) 864-7452 (phone), (804) 864-7476 (fax), don.alexander@vdh.virginia.gov. Written comments must include the name and address of the commenter. In order to be considered comments must be received by the last day of the public comment period.

A public hearing will not be held.

Participatory approach

Please indicate, to the extent known, if advisers (e.g., ad hoc advisory committees, technical advisory committees) will be involved in the development of the proposed regulation. Indicate that 1) the agency is not using the participatory approach in the development of the proposal because the agency has authorized proceeding without using the participatory approach; 2) the agency is using the participatory approach in the development of the proposal; or 3) the agency is inviting comment on whether to use the participatory approach to assist the agency in the development of a proposal.

As noted above, the agency convened a series of public meetings early in 2006 to receive input from interested parties. Additionally, the agency has sought and will continue to seek input in the development of the proposed regulation from its standing advisory committees- the Sewage Handling and Disposal Advisory Committee and the Authorized Onsite Soil Evaluator Advisory Committee- as well as from other stakeholder groups such as the Virginia Onsite Wastewater Recycling Association and the Virginia Environmental Health Association.

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.

The most likely direct impact of the new regulation on families in the Commonwealth would be economic. Performance standards, most notably the nitrogen standard, have the potential to increase the costs of constructing and operating an onsite system. These cost increases will be felt by individual families. However, the costs need to be weighed against the benefits of improved health protection and cleaner ground and surface waters. Families benefit in many ways, directly and indirectly, from cleaner ground and surface waters- fewer gastrointestinal illnesses related to contaminated water, improved economic opportunity, and esthetic and recreational opportunities.

The Commonwealth has seen great growth in the number of private-sector individuals practicing in the onsite sewage industry. Many of these AOSEs, PEs, installers, and maintenance providers operate small business and family-run business. The agency anticipates that the proposed regulation will improve things for the private sector by bringing some clarity to the requirements for the design, location, and construction of alternative systems. In addition, the new requirements for operation and maintenance of alternative systems should provide expanded business opportunities for these small and family-run operations.