



Economic Impact Analysis Virginia Department of Planning and Budget

12 VAC 5-640 – Alternative Discharging Sewage Treatment Regulations for Individual Single Family Home Dwellings
Virginia Department of Health
December 1, 2011

Summary of the Proposed Amendments to Regulation

The State Board of Health proposes to 1) require new owners of alternative discharging systems to have an operation and maintenance manual, 2) add wetlands as a potential discharge point, 3) expand the areas where systems may discharge under certain conditions, 4) reduce the number of required analytical tests and the maintenance visits for some homeowners, 5) no longer allow homeowners to conduct sampling of their own systems, 6) expand the types of systems that must be considered, evaluated, and found unsatisfactory before a discharging system permit may be issued, and 7) increase the time frame of a construction permit from 54 months to 60 months.

Result of Analysis

The benefits likely exceed the costs for one or more proposed changes. There is insufficient data to accurately compare the magnitude of the benefits versus the costs for other changes. Detailed analysis of the benefits and costs can be found in the next section.

Estimated Economic Impact

One of the proposed changes will require new owners of alternative discharging systems to have an operation and maintenance manual for their system. The manual will provide information on what is in the ground, how to operate it, maintenance requirements, where sample ports are, what samples are required, etc. The manual will be a quick reference for the operator and is expected to improve the quality of maintenance and repair service and shorten the amount of time it would otherwise take to service the system. It will also help pass this information to new owners. Virginia Department of Health (VDH) estimates that the cost of the manual ranges

from \$300 to \$500 per system. This change will affect approximately 100 discharging systems expected to come online every year. The main benefit of this requirement is a reduction in likelihood and amount of having an untreated discharge into the environment due to reduced chances for a system failure or reduced time to repair a failing system.

Another proposed change will add wetlands as a potential discharge point, but will require that wetland delineation is conducted. These delineations can be conducted for free by Army Corps of Engineers or for an estimated cost of \$1,000 to \$2,500 by private consultants. VDH expects no more than 5 to 10 systems per year to be allowed to discharge into wetlands. While this change may expose wetlands to some environmental risks, the amount of land available for development in coastal areas of the state is expected to increase. Landowners in wetlands where no development was possible before may see an increase in the value of their real property. However, if discharges from these systems are perceived to be detrimental to human health and the environment, the value of properties in the area may be negatively affected.

The proposed changes will also allow VDH to issue permits for systems discharging to areas that were previously prohibited, such as downstream waters used for swimming, water skiing, or tubing, provided an appropriate level of treatment is achieved. Similar to the previous change, while public may be exposed to additional health risks, the amount of land available for development will increase. Landowners in these areas where discharging systems are currently prohibited on their land may see an increase in the value of their real property. Similarly, if discharges from these systems are perceived to be detrimental to human health and environment, the value of properties in the area may be negatively affected.

The proposed changes will also reduce the number of required analytical tests and maintenance visits for some homeowners. Currently, maintenance and monitoring costs for non-generally approved systems range from \$1,000 per year for monthly maintenance visits and quarterly formal monitoring to about \$800 for quarterly visits and semiannual monitoring. The proposed changes will allow non-generally approved systems to be monitored initially quarterly, but once the system demonstrates compliance, the system will revert to the generally approved sampling schedule which will save the owner approximately \$400 per year in operation and maintenance costs. According to VDH, the majority (approximately 90% to 95%) of the systems

are generally approved systems. Thus, of the 100 systems expected to come online every year, about 5 to 10 are likely to experience cost savings due to this change. Of the existing systems, VDH estimates that approximately 200 to 300 systems may benefit from this change.

Another proposed change will no longer allow homeowners to conduct sampling of their own systems. VDH estimates that approximately 120 owners are currently performing their own sampling. However, current sampling waiver holders may be grandfathered under the proposed regulations. Thus, this change is expected to mainly affect new homeowners. This proposed change may add to compliance costs in terms of increased monitoring costs, but is also expected to reduce potentially risky discharges to the environment by making sure that sampling is performed by independent professionals.

One of the proposed changes will expand the types of systems that must be considered, evaluated, and found unsatisfactory before a discharging system permit may be issued to include alternative systems in addition to conventional systems. This change has the potential to reduce the number of discharging system permits as some alternative systems may now be found satisfactory, but also add to compliance costs associated with evaluating more types of systems.

Finally, the proposed changes will increase the time frame of a construction permit from 54 months to 60 months. The proposed new time frame will coincide with life span of the general permit and may provide administrative cost savings.

Businesses and Entities Affected

These regulations apply to individual residential discharging sewage treatment systems. There are approximately 1,500 to 1,800 such systems permitted to operate in Virginia.

Localities Particularly Affected

The proposed regulations apply throughout the Commonwealth. However, discharging sewage treatment systems are known to cluster around Interstate 81 corridor and Southwest Virginia. Thus, localities in these regions of the state may proportionally be more affected.

Projected Impact on Employment

While reducing the number of required analytical tests and the maintenance visits for some homeowners is expected to reduce demand for labor, the majority of the changes (i.e. requiring new owners of alternative discharging systems to have an operation and maintenance

manual, adding wetlands as a potential discharge point, expanding the areas where systems may discharge under certain conditions, no longer allowing homeowners to conduct sampling of their own systems, expanding the types of systems that must be considered, evaluated, and found unsatisfactory before a discharging system permit may be issued) are expected to increase demand for labor.

Effects on the Use and Value of Private Property

The proposed changes are expected to have a significant positive effect on the value of land which could not be developed under the current regulations, but may be developed under the proposed regulations due to adding wetlands as a potential discharge point and expanding the areas where systems may discharge under certain conditions. Whether a land can now be developed under the proposed regulations will be site specific.

On the other hand, if the market perceives that building systems that discharge into wetlands and waters where human contact is present pose a significant health and environmental risks, the value of surrounding properties may be negatively affected.

Finally, reduced compliance costs (due to reducing the number of required analytical tests and the maintenance visits for some homeowners and increasing the time frame of a construction permit from 54 months to 60 months) are expected to increase asset value of the properties while added compliance costs (due to requiring new owners of alternative discharging systems to have an operation and maintenance manual, no longer allowing homeowners to conduct sampling of their own systems, , expanding the types of systems that must be considered, evaluated, and found unsatisfactory before a discharging system permit may be issued) are expected to have a negative effect on the asset value of affected properties.

Small Businesses: Costs and Other Effects

The proposed regulations do not have any direct impact on small businesses. However, the proposed changes may have some indirect effects on the revenue of small businesses involved in construction and maintenance of discharging systems and houses. For example, requiring new owners of discharging systems to have an operation and maintenance manual, adding wetlands as a potential discharge point, expanding the areas where systems may discharge under certain conditions, no longer allowing homeowners to conduct sampling of their own systems, expanding the types of systems that must be considered, evaluated, and found

unsatisfactory before a discharging system permit may be issued are expected to increase the demand for services of small businesses and have a positive impact on their revenues.

On the other hand, reducing the number of required analytical tests and the maintenance visits for some homeowners is expected to reduce demand for services of small businesses and have a negative impact on their revenues.

Small Businesses: Alternative Method that Minimizes Adverse Impact

The proposed changes are not expected to have a direct and significant adverse impact on small businesses.

Real Estate Development Costs

Some of the proposed regulations (i.e. adding wetlands as a potential discharge point and expanding the areas where systems may discharge under certain conditions) are expected to reduce real estate development costs while some others (i.e. requiring new owners of alternative discharging systems to have an operation and maintenance manual, expanding the types of systems that must be considered, evaluated, and found unsatisfactory before a discharging system permit may be issued) are expected to increase real estate development costs.

Legal Mandate

The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with Section 2.2-4007.H of the Administrative Process Act and Executive Order Number 107 (09). Section 2.2-4007.H requires that such economic impact analyses include, but need not be limited to, the projected number of businesses or other entities to whom the regulation would apply, the identity of any localities and types of businesses or other entities particularly affected, the projected number of persons and employment positions to be affected, the projected costs to affected businesses or entities to implement or comply with the regulation, and the impact on the use and value of private property. Further, if the proposed regulation has adverse effect on small businesses, Section 2.2-4007.H requires that such economic impact analyses include (i) an identification and estimate of the number of small businesses subject to the regulation; (ii) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the regulation, including the type of professional skills necessary for preparing required reports and other documents; (iii) a

statement of the probable effect of the regulation on affected small businesses; and (iv) a description of any less intrusive or less costly alternative methods of achieving the purpose of the regulation. The analysis presented above represents DPB's best estimate of these economic impacts.