

Department of Legislative Services
Maryland General Assembly
2000 Session

FISCAL NOTE

House Bill 283 (The Speaker)
(Administration)

Environmental Matters

Water Resources Protection Act

This Administration bill addresses the designation of “areas of special concern” with respect to nutrient pollution from on-site sewage disposal systems. It also provides for the adoption of regulations by the Maryland Department of the Environment (MDE) to require nitrogen removal technologies for specified on-site sewage disposal systems and the proposal of regulations regarding the inspection, operation, and maintenance of on-site sewage disposal systems.

Fiscal Summary

State Effect: Under one set of assumptions, general fund revenues would decrease by \$14.66 million and Transportation Trust Fund (TTF) revenues would decrease by \$44,100 annually beginning in FY 2001 related to the bill’s tax credit provision. The bill’s requirements could be handled with existing budgeted resources.

Local Effect: Under one set of assumptions, revenues from the TTF would decrease by approximately \$13,230 annually beginning in FY 2001 due to the bill’s tax credit provision. **This bill imposes a mandate on a unit of local government.** Most jurisdictions could handle the bill’s requirement to identify areas of special concern with existing resources, but the requirement could cause an increase in expenditures for some jurisdictions. As a result of the regulations, local jurisdictions could incur additional significant costs related to site evaluations, plan review, monitoring, and enforcement.

Small Business Effect: A small business impact statement was not provided by the Administration in time for inclusion in this fiscal note. A revised fiscal note will be issued

when the Administration's assessment becomes available.

Analysis

Bill Summary: This bill requires counties, beginning on or before October 1, 2004, to indicate in their county plans "areas of special concern" in which nitrogen removal technology is required for the installation of a new individual sewerage system, the installation of a new multiuse sewerage system or a new shared facility providing sewerage service, and the repair, replacement, or change in use of existing on-site sewage disposal activities. "Areas of special concern" are defined as: (1) areas of failing on-site sewage disposal systems; (2) drinking water supply areas, including wellhead protection areas, reservoir protection areas, and aquifer recharge areas; (3) Chesapeake Bay critical areas; (4) soils with a high potential to transport nitrogen; (5) karst or carbonate geologic areas; (6) coastal bays watersheds; (7) areas of groundwater and surface water with documented contamination from nitrogen; and (8) any other areas identified and documented scientifically by local officials as requiring the use of nitrogen removal technology. Designation of areas of special concern will not take effect prior to October 1, 2002.

The bill requires MDE to:

- adopt rules and regulations to: (1) require that before installation of individual water supply systems or individual sewerage systems, consideration be given to conditions which may require that nitrogen removal technology be installed on on-site sewerage disposal systems; and (2) require nitrogen removal technology in areas of special concern;
- propose regulations applicable statewide regarding the inspection, operation, and maintenance of on-site sewerage disposal systems consistent with the bill, within 12 months of the effective date of the bill; and
- report, on or before October 1, 2002, to the Governor and the General Assembly on progress towards the implementation of the bill.

The bill also provides that an individual or a corporation repairing, replacing, or modifying an existing on-site sewerage disposal system may claim a credit against the State income tax for a taxable year in the amount equal to 70% of the cost of purchasing and installing nitrogen removal technology, not to exceed \$4,900 in any taxable year. If the credit exceeds the total tax otherwise payable by the individual or corporation for that taxable year, the individual or corporation may apply the excess as a credit for succeeding taxable years until the full amount of the excess is used or until the expiration of the third succeeding taxable year, whichever occurs earlier.

Current Law: Local health departments implement State regulations regarding septic systems through delegation agreements with MDE. Counties must submit to MDE plans for adequately providing sewerage systems and any revisions or amendments to those plans. Local health officers are authorized to institute fee structures as necessary to implement delegated activities. MDE has submitted proposed regulations to the Joint Committee on Administrative, Executive, and Legislative Review to amend the current regulations to reflect design parameters for septic tanks, maintenance requirements, consideration of new technologies, soil absorption loading rates, and the need to pretreat high strength wastes.

Background: Current initiatives addressing water pollution from nonpoint sources concentrate on pollution from wastewater treatment plants, urban stormwater runoff, and agricultural operations. Industrial sources are controlled by permits, major sewage plants are voluntarily reducing nitrogen through the State's biological nutrient removal program, and agricultural wastes are being addressed through the Water Quality Improvement Act of 1998.

However, current initiatives do not address the reduction of nutrient pollution from septic systems which are used to dispose of wastewater from development that is not served by public sewer. Currently, there are approximately 400,000 septic systems in Maryland; approximately one in five households in Maryland has a septic system. Current septic systems are designed to provide primary removal of solids before disposal through various types of soil absorption systems. They are not designed to remove nutrients, the major threat to the health of the Chesapeake Bay and the State's other water resources. The United States Environmental Protection Agency's Chesapeake Bay Program reports that approximately 6% of the nitrogen reaching the bay originates from septic systems. MDE estimates that septic systems discharge approximately nine pounds of nitrogen per person annually, while wastewater treatment plants discharge approximately 2 to 4.5 pounds of nitrogen per person annually.

As rural areas continue to develop, there is great concern that the total loading of nitrogen to ground and surface water will increase. Estimated increases in wastewater nitrogen from projected population growth could vary from 2 million pounds per year (if all growth is developed on central sewer) to 9 million pounds per year (if all growth is developed with conventional septic systems).

In August 1999, the Governor created the Septic System Advisory Committee to address concerns relating to nutrient pollution from septic systems. The committee was charged with defining and developing recommendations for an "areas of concern" approach to reducing nutrient pollution from septic systems. Specifically, the committee was asked to: (1) examine the recommendations of the Tributary Team On-site Sewage Disposal System Task Force

and the State Water Quality Advisory Committee and develop policy recommendations to further those suggestions and examine the other environmental impacts of septic systems; (2) examine options for reducing nitrogen from septic systems as part of the nonpoint source contributions to surface water; (3) explore methods to delineate local areas of special concern where nitrogen reduction and related measures should be implemented; and (4) recommend strategies to link nutrient reduction initiatives to management of new growth and development.

The committee, in its report to the Governor issued in January 2000, provided several recommendations, including: (1) in areas of special concern, nitrogen removal technology should be required for all new septic systems and upon repair, replacement, or change in the use of existing septic systems; (2) MDE's on-site sewage disposal regulations should be amended to establish basic criteria for utilizing re-circulating sand filters and denitrifying biological treatment units for nitrogen removal; (3) MDE should develop standard maintenance requirements; (4) MDE's septic system regulations should be amended to include inspection of all septic systems once every three years; (5) shared on-site sewage disposal systems should be addressed; and (6) financial assistance in the form of a tax credit should be provided to owners to install nitrogen removal technology. This legislation is a direct result of those recommendations.

Some states have established "areas of special concern" for other programs and have applied them to their septic system programs. Massachusetts's septic program, for example, requires community inspection plans to prioritize areas to be inspected based on several factors, including high system failure rates, high density of private wells, high groundwater levels, and poor soils.

State Revenues: The bill would create a new tax credit for individuals and corporations repairing, replacing, or modifying existing systems up to 70% of the cost of purchasing and installing nitrogen removal technology, not to exceed \$4,900. In order to receive the credit, the technology must achieve a nitrogen removal efficiency of 60% or greater. Credits in excess of the tax liability for the taxable year may be carried forward for the next three years.

The loss of revenue to the State will depend on the number and cost of systems installed each year, whether the entity is an individual or a corporation, and the tax liability of the entity for each tax year. The final report of the Septic System Advisory Committee indicated that the average capital cost for installing technology to achieve a 50% reduction in nitrogen is \$4,500. Assuming that costs would be higher to achieve a 60% reduction in nitrogen, it is not unreasonable to assume that all entities would qualify for the maximum credit of \$4,900 per system. Of those that are installed by corporations, 75% of the credit would be a loss of general fund revenue and 25% would be a loss of revenue to the Transportation Trust Fund (TTF).

Local health departments issued approximately 3,000 permits to remodel or replace existing septic systems in 1999. Because the bill's tax credit provision does not limit the credit to areas of special concern, all individuals or corporations repairing, replacing, or modifying existing systems could be eligible for the credit. Based on the 1999 permit data, the bill could result in a decrease in revenues of an estimated \$14.7 million annually (3,000 x \$4,900). Based on 1999 data on non-community well permits, MDE estimates that approximately 98.8% of permits issued to remodel or replace existing septic systems would be to individuals and 1.2% would be to corporations. Based on those percentages, general fund revenues would decrease by an estimated \$14.66 million and TTF revenues would decrease by an estimated \$44,100. Actual revenue losses will depend on the number of systems that are actually installed, which depends on the designation of areas of special concern, the extent to which regulations require nutrient removal technology in areas other than areas of special concern, and the extent to which individuals and corporations voluntarily purchase the systems.

Nitrogen removal technology systems installed in a given tax year will reduce revenues in the following fiscal year when tax returns are filed. Because the bill takes effect October 1, 2000, the full impact of any decrease in revenues will not be realized until fiscal 2002 or later, depending on the implementation of regulations requiring these technologies.

State Expenditures: The Office of the Comptroller advises that it would incur one-time computer programming costs of \$43,500 to add the credit to the tax forms. The Department of Legislative Services advises that economies of scale regarding computer programming changes could be realized since there will be changes to the income tax processing system due to the 1997 income tax reduction which is phased in through 2002. In addition, since forms and instructions are updated annually, the costs for form changes resulting from this bill could be absorbed within existing resources.

MDE could handle the bill's requirements with existing budgeted resources.

Local Revenues: Because approximately 30% of the revenues distributed to the TTF are ultimately distributed to the counties and Baltimore City, local government revenues will decline. The extent of any revenue decrease will depend largely on the number and cost of nitrogen removal technologies installed by corporations as well as the corporation's tax liability for each tax year. Based on the assumptions above, the bill's tax credit could result in a loss of local government revenues of approximately \$13,230 annually (30% of \$44,100).

Local Expenditures: Most jurisdictions could handle the bill's requirement to identify areas of special concern with existing resources, but the requirement could cause an increase in

expenditures for some jurisdictions. For example, Calvert County reports that it would incur costs of approximately \$10,000 to hire a consultant to identify the areas of concern.

The degree to which a local government will incur additional expenditures related to the modification of county septic system programs will depend largely on the regulations that are adopted to implement the bill. Because the number of systems that would require the new technology and the changes to existing regulations regarding inspection, operation, and maintenance of septic systems will be delineated through regulations, a precise estimate of increased expenditures cannot be made at this time. However, local environmental health directors have advised that additional sanitarians may be needed to review plans and to perform field tests and site inspections. For example:

- Caroline County reports that to amend current plans, consultant costs would total approximately \$5,000;
- Charles County reports estimated costs of about \$10,000 to amend county plans;
- Carroll County advises that costs related to evaluation, permitting, tracking, and maintenance could range from \$50,000 to \$80,000 annually; and
- Washington County estimates the costs for permitting, tracking, and enforcement at about \$35,000 annually.

However, MDE advises that it is the State's intent that maintenance and inspection requirements be privatized so as not to add a significant operational burden to local health departments. If those functions are privatized, the impact on local governments would decrease. It is anticipated that most local health departments would attempt to increase permit fees to offset at least a portion of the costs resulting from the bill and the regulations. It is also assumed that MDE will provide technical guidance and training to local jurisdictions.

Additional Comments: Although the number of individuals and businesses that will be required to install nitrogen removal technology on septic systems is unknown, the committee's report estimates that the capital cost of systems achieving 50% nitrogen removal vary from \$3,000 to \$7,000, with an average cost of approximately \$4,500. Some of those costs would be offset for those entities replacing or modifying existing systems due to the bill's tax credit provision. Annual operating and maintenance costs for nitrogen removal technology systems are estimated at \$150 to \$250. Presumably any increase in costs for permits and inspections would ultimately be borne by the individuals and businesses installing the systems. To the extent that the bill increases the demand for businesses involved in the design, installation, inspection, and maintenance of on-site sewage disposal

systems, the bill could result in an increase in revenue for those entities.

Additional Information

Prior Introductions: None.

Cross File: SB 210 (The President, *et al.*) - Economic and Environmental Affairs and Budget and Taxation.

Information Source(s): Maryland Department of the Environment; Office of the Comptroller; Septic System Advisory Committee; Maryland Association of Counties; Prince George's, Kent, and Washington counties; Department of Legislative Services

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