

Department of Legislative Services
Maryland General Assembly
2018 Session

FISCAL AND POLICY NOTE
Enrolled - Revised

Senate Bill 496

(Senator Ready, *et al.*)

Education, Health, and Environmental Affairs

Environment and Transportation

Environment – Graywater – Residential Use

This bill defines “graywater” and authorizes its use under specified conditions for residential purposes including: household gardening; composting; lawn watering; landscape irrigation; or flushing of a conventional toilet or urinal. The Maryland Department of the Environment (MDE) must adopt implementing regulations.

Fiscal Summary

State Effect: MDE can likely handle the bill’s changes with existing budgeted resources, as discussed below.

Local Effect: Assuming the bill results in a significant increase in the use of graywater, expenditures may increase for local jurisdictions that do not currently prohibit or otherwise restrict the use of graywater. Revenues are not anticipated to be significantly affected.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: “Graywater” is defined as used, untreated water generated by the use of and collected from a shower, a bathtub, or a lavatory sink; the term does not include water from a toilet, a kitchen sink, or a dishwashing machine.

The bill only allows the use of graywater if the use is permitted under the regulations established by MDE pursuant to the bill and if several specified conditions are met. Generally, these conditions include ensuring that the water originates from a residence onsite, it is properly stored and covered, the water’s conveyance and end-use is properly

managed, and that the water is contained on-site and away from floodways or human contact. The graywater system must also be located outside the 100-year floodplain. The graywater may not contain specified hazardous chemicals or waste from diapers, and the graywater system must be constructed to provide for overflow into a sewerage system or an on-site sewage disposal system (septic system). In addition, the graywater may not create nuisance conditions. Finally, the use of graywater must also conform to applicable State and local laws, including State and local plumbing codes.

Current Law: According to MDE, for the uses authorized by the bill, graywater is currently regulated as sewage. A person may only dispose of sewage in accordance with an approved septic system permit or other method of disposal approved by the Secretary of the Environment (or designee). As defined by regulation, sewage includes water-carried domestic wastes. State law also prohibits a discharge of any wastewater, regardless of volume, into the waters of the State, without a permit from MDE. The definition of wastewater includes a liquid waste substance derived from residential operations or establishments.

Background: As long-term water shortages increasingly are predicted in areas across the nation, water conservation efforts have become more prominent. One technique is graywater recycling, which is an on-site wastewater treatment and recycling system. Graywater systems are designed to safely manage wastewater and reduce water consumption.

MDE advises that rather than irrigation, the use of graywater typically takes the form of providing a water source to meet nonpotable needs, such as toilet flushing. This use is not regulated by MDE but by plumbing codes. The National Standard Plumbing Code (NSPC) is incorporated by reference as the State plumbing code and is updated every three to six years to reflect updated industry practices. The State Board of Plumbing uses the 2015 NSPC.

Counties are typically responsible for adopting and enforcing the State plumbing code or an equally stringent plumbing code. If the State Board of Plumbing determines that a county is not adequately enforcing a plumbing code, the board enforces the plumbing code in that county. The State plumbing code does not apply to Baltimore County and portions of Montgomery and Prince George's counties served by the Washington Suburban Sanitary Commission (WSSC) because the board does not have authority over these jurisdictions.

NSPC defines graywater as water that has been used for washing dishes, laundering clothes, or bathing. Under that definition, essentially any water, other than toilet wastes, draining from a household is graywater. Although graywater may contain grease, food particles, hair, and any number of other impurities, it may still be suitable for reuse as nonpotable water. Reusing graywater serves two purposes: it reduces the amount of

freshwater needed to supply a household, and it reduces the amount of wastewater entering sewer or septic systems.

NSPC specifies how systems must be designed, installed, and maintained to prevent contamination of the potable water supply from nonpotable liquids, solids, or gases. NSPC approves graywater installation, materials, and treatment methods. In all buildings where dual water systems are installed, each system must be identified either by a color marking or metal tags. A sign indicating “unsafe water” must be posted on any outlets on the nonpotable water line that could be used for drinking or domestic purposes. Finally, NSPC outlines the cross-connection control techniques that must be followed to protect the potable water supply from backflow and back-siphonage.

According to a 2016 publication by the National Academies of Sciences, Engineering, and Medicine, human pathogens are likely to occur in graywater, although the specific types and concentrations vary substantially among sources and their occurrence and fate are not yet well understood. However, there have been no documented reports of adverse human health effects from the beneficial use of stormwater or graywater. The report noted that in a typical household, enabling the use of graywater meets the total toilet flushing demand, with excess graywater available for irrigation and other nonpotable uses. Further, the use of graywater for toilet flushing alone reduces indoor water demand on average by 24%. As of 2013, 20 states allow some form of graywater reuse.

State Expenditures: MDE advises that costs increase by \$80,700 in fiscal 2019 to conduct additional study on graywater to ensure that public and environmental health is protected, amend related regulations, and conduct graywater sampling throughout the State. MDE’s estimate includes costs for travel and for contractual laboratory analysis. MDE’s out-year cost estimates, which reflect ongoing testing, are \$107,600 annually from fiscal 2020 through 2023.

The Department of Legislative Services advises, however, that the bill does not require MDE to conduct additional testing or studies and that enforcement is largely expected to occur at the local level. Thus, without actual experience under the bill, the need for additional resources is unclear, and MDE can likely promulgate regulations and begin to implement the bill with existing budgeted resources. Should existing resources prove insufficient, MDE may request additional resources through the annual budget process.

Local Expenditures: The bill states that any use of graywater is subject to local laws and regulations. Therefore, graywater use will not increase in any jurisdiction that currently prohibits its use through its plumbing code, sewer ordinance, or other law or regulation. Baltimore City and the City of Bowie both indicate the bill does not have a fiscal impact. Calvert County indicates a potential need for greater enforcement resources.

WSSC advises that if graywater systems are installed within its service area, additional resources are needed to inspect and track the maintenance of the systems. If 1% of its customers install a graywater system, the commission must conduct an additional 4,400 inspections annually, representing a 6% increase in its current workload. The commission advises that in order to accommodate the anticipated increase in workload, it needs to hire three full-time employees, resulting in an increase in expenditures of between \$514,332 and \$473,899 annually between fiscal 2019 and 2023.

Small Business Effect: The bill may result in an increase in business opportunities for plumbers and plumbing supply companies.

Additional Information

Prior Introductions: HB 604 of 2010, a similar bill, received a hearing in the House Environmental Matters Committee, but was subsequently withdrawn.

Cross File: None.

Information Source(s): Baltimore City; Calvert, Montgomery, and Prince George's counties; Washington Suburban Sanitary Commission; cities of Bowie and Takoma Park; Maryland Department of the Environment; Maryland Department of Health; National Academy of Sciences, Engineering, and Medicine; Department of Legislative Services

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