SB 719

Department of Legislative Services

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FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 719 (Senators Love and Hester)

Education, Energy, and the Environment Environment and Transportation and Health

Sewage Sludge - Per- and Polyfluoroalkyl Substances - Regulation

This bill establishes prohibitions and restrictions related to the land application of sewage sludge that has a total "concentration of regulated PFAS" equal to or greater than specified levels. The bill establishes related requirements for the Maryland Department of the Environment (MDE) and sewage sludge generators. In addition, the bill establishes provisions related to the establishment of pretreatment standards or appropriate controls for certain industrial users; related requirements are established for MDE and publicly owned treatment works (POTWs). A local jurisdiction or a pretreatment authority may set appropriate rates and fees for certain industrial users, as specified.

Fiscal Summary

State Effect: General fund expenditures for MDE increase by $248,100 in FY 2027; future years reflect annualization, inflation, and ongoing costs. State expenditures (all/multiple funds) may increase beginning in FY 2029, as discussed below. Nonbudgeted expenditures may increase beginning in FY 2029; nonbudgeted revenues increase correspondingly.

(in dollars)	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
NonBud Rev.	$0	$0	-	-	-
GF Expenditure	$248,100	$290,900	$304,400	$318,100	$331,800
GF/SF Exp.	$0	$0	-	-	-
NonBud Exp.	$0	$0	-	-	-
Net Effect	($248,100)	($290,900)	(-)	(-)	(-)

Note:() = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: Potential significant increase in local government expenditures for at least some local jurisdictions, as discussed below. Potential increase in local revenues for some local jurisdictions. **This bill may impose a mandate on a unit of local government.**

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: The bill specifies that all sewage sludge generators are encouraged to identify potential sources of "PFOA" and "PFOS" loading to their wastewater treatment systems and to take steps to reduce the total concentration of regulated PFAS in the sewage sludge produced by those systems. "PFOA" means perfluorooctanoic acid. "PFOS" means perfluorooctane sulfonic acid. "Concentration of regulated PFAS" means the total concentration, as measured in accordance with monitoring protocols established pursuant to the bill, of PFOA, PFOS, or a mixture of PFOA and PFOS.

Prohibition/Restriction on Land Application of Sewage Sludge with Certain PFAS Concentrations

Beginning October 1, 2028, a person may not apply sewage sludge to agricultural or marginal land if the sewage sludge has a total concentration of regulated PFAS of 50 parts per billion (ppb) or more.

Also beginning October 1, 2028, if sewage sludge has a total concentration of regulated PFAS of at least 25 ppb but less than 50 ppb, a person may apply the sewage sludge to agricultural or marginal land only in accordance with the bill's provisions that establish temporary alternative management measures and study and mitigation requirements (discussed in more detail below).

Commingling Sewage Sludge

Beginning October 1, 2028, if a sewage sludge generator determines, through monitoring protocols established by the bill and described below, that its sewage sludge has a total concentration of regulated PFAS that is at least 25 ppb but less than 50 ppb, subject to the bill's requirements and in accordance with MDE regulations, for at most two years following the date the determination is made, the sewage sludge may be "commingled" to reduce the total concentration of regulated PFAS in the final material to levels below 25 ppb. Sewage sludge commingled as such may not be subject to the temporary alternative management measures described below. "Commingle" means to mix treated sewage sludge with other materials for the purpose of reducing the concentration of regulated PFAS.

A person that commingles sewage sludge for the purpose of land application must monitor for the presence of PFOS and PFAS at least once per month, using a representative sample, in accordance with protocols established under the bill (discussed below). If the total concentration of regulated PFAS in the commingled product is at least 25 ppb, the person must immediately notify MDE and may not apply the commingled product to land until the person demonstrates, through additional monitoring, that the total concentration of regulated PFAS in the commingled product has been reduced to levels below 25 ppb.

Temporary Alternative Management Measures for the Land Application of Sewage Sludge with PFAS Concentrations of At Least 25 Parts per Billion but Less Than 50 Parts per Billion

Beginning October 1, 2028, during the development and implementation of the source tracking study and mitigation plan required by the bill (discussed below), a person may apply sewage sludge to land:

- at a rate that does not exceed three dry metric tons per acre; and
- subject to (1) the same setback requirements established in regulation for Class B biosolids; (2) additional setbacks for land application near public and private water supply wells developed by MDE; and (3) notification requirements established by the bill; specifically, at least 14 days before applying sewage sludge under this provision, the land applier must provide notice of the concentration of regulated PFAS in the sewage sludge to specified land owners and operators and local governments.

Sewage Sludge Generators – Source Tracking Study and Mitigation Plan Requirements

With respect to a sewage sludge generator that produces sewage sludge intended for land application, if a sewage sludge generator determines (through monitoring protocols established under the bill and described below), that its sewage sludge has a total PFAS concentration of at least 25 ppb, the sewage sludge generator must (1) complete a source tracking study and (2) develop a mitigation plan. MDE must provide a sewage sludge generator with reasonable technical assistance in the development of a source tracking study and mitigation plan.

Source Tracking Study Requirements: A source tracking study conducted pursuant to the bill must be designed to determine the contributions of sources of PFOA and PFOS to the wastewater treatment system with sufficient specificity to allow the sewage sludge generator and MDE to reduce or prevent the release of PFOA and PFOS from controllable sources in accordance with applicable law.

Mitigation Plan Development, Submission, Review, and Implementation: A mitigation plan developed pursuant to the bill must (1) be developed in consultation with MDE; (2) identify significant sources of PFOA and PFOS loading to the wastewater treatment system; (3) include actions that the sewage sludge generator can implement, or require the sources of PFOA and PFOS loading to implement, to reduce the total concentration of regulated PFAS to levels below 25 ppb; (4) take into consideration innovative solutions and long-term mitigation approaches, consistent with applicable laws, regulations, and other requirements; and (5) include a reasonable timeline for implementing the mitigation plan (not to exceed five years from the date a determination is made by the sewage sludge generator that its sewage sludge has a total concentration of PFAS that is at least 25 ppb).

The bill specifies elements and strategies that may be included in a mitigation plan and requires the mitigation plan to include additional testing requirements and timelines, developed in consultation with MDE, under specified circumstances.

In general, a sewage sludge generator must submit a mitigation plan to MDE within six months after completion of the required source tracking study; however, a sewage sludge generator may request, and MDE may grant, a single extension on the development and submission of a mitigation plan under specified circumstances.

MDE must review each mitigation plan submitted and may approve, deny, or suggest changes to the mitigation plan. In reviewing a mitigation plan, MDE must consider the cost of implementing mitigation options.

A sewage sludge generator must comply with the provisions of an approved mitigation plan and may not apply sewage sludge to land if MDE has determined that the generator is out of compliance with the provisions of an approved mitigation plan.

Monitoring Protocols to Determine Compliance

Generally, for the purpose of assessing compliance with the bill's provisions, the total concentration of regulated PFAS in sewage sludge must be determined by taking the average of samples taken over the immediately preceding 12 months. Each sample must be taken in accordance with specifications under the bill and at a frequency specified by MDE in regulation, but at least quarterly. However, on or before October 1, 2027, a commingling operation may use a mass balance calculation to determine the concentration of regulated PFAS in the commingled product.

Samples must be analyzed (1) using the U.S. Environmental Protection Agency's (EPA) Method 1633A or an equivalent method approved by MDE; (2) at a certified or accredited laboratory; and (3) subject to a reporting level established by MDE. MDE must assist sewage sludge generators in identifying qualified laboratories.

MDE may establish additional monitoring requirements for commingled materials.

Pretreatment Program Standards, Controls, and Related Rates and Fees

In accordance with the federal Clean Water Act (CWA), MDE and pretreatment authorities may establish pretreatment standards for industrial users that discharge per- and polyfluoroalkyl substances at levels that exceed action levels established by MDE or the pretreatment authority under an industrial pretreatment program.

If a POTW does not have an industrial pretreatment program, and it is determined that sewage sludge produced for land application by the POTW has a total concentration of regulated PFAS of at least 25 ppb, MDE must, in consultation with the POTW, evaluate the contribution from industrial users and determine appropriate controls to meet applicable standards.

MDE must (1) issue guidance to support POTWs in the implementation of these pretreatment standards and (2) provide reasonable technical assistance as requested by local jurisdictions in the exercise of local limits authority under CWA.

A local jurisdiction or a pretreatment authority may set appropriate rates and fees for industrial users (individually or as a class) that are determined to discharge per- and polyfluoroalkyl substances into the wastewater treatment system at levels that necessitate the implementation of mitigation measures.

These provisions may not be interpreted to limit the authority of a local jurisdiction or a pretreatment authority to set local limits that lead to reductions of per- and polyfluoroalkyl substances that exceed the reductions required under the bill.

Current Law:

Sewage Sludge Utilization Permits and Recent Regulatory Action

Sewage sludge (also known as biosolids) is one of the final products of the treatment of sewage at a wastewater treatment plant (WWTP). MDE's Land and Materials Administration issues sewage sludge utilization (SSU) permits, which are required prior to engaging in a number of SSU activities, including the application of Class B sewage sludge to agricultural or marginal land under certain conditions, marketing, and disposing of sewage sludge at a municipal landfill.

MDE is required to adopt regulations to establish a mechanism for determining annual generator fees; the fee schedule must take into account certain considerations, including the anticipated costs to monitor and regulate SSU sites and the needs of the State's sewage

sludge regulation program. Current permit application fees vary depending on the type of SSU permit and range from $25 to $750. There are also fees for permit modifications and variances. In addition, sewage sludge generators pay an annual fee for each wet ton of sewage sludge generated during the previous calendar year; the fee varies depending on several factors, including how the sewage sludge is ultimately used or disposed of. Fees are deposited into the Maryland Clean Water Fund.

On February 28, 2023, due to concerns about PFAS contamination, MDE issued a biosolids regulatory update and put a hold on the issuance of new sewage sludge land application permits. MDE followed this regulatory update with an addendum, issued in August 2024, that requires all WWTPs from which land-applied sewage sludge originates to sample for PFOS and PFOA prior to land application. The addendum establishes (1) beginning January 1, 2025, required testing for PFOS and PFOA at a frequency that depends on the amount of sewage sludge generated at a specific site and (2) recommended actions depending on the level of PFOS or PFOA found in the sewage sludge. Pursuant to the addendum, sewage sludge with PFOS and PFOA concentrations below 20 micrograms per kilogram (µg/kg) may be land applied with no additional requirements after submitting testing results. If PFOS or PFOA is at or above 20 µg/kg, but less than 50 µg/kg, the recommended application rate for land application of biosolids must be lowered to three dry tons per acre or less. If PFOS and PFOA concentrations are 100 µg/kg or above, land application of the sewage sludge is recommended to be stopped. (One µg/kg is equivalent to one ppb.)

Among other requirements, an SSU permittee for the application of sewage sludge on agricultural land must prepare a nutrient management plan in accordance with regulations and the Maryland Nutrient Management Manual.

Among other requirements, unless analytical results have been submitted to MDE in accordance with testing requirements for sewage sludge generators, an SSU permittee for the disposal of sewage sludge at a municipal landfill must submit recent results of a laboratory analysis of a representative composite sample of the sewage sludge that was obtained from the WWTP that generated the sewage sludge.

National Pretreatment Program and State Implementation

Under CWA, EPA established the National Pretreatment Program to control pollutants discharged by industrial and commercial facilities into municipal WWTPs or POTWs. These discharges, if not properly managed, can interfere with treatment processes, contaminate biosolids, or pass through untreated into receiving waters.

In Maryland, EPA delegates pretreatment authority to MDE. In turn, MDE requires certain local jurisdictions and/or POTWs to develop, implement, and enforce local pretreatment

programs whenever they receive wastewater from Significant Industrial Users (SIUs). SIUs are industries that discharge large volumes of wastewater or release significant amounts of toxic pollutants into a municipal wastewater treatment system. These local programs issue permits to SIUs, set discharge limits, conduct inspections and sampling, and take enforcement action as necessary.

The Protecting State Waters from PFAS Pollution Act (Chapters 557 and 556 of 2024) required MDE, in collaboration with POTWs and specified SIUs in the State, to (1) by October 1, 2024, identify SIUs that currently and intentionally use PFAS chemicals; (2) by June 1, 2025, develop PFAS action levels for addressing PFAS contamination from industrial discharge for pretreatment permits; and (3) by September 1, 2025, develop specified mitigation plans for addressing PFAS contamination from industrial discharge for pretreatment permits. In addition, MDE was required to develop PFAS monitoring and testing protocols for SIUs and update its PFAS Action Plan. The Acts also established measurement, reporting, implementation, and PFAS storage and disposal requirements for certain SIUs.

MDE published its Determination of PFAS Action Levels for SIUs in June 2025. That guidance document is available on MDE's website.

Federal Regulation and Recommendations Regarding PFAS Contamination and Land Application of Sewage Sludge

As part of its comprehensive national strategy to combat PFAS pollution, called the "Strategic Roadmap," EPA has taken steps to restrict, remediate, and research PFAS contamination and impacts. To that end, EPA has taken several actions under numerous federal laws designed to protect human health and the environment, including under CWA. CWA requires EPA to establish technology-based effluent (*i.e.*, discharge) limits for industrial dischargers, known as effluent limitation guidelines. CWA also authorizes EPA to address contaminants through the National Pollutant Discharge Elimination System (NPDES), a federal regulatory tool under CWA. Under NPDES, EPA is authorized to set pollutant limits and establish monitoring and reporting requirements for contaminants in biosolids if sufficient scientific evidence shows there is potential harm to human health or the environment.

On January 14, 2025, EPA issued a draft risk assessment of the potential human health risks associated with the presence of PFAS chemicals in biosolids. Once finalized, EPA will use the risk assessment to help inform future risk management actions for PFOA and PFOS in sewage sludge. The preliminary findings of the draft risk assessment indicate that there can be human health risks that exceed EPA's acceptable thresholds, sometimes by several orders of magnitude, for some scenarios where the farmer applied biosolids

containing one ppb of PFOA or PFOS (which is near the current detection limit for these PFAS in biosolids).

Additionally, pursuant to a December 2022 memo, EPA currently recommends pretreatment best practices to reduce PFAS from sources and quarterly monitoring of influent, effluent, and sewage sludge using EPA Method 1633, a CWA analytical method to test for PFAS compounds in wastewater and other environmental media.

State/Local/Small Business Effect:

Maryland Department of the Environment

General fund expenditures for MDE increase by $248,101 in fiscal 2027, which accounts for the bill's October 1, 2026 effective date. This estimate reflects the cost of hiring three employees (one regulatory and compliance engineer and two natural resource planners) to (1) draft regulations; (2) assist sewage sludge generators in identifying qualified laboratories, and receive, review, and take any necessary actions in response to PFAS testing and laboratory results; (3) provide technical assistance in the development of source tracking studies and mitigation plans; (4) issue guidance to support WWTPs in implementing the bill; (5) provide technical assistance to local jurisdictions in the exercise of local limits authority under CWA; (6) increase communication with and oversight of POTWs that currently operate without delegated pretreatment program authority and develop appropriate controls for industrial users as necessary; and (7) conduct ongoing research and stay informed about PFAS-related mitigation, technologies, testing, research, and legislation in order to effectively implement the bill. It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses. The information and assumptions used in calculating the estimate are stated below:

- the bill expands MDE's responsibilities regarding implementation and oversight of pretreatment standards for industrial users; currently, most of the workload related to implementing such standards is delegated to pretreatment authorities and applies to SIUs, not all industrial users;
- MDE must increase oversight of and collaboration with 235 POTWs that operate without delegated pretreatment programs;
- of the 50 POTWs that land apply sewage sludge and have SSU permits, only a handful of them generate sewage sludge with concentrations of regulated PFAS that, on average, approach 25 ppb, and only two exceed 25 ppb; and
- even though some of the bill's requirements do not apply until October 1, 2028, MDE needs to hire staff in fiscal 2027 to work with stakeholders, develop regulations, educate the regulated community on the bill's changes, and implement the provisions that take effect October 1, 2026.

Positions	3.0
Salaries and Fringe Benefits	$217,934
Operating Expenses	30,167
Total FY 2027 MDE Expenditures	**$248,101**

Future year expenditures reflect full salaries with annual increases and employee turnover as well as annual increases in ongoing operating expenses.

This analysis assumes general funds are needed to cover MDE's costs. However, as mentioned above, under current law, MDE is required to adopt regulations to establish a mechanism for determining annual generator fees for SSU permits, and the fee schedule must take certain considerations into account, including the anticipated costs to monitor and regulate SSU sites and the needs of the State's sewage sludge regulation program. SSU permit fee revenues accrue to the Maryland Clean Water Fund. To the extent that MDE increases its generator fees to cover its increased costs to monitor and regulate SSU sites and implement the State's sewage sludge regulation program as altered by the bill, special fund revenues increase (to cover some portion of MDE's costs), and the need for general funds decreases.

Impacts on the Regulated Community

Impacts on Wastewater Treatment Plants that Land Apply Sewage Sludge: According to MDE, all of the WWTPs that currently land apply sewage sludge in the State are publicly owned systems. Based on information gleaned from a limited survey of State agencies and local entities, most POTWs that land apply sewage sludge are generating sewage sludge that falls below the 25 ppb threshold for concentrations of regulated PFAS under the bill. For these POTWs, the primary impact of the bill is the potential need to conduct additional PFAS testing. However, according to MDE, most affected systems already meet the quarterly testing frequency mandated under the bill, although some smaller systems only sample once each year. Thus, the bill's impact on most POTWs in the State that land apply sewage sludge is likely minimal.

According to MDE, of the 50 POTWs that land apply sewage sludge, only a few have total concentrations of regulated PFAS approaching or exceeding 25 ppb, and these are locally owned WWTPs. For these POTWs, costs increase, potentially significantly, beginning in fiscal 2029 to implement mitigation measures, install facility upgrades, or use alternative disposal methods for affected sewage sludge, such as landfilling or transporting out of state. Compliance costs for these facilities vary significantly, depending on (1) how an affected facility chooses to respond to the bill's restrictions and prohibitions; (2) the concentration of regulated PFAS in the affected sewage sludge; and (3) a facility's ability to address elevated PFAS levels in sewage sludge through pretreatment by industrial users.

For example, the Washington Suburban Sanitary Commission (WSSC) is one of the WWTPs that currently land applies sewage sludge and generates sewage sludge with a total concentration of regulated PFAS that exceeds 25 ppb. WSSC estimates that annual costs to manage sewage sludge increase by between $4.1 million and $8.2 million annually under the bill as a result of commingling, reduced land application, and landfilling. WSSC notes that if it needs to install equipment to destroy PFAS at its facility, capital costs are estimated to total $200.0 million. Any costs incurred by WSSC are ultimately borne by WSSC customers in Montgomery and Prince George's counties through an increase in rates.

The Maryland Environmental Service (MES) manages approximately 90 WWTPs on behalf of State and local entities throughout the State. MES advises that sewage sludge that is land applied from these WWTPs has consistently demonstrated PFAS concentrations at or below 25 ppb for the past two years (since MDE started tracking and MES started testing for PFAS). To that end, MES does not anticipate that the bill has a significant fiscal or operational impact; however, MES notes that the bill may result in an increase in required testing depending on the testing frequencies established in regulation by MDE under the bill. As MES is a fee-for-service entity, any costs incurred by MES resulting from the bill are ultimately borne by the entities that contract for MES services through an increase in fees. As a result, MES nonbudgeted expenditures and revenues may increase correspondingly beginning in fiscal 2029.

None of the respondents to requests for information regarding the fiscal effect of the bill indicated that there are currently any WWTPs that land apply sewage sludge with concentrations of PFAS that exceed 50 ppb. Thus, the bill's prohibition on the land application of sewage sludge that has total concentrations of regulated PFAS equal to or greater than 50 ppb is not anticipated to materially affect State or local finances, at least in the near term.

Impacts on Industrial Users: Industrial users (those that discharge to POTWs) could be State agencies, local governments, and small businesses. The bill expands existing pretreatment requirements for industrial users that discharge wastewater to a POTW that land applies sewage sludge that has a total concentration of regulated PFAS of at least 25 ppb by (1) authorizing the establishment of pretreatment standards for industrial users that discharge PFAS at levels that exceed specified action levels and (2) if a POTW does not have an industrial pretreatment program, requiring MDE, in consultation with the POTW, to evaluate the contribution from industrial users and determinate appropriate controls to meet applicable standards.

The bill also authorizes a local jurisdiction or a pretreatment authority to set appropriate rates and fees for industrial users (individually or as a class) that discharge PFAS into the WWTP at levels that necessitate the implementation of mitigation measures. Thus, expenditures for some industrial users may increase to implement measures to reduce

PFAS discharges into WWTPs and to pay any new or increased rates and/or fees imposed under the bill. These increased costs could be significant depending on the amount of regulated PFAS that an industrial user discharges.

Local Revenues for Local Jurisdictions and Pretreatment Authorities from Rates and Fees: As noted above, the bill authorizes a local jurisdiction or a pretreatment authority to set appropriate rates and fees for industrial users that discharge PFAS into the WWTP. Thus, local revenues may increase from any new or increased rates and/or fees established pursuant to this authority.

Additional Information

Recent Prior Introductions: Similar legislation has not been introduced within the last three years.

Designated Cross File: HB 925 (Delegate Stein, *et al.*) - Environment and Transportation and Health.

Information Source(s): Maryland Environmental Service; Calvert, Howard, and Prince George's counties; Maryland Association of Counties; Washington Suburban Sanitary Commission; Northeast Maryland Waste Disposal Authority; City of Annapolis; Maryland Department of Agriculture; Maryland Department of the Environment; Maryland Department of Health; U.S. Environmental Protection Agency; Department of Legislative Services

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Analysis by: Kathleen P. Kennedy

Direct Inquiries to:
(410) 946-5510
(301) 970-5510