

Department of Legislative Services
 Maryland General Assembly
 2008 Session

FISCAL AND POLICY NOTE

House Bill 388 (Delegates McConkey and Holmes)
 Environmental Matters

Environment - Pozzolan - Use and Disposal

This bill prohibits the use of pozzolan, commonly known as “fly ash,” for landfill, soil improvement, agriculture, soil conditioning, or land reclamation. In addition, it requires that pozzolan be disposed of in a permitted refuse disposal system.

Fiscal Summary

State Effect: General fund expenditure increase of \$701,000 in FY 2009 for the Maryland Department of the Environment to handle the increase in workload anticipated as a result of the bill. Future year estimates are annualized, adjusted for inflation, and reflect ongoing expenses. Legislative Services notes, however, that *even in the absence of this bill*, MDE anticipates a similar increase in expenditures to implement its proposed regulations relating to coal combustion byproducts (CCBs). Revenues would not be materially affected.

(in dollars)	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Revenues	\$0	\$0	\$0	\$0	\$0
GF Expenditure	701,000	730,300	766,800	805,300	845,800
Net Effect	(\$701,000)	(\$730,300)	(\$766,800)	(\$805,300)	(\$845,800)

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

Local Effect: Potential significant increase in local expenditures and revenues relating to solid waste activities.

Small Business Effect: Meaningful.

Analysis

Current Law: CCBs, such as fly ash, are allowed to be used in a variety of ways subject to certain requirements. Any person who uses pozzolan for landfill is required to do so in a manner that complies with sound engineering practices. A person who uses pozzolan for landfill, structural building, soil improvement, agriculture, soil conditioning, or land reclamation is required to minimize dust and wind erosion and must comply with all MDE silt control regulations and permit requirements.

MDE's Water Management Administration oversees pozzolan placement in mines and other reclamation sites through mining reclamation permits and discharge permits. If managed as an industrial waste, MDE's Waste Management Administration oversees disposal activities and evaluates recycling activities.

MDE's Waste Management Administration also permits, monitors, and inspects refuse disposal systems. The term "refuse disposal system" includes an incinerator, a transfer station, a landfill system, a landfill, a solid waste processing facility, and any other solid waste acceptance facility.

Background: Fly ash is a byproduct from the burning of coal in power plants that is captured by air pollution control equipment. According to MDE, approximately 2 million tons of coal ash (fly ash and bottom ash, which is heavier than fly ash and is captured at the bottom of the combustion device) is currently generated each year in Maryland, but this amount is anticipated to increase as a result of new environmental controls being installed at power plants. CCBs are currently either disposed of or beneficially used. According to MDE, beneficial uses of coal ash include mine reclamation, structural fill applications, or as a substitute for cement in the production of concrete. According to a 2006 report by the Department of Natural Resources, in 2004, about 49% of CCBs were placed in disposal sites. MDE advises that there are about 20 disposal sites statewide.

If CCBs are not managed properly, constituents of the material can be released into the environment. MDE advises that under certain geologic conditions, certain types of coal ash can produce high concentrations of the constituents (such as selenium, sulfate, arsenic, iron, or manganese) in soil that may leach into surface or groundwater. In addition, without proper controls, MDE reports that coal ash released into the air in large quantities can create a public nuisance and/or cause respiratory problems.

MDE advises that the U.S. Environmental Protection Agency has been working on regulations since 2000 to institute additional controls on the management of CCBs.

In response to the recent discovery of contaminated groundwater near a fly ash disposal site (sand and gravel mine) in Gambrills, MDE proposed regulations in December 2007 to provide a regulatory framework for the disposal of CCBs and the use of CCBs for mine reclamation. In general, under the proposed regulations, disposal facilities would need to meet many of the same standards required for industrial solid waste landfills (such as leachate collection, groundwater monitoring, and the use of liners). The use of CCBs in noncoal mines would need to meet standards similar to those required for industrial solid waste landfills. Standards for coal mine reclamation will ensure that only alkaline CCBs are used. For both disposal and mine reclamation sites, dust control measures must be implemented and post-closure monitoring and maintenance must be performed. The proposed regulations would also establish reporting requirements. MDE anticipates that the proposed regulations will take effect April 1, 2008.

State Expenditures: General fund expenditures could increase by an estimated \$701,030 in fiscal 2009, which accounts for the bill's October 1, 2008 effective date. This estimate reflects the cost of hiring three geologists (to review geologic and environmental information for proposed disposal sites and to perform related technical assessments); three public health engineers (to perform technical assessments required during the permit review process and to conduct engineering evaluations of operations and design plans); three environmental compliance specialists (to review environmental monitoring data and conduct inspections); one attorney (to conduct compliance reviews and enforcement activities); and two office services clerks and one office secretary (to provide administrative support). It includes salaries, fringe benefits, one-time start-up costs, and ongoing operating expenses, including contractual services for software support, sample analysis, and medical monitoring for the inspectors. The information and assumptions used in calculating the estimate are stated below:

- there would be a significant increase in applications for permits because the bill would eliminate many existing options for pozzolan (such as use in mine reclamation) and require that it be disposed of in permitted refuse disposal systems; and
- generators would dispose of pozzolan in Maryland permitted facilities, rather than shipping it out of state.

Positions	13
Salaries and Fringe Benefits	\$514,164
Automobile Purchase and Operations	71,524
Contractual Services	60,749
Other Equipment/Operating Expenses	<u>54,593</u>
Total FY 2009 State Expenditures	\$701,030

Future year expenditures reflect • full salaries with 4.4% annual increases and 3% employee turnover; and • 2% annual increases in ongoing operating expenses.

Legislative Services advises, however, that MDE's proposed regulations are anticipated to result in a similar increase in the department's overall workload. Accordingly, even in the absence of this bill, MDE anticipates a significant increase in expenditures. MDE advises that it will be proposing departmental legislation to establish fees to offset the estimated costs of implementing its proposed regulations.

The extent to which the bill could affect any State agencies that may generate or use pozzolan is unknown.

Local Fiscal Effect: The bill could have a significant impact on local governments. Local governments own 22 of the 39 landfills currently permitted by MDE. Of the four major types of refuse disposal systems (municipal solid waste (MSW) landfills, rubble landfills, industrial waste landfills, and land-clearing debris landfills), only MSW and industrial waste landfills are currently permitted to accept industrial wastes such as pozzolan. MDE advises, however, that while its permit specifies what types of waste a landfill may accept, county landfill operators are *not required* to accept all permitted wastes; thus, a county landfill could refuse to accept pozzolan. Accordingly, while pozzolan may be expected to be disposed of in MSW landfills until adequate landfills for the material can be permitted and constructed, it is unlikely that the total available capacity of landfills would be dedicated to this use. MDE also advises that there are only three industrial waste landfills in the State, and only one of those is permitted to accept waste from offsite. Rubble landfills are generally prohibited from accepting industrial waste under the conditions of their permits, but could apply to amend their permits to allow them to accept pozzolan.

MDE advises that it is unlikely that dedicated facilities for the disposal of pozzolan could be permitted and constructed sooner than 2011. Until new facilities are constructed, it is assumed that pozzolan would need to be disposed of in existing county or commercial

landfills. County revenues from landfill tipping fees could therefore increase. MDE advises that current landfill tipping fees range from \$50 to \$65 per ton.

Appendix 1 shows the projected available landfill capacity in counties *most* likely to be affected by the bill (counties in which the largest generators of pozzolan are located), as estimated by MDE. Based on these projections, under the bill, the total capacity of these landfills would be exhausted in less than 13 years, not accounting for any growth in other wastes. MDE advises that this is less than half the time that these counties anticipate exhausting existing capacity under current law. Accordingly, the bill would likely result in the need for counties to construct new landfills sooner than currently anticipated.

Under the bill, new refuse disposal facilities would ultimately need to be constructed, although it is unclear at this point whether such facilities would be locally or privately owned. In any event, the construction of new facilities will result in significant costs. *For illustrative purposes*, according to information provided by MDE, annualized costs to construct new facilities capable of handling 2 million tons of CCBs per year could total an estimated \$4.85 per ton, or \$9.7 million annually. This estimate is based on various assumptions and includes the cost to construct a landfill with a liner and a leachate treatment system; one-time land acquisition, design, and permitting costs; ongoing operating costs; and closure costs.

In addition to managing additional waste, counties would be required to undertake additional planning and site evaluation tasks as a result of the bill. Regardless of whether proposed disposal facilities are public or private, landfill permits require significant review and approval at the local level. *For illustrative purposes*, Montgomery County reports that the bill could result in a significant increase in one-time expenditures (estimated at approximately \$312,000 in fiscal 2009) to hire consultants to conduct siting and other studies needed to assure the adequacy of the county's disposal system capacity. In Montgomery County, solid waste is managed under a full-cost recovery system where all costs are paid for by a system of user fees.

Small Business Effect: The bill would have a significant impact on coal mining operations in Allegany and Garrett counties. According to MDE, at least half the coal producers in the State use the alkaline ash generated by the AES Warrior Run power plant to neutralize the acidic exposed coal pavement that remains after coal mining in the region. Under the bill, such ash could not be used for reclamation and would be required to be disposed of in refuse disposal systems. As a result, coal companies would be required to purchase large quantities of lime instead. According to the U.S. Census Bureau's *2005 County Business Patterns*, 80% of the 15 coal mining establishments in Maryland are considered small businesses.

Private landfill owners and operators, which may be small businesses, could benefit from the increase in material that would be required to be disposed of in permitted facilities. MDE advises that landfill tipping fees typically range from \$50 to \$65 per ton. Small businesses involved in the engineering and construction of any new landfills proposed as a result of this bill could also be positively impacted.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Maryland Department of the Environment, Department of Natural Resources, Maryland Department of Transportation, Montgomery County, Prince George's County, Kent County, Washington County, Worcester County, Department of Natural Resources, U.S. Census Bureau, Constellation Energy, Department of Legislative Services

Fiscal Note History: First Reader - February 11, 2008
mll/jr

Analysis by: Lesley G. Cook

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

Appendix 1
Available Landfill Capacity in Affected Counties

Landfill Name (County)	Total Cubic Yards Filled by End of 2006¹	Total Tons Filled by End of 2006¹	Compaction Multiplier² (cy/tons) Calculated	2006 Tons Accepted¹	2006 Cubic Yards Accepted, Calculated	Remaining Capacity, Cubic Yards^{1,3}
Mountainview (Allegany) ⁴	2,179,228	1,634,421	1.3333333	136,913	182,550.6667	1,540,772
Millersville (Anne Arundel)	4,147,503	2,728,994	1.5197919	148,197	225,228.6015	10,152,497
Eastern (Baltimore)	9,675,000	4,837,287	2.0000881	137,927	275,866.1467	12,148,000
Charles #2 (Charles)	1,347,445	668,593	2.0153442	74,740	150,626.8227	3,027,255
Brown Station (Prince George's)	10,059,381	7,544,535	1.3333334	600,252	800,336.04	3,027,255
40 West (Washington)	2,087,048	851,440	2.451198	155,469	381,085.2973	18,185,952
Total or Average	29,495,605	18,265,270	1.7755148	1,253,498	2,015,693.575	48,081,731

¹ MDE 2006 annual report, *Solid Waste Managed in Maryland, Calendar Year 2006*.

² This multiplier is used to provide the factor by which the tonnage that will be received must be multiplied to convert it to cubic yards. It was derived using the reported amount of cubic yards of landfill actually filled and the reported tons of waste received. Factors that affect this number are the type, density, and compactibility of the refuse; the type of equipment and amount of effort used; the type and amount of cover material used; the rate of fill; and the weather.

³ This estimate discounts the availability of Montgomery County's permitted Site 2 landfill, which is not yet constructed, and the out-of-state landfill capacity Montgomery County currently uses, as the bill appears to direct waste into landfills that are regulated under Maryland State law.

⁴ Mountainview is privately owned.

Source: Maryland Department of the Environment