

**Department of Legislative Services**  
 Maryland General Assembly  
 2011 Session

**FISCAL AND POLICY NOTE**  
**Revised**

Senate Bill 634 (Senator Frosh)  
 Education, Health, and Environmental Affairs

**Marcellus Shale Safe Drilling Act of 2011**

This bill prohibits the Maryland Department of the Environment (MDE) from issuing a permit for the drilling of a well in the Marcellus Shale until the permit applicant has made specified environmental, public health, emergency response, and financial security demonstrations to MDE. The bill also requires MDE, when evaluating a permit, to consult with the county and any municipality in which a proposed well is located.

The bill takes effect June 1, 2011.

**Fiscal Summary**

**State Effect:** Special and/or general fund expenditures increase by \$200,000 in FY 2012 and 2013 each, for MDE to contract with consultants with expertise in hydrology and hydrogeology. Special fund revenues increase, assuming MDE assesses permit fees to cover some or all of its costs, as authorized under current law.

(in dollars)	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
SF Revenue	\$0	-	-	\$0	\$0
GF/SF Exp.	\$0	\$200,000	\$200,000	\$0	\$0
Net Effect	\$0	(-)	(-)	\$0	\$0

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

**Local Effect:** Local government tax revenues may decrease significantly in several jurisdictions in the area of the Marcellus Shale formation to the extent that the bill's restrictions indefinitely delay or prohibit drilling that otherwise would occur. Workloads and/or expenditures may increase for affected local jurisdictions due to direct involvement in implementing or overseeing certain provisions of the bill as well as indirect involvement of local health, environmental, development, and public works agencies. Local expenditures may decrease in future years to the extent that the bill

reduces or prevents potentially significant emergency response, environmental remediation, or legal expenses that would not otherwise have been prevented by existing laws, regulations, or contractual protections.

**Small Business Effect:** Meaningful adverse impact on any small business engaged in gas well drilling and other contractual services associated with the regulated production of natural gas in the Marcellus Shale and potentially on other small businesses that provide services to those entities, to the extent the bill delays or prohibits drilling that otherwise would occur. Potentially meaningful beneficial impact on engineering services firms, environmental remediation contractors, and emergency response consultants to the extent the bill's requirements result in additional business opportunities beyond what would otherwise exist under current laws and drilling practices.

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## Analysis

**Bill Summary:** MDE may not issue a permit until the permit applicant demonstrates to MDE that:

- a plan has been developed that can be implemented to avoid, minimize, and offset the impacts, including cumulative impacts, of drilling and related activities to wetlands, forests, or other vital natural resources, including fragmentation of forests and critical habitat;
- an agreement has been reached with each local government through which heavy equipment or trucks may pass, which addresses travel routes, hours of truck travel, and the responsibility for the construction, maintenance, and repair of roads and bridges;
- the drilling and operation of wells will not impair the sustainability, water quality, or potability of the groundwater and surface water in the relevant watershed;
- the water used for drilling and hydraulic fracturing is from a public water supply that has sufficient capacity under its water appropriation permit or is reclaimed water approved for use by MDE;
- the fracturing fluids used for hydraulic fracturing contain only materials that have been approved by MDE;
- the treatment and disposal of fracturing fluids that return to the surface and other wastewaters and wastes will occur only at regulated facilities;

- the permit applicant will implement a monitoring program, approved by MDE, to establish a baseline of water quality for groundwater and surface water prior to the drilling and initial hydraulic fracturing, and to test these waters periodically to determine whether they have been affected by the drilling;
- an emergency response plan has been developed, can be implemented, and includes a description of the emergency response capability and response time as well as an assurance that local emergency responders have been trained and have appropriate protective gear and equipment to attend to any injuries and secure the site until the permit applicant's emergency response unit arrives; and
- the permit applicant has environmental impairment liability insurance approved by MDE that is sufficient to remediate on- and off-site contamination, bodily injury, property damage, and other long-term pollution problems caused by drilling and related activities.

**Current Law:** MDE's Mining Program consists of two units, the Bureau of Mines and the Minerals, Oil, and Gas Division, which regulate coal mining, noncoal mining, and oil and gas exploration and production. A person must obtain a permit from the Minerals, Oil, and Gas Division before drilling a well for the exploration, production, or underground storage of gas or oil in Maryland. A permit is also required for the disposal of any product of a gas or oil well. An applicant who wants to extract gas from the Marcellus Shale may also be required to apply for a number of other State permits, such as a water appropriation permit or a National Pollutant Discharge Elimination System permit.

Chapter 383 of 2010 established an Oil and Gas Fund to support MDE's administration of a regulatory program that oversees the drilling, development, production, and storage of oil and gas wells in the State. Among other things, current oil and gas regulations outline application requirements and procedures; criteria for permit approval; drilling and operating requirements and permit conditions; and requirements for the plugging of an oil or gas well upon abandonment or ending of operation. For instance, prior to permit approval, applicants are required to submit a drilling and operating reclamation plan that, among other things, describes how the free liquid fraction and contaminated materials will be disposed of. The drilling and operating requirements and permit conditions outlined in regulations require, among other things (1) drilling liquid to be conditioned and tested daily; (2) authority for MDE to visit and inspect permitted operations; (3) surface casing cement and other casing to meet specified requirements; (4) recordkeeping; and (5) a completed oil and gas well to be equipped with wellhead controls adequate to control the flow and secured to prevent unauthorized access. Upon abandonment or ending of the operation of any gas or oil well, the permittee must plug the hole in accordance with specified requirements.

Current regulations apply to all gas wells in Maryland and are not specific to the practice of hydraulic fracturing, the process used to extract gas from the Marcellus Shale. However, under current law, MDE has broad authority to impose conditions on permits to protect the State's natural resources and to provide for public safety. Thus, under current law, MDE is able to impose special conditions on drilling in the Marcellus Shale if desired. Further, MDE may deny a permit based on a substantial threat to public safety or a risk of significant adverse environmental impact.

**Background:** The Marcellus Shale formation is a geologic feature in the Appalachian Range which has recently attracted significant attention from the energy industry for its rich natural gas deposits. Geologists have long known about the natural gas resources contained within the formation but had considered the gas to be not economically recoverable until the recent development of new drilling technology reliant on a process called hydraulic fracturing.

The Marcellus Shale underlies New York, Pennsylvania, Ohio, West Virginia, and Western Maryland. Production wells have been drilled in Pennsylvania, New York, Ohio, and West Virginia, and several companies have expressed interest in drilling into the formation in Maryland. In Maryland, the formation is located in Allegany, Garrett, and Washington counties; however, the only anticipated areas of gas production are in Garrett and western Allegany counties. MDE advises that it has received permit applications for drilling in the Marcellus Shale from two companies for six sites, but that only three of those sites are currently being pursued.

In 2010 the U.S. Environmental Protection Agency raised several concerns regarding the impact of hydraulic fracturing on water supplies, water quality, and air quality, among other issues, and is currently examining the practice more closely.

In response to concerns regarding the practice of high-volume, horizontal hydraulic fracturing, in December 2010 New York's Governor issued an executive order imposing a moratorium on the practice until at least July 2011.

**State Fiscal Effect:** MDE advises that the conditions under which drilling will be allowed to proceed cannot be satisfied without additional study by MDE. Even if a permit applicant provides for the necessary study of the various conditions required by the bill, MDE will nevertheless require contractual assistance in evaluating the permit application and demonstrations of compliance under the bill. MDE estimates that the cost of procuring the contractual assistance necessary to conduct such studies will cost \$200,000 in fiscal 2012 and 2013 only.

Under Chapter 383 of 2010, MDE is required to set and collect permit and production fees related to oil and gas well drilling. Fees must be set at a rate necessary to (1) review,

inspect, and evaluate monitoring data, applications, licenses, permits, and other reports; (2) perform and oversee assessments, investigations, and research; (3) conduct permitting, inspection, and compliance activities; and (4) develop and implement regulations to address the risks to public safety, human health, and the environment from oil and gas well drilling and development. MDE advises that the regulations to establish such fees have been drafted but are being held pending any legislative action that may necessitate a different fee structure or amount.

Because MDE has the authority under current law to assess fees to cover its costs related to gas drilling permits, this analysis assumes that MDE will attempt to recover the costs incurred as a result of this bill from permit applicants. Thus, special fund revenues from fees may increase by up to \$200,000 in fiscal 2012 and 2013 to offset MDE's costs. However, Legislative Services advises that, to date, MDE has only received permit applications from two companies. Thus, to the extent MDE is unable to recover all of its costs through the assessment of fees, other special funds or general funds may be needed.

Although the bill takes effect June 1, 2011, it is assumed that State finances and operations are not materially affected in fiscal 2011.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** HB 852 (Delegate Mizeur, *et al.*) - Environmental Matters.

**Information Source(s):** Maryland Department of the Environment, Department of Health and Mental Hygiene, Maryland Department of Transportation, U.S. Environmental Protection Agency, Department of Legislative Services

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