

Department of Legislative Services
Maryland General Assembly
2014 Session

FISCAL AND POLICY NOTE

House Bill 865 (Delegate Mizeur, *et al.*)
Environmental Matters

Natural Gas - Hydraulic Fracturing - Rural Residential Drinking Water
Protection Act

This bill prohibits the Maryland Department of the Environment (MDE) from issuing a permit for the hydraulic fracturing of a well for the exploration or production of natural gas within 3,280 feet from a drinking water well, a drinking water supply reservoir, or a surface water intake on a flowing stream.

Fiscal Summary

State Effect: General/special fund revenues associated with general economic activity decrease, potentially beginning in FY 2015, to the extent that the bill results in less development of natural gas resources than would occur in the absence of the bill, as discussed below. MDE can enforce the bill with existing resources.

Local Effect: Local severance tax revenues and other revenues associated with general economic activity decrease for Allegany and Garrett counties, potentially beginning in FY 2015, to the extent that the bill's requirements result in less development of gas resources than would occur in the absence of the bill, as discussed below.

Small Business Effect: Potential meaningful.

Analysis

Current Law/Background: MDE is authorized to issue permits for oil and gas exploration and production and is required to coordinate with the Department of Natural Resources (DNR) in its evaluation of the environmental assessment of any proposed oil or gas well. Specifically, a person must obtain a permit from MDE 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.

Current regulations apply to all gas wells in Maryland and are not specific to the practice of hydraulic fracturing. 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. Further, MDE may deny a permit based on a substantial threat to public safety or a risk of significant adverse environmental impact. Although MDE regulates gas exploration and production, the regulations were written prior to the use of hydraulic fracturing and have not been revised since 1993.

Under current MDE regulations, a drilling and operating permit may not be issued if the well is within 1,000 feet of a school, church, drinking water supply, wellhead protection area, or an occupied dwelling unless written permission of the owners is submitted with the application and approved by MDE. Additionally, an applicant must submit a plat showing the locations of all drinking water wells within 2,640 feet, and any surface water within one mile, of a proposed well location.

A best practices report recently submitted by MDE and DNR as part of the Marcellus Shale Safe Drilling Initiative contains several recommended setbacks, including 2,000 feet from public groundwater wells, surface water intakes, and drinking water reservoirs; 1,000 feet from a private water well; and 300 feet from streams and other aquatic habitat. The consultant's report, on which this best practices report was based, had recommended a 500-foot setback for private water wells and did not include drinking water reservoirs within the 2,000 foot setback for groundwater wells and surface water intakes.

More information on the practice of hydraulic fracturing, the Marcellus Shale, and the Marcellus Shale Safe Drilling Initiative may be found in the **Appendix – High-volume Hydraulic Fracturing in the Marcellus Shale**.

State/Local Fiscal Effect: The bill restricts the areas where hydraulic fracturing of a well for the exploration or production of natural gas may occur. The extent of this restriction is unclear without additional information, including the location of drinking water wells, drinking water supply reservoirs, and streams' surface water intakes in Allegany and Garrett counties. However, the bill's restriction represents a significant expansion over the limitations established in current regulations and proposed for consideration by the Marcellus Shale Safe Drilling Initiative Advisory Commission.

Thus, it is expected that the bill may result in a significant limitation on potential natural gas extraction using hydraulic fracturing.

MDE advises that it can implement the bill with limited impact on existing workloads and resources. Given this, it is also assumed that the bill does not materially impact operations in Allegany or Garrett counties. However, Garrett County advises that, if MDE relies on county assistance to verify the location of wells, surface waters, and streams, it may significantly increase the workloads of county personnel.

Any impact on the future extraction of natural gas resources in the State would directly affect severance tax revenues in Allegany County, and to a greater extent, Garrett County; other sources of State and local revenue from general economic activity may also be indirectly impacted. The State does not currently impose a severance tax on gas production. Although not prohibited under current law, it is assumed that MDE will likely not issue any permits for gas well drilling in the Marcellus Shale until after the Marcellus Shale Safe Drilling Initiative releases its final report, which is due August 1, 2014. However, it is unclear whether or when any gas well drilling will be authorized even after that date.

Small Business Effect: The bill may have a meaningful adverse impact on small businesses engaged in providing services related to hydraulic fracturing and natural gas extraction to the extent the bill prevents, or reduces the level of, future natural gas production through hydraulic fracturing.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Garrett County, Maryland Department of the Environment, Department of Legislative Services

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Appendix – High-volume Hydraulic Fracturing in the Marcellus Shale

The Marcellus Shale formation is a geologic feature that has attracted significant attention from the energy industry for its rich natural gas and liquids resources contained within seven states. In Maryland, the only anticipated areas of gas production are in Garrett and western Allegany counties. Applications for permits to produce natural gas in Maryland using horizontal drilling and high-volume hydraulic fracturing were first filed with the Maryland Department of the Environment (MDE) in 2010. According to MDE, however, all of the permit applications that had been filed have been withdrawn.

Concerns Regarding High-volume Hydraulic Fracturing

As the use of hydraulic fracturing has increased, so has concern about its potential impacts. MDE has advised that, although accidents are relatively rare, exploration for and production of natural gas in nearby states have resulted in injuries, well blowouts, releases of fracturing fluids, releases of methane, spills, fires, forest fragmentation, road damage, and evidence of water contamination.

In 2010, the U.S. Environmental Protection Agency (EPA) 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 April 2012, EPA adopted a final rule to address air emissions from hydraulic fracturing, and in December 2012, EPA released a progress report on its comprehensive study of hydraulic fracturing impacts on water resources; a full draft report is expected to be released for public comment and peer review in 2014. Other states, academic organizations, environmentalists, and the industry are also conducting research into the impacts of hydraulic fracturing on public health, safety, and the environment.

Marcellus Shale Safe Drilling Initiative

Governor Martin O'Malley established the Marcellus Shale Safe Drilling Initiative by executive order in June 2011 to ensure that, if drilling for natural gas from the Marcellus Shale proceeds in Maryland, it is done in a way that protects public health, safety, natural resources, and the environment. The executive order directs MDE and the Department of Natural Resources (DNR) to assemble and consult with an advisory commission. Specifically, the executive order tasks MDE and DNR, in consultation with the advisory commission, with conducting a three-part study and reporting recommendations.

Part I of the study, a report on findings and recommendations regarding sources of revenue and standards of liability for damages caused by gas exploration and production, was released in December 2011. The findings and recommendations of the report led to the introduction of several bills during the 2012 legislative session; the General Assembly passed only one of the bills, however. Chapter 703 of 2012 (HB 1123) established a

presumptive impact area applicable to areas around a deep shale gas deposit well for which MDE has issued a gas exploration or production permit. In a presumptive impact area, it is presumed that contamination of a “water supply” was caused by the activities of gas exploration or production.

Part II of the study – a report on best practices – was completed in August 2013 and reflected changes made after consideration of more than 4,000 public comments. This report was based upon work conducted by two experts at the University of Maryland Center for Environmental Science, Appalachian Laboratory. The experts provided MDE and DNR with a suite of recommendations that have been used or studied in other states. The departments considered each recommended best practice and decided, in consultation with the advisory commission, which practices to accept. While the report contained many recommendations, the centerpiece was the use of a Comprehensive Gas Development Plan (CGDP), which a drilling applicant would be required to submit as a prerequisite to an individual well permit. A CGDP would address broad and cumulative issues associated with the completion of numerous wells and the effects that the well construction and resource extraction and transportation would have on a large-scale.

The third and final report required by the executive order is expected by August 1, 2014. This report is expected to address all other issues identified by the executive order and focuses on identifying the potential impact of drilling. Currently, the departments and their contractors are working on completing an economic and fiscal study; a comprehensive risk assessment; a public health study; and monitoring efforts to measure baseline water quality and effects on air and water quality of any future drilling.

The Marcellus Shale Safe Drilling Initiative has been hampered to some extent by a lack of funding. Legislation failed in the 2011 and 2012 sessions that would have provided the estimated funding needed. However, the fiscal 2014 budget included a \$1.5 million fiscal 2013 deficiency appropriation for MDE and DNR to support the research required by the executive order. The general funds are being used to support the stream sampling, economic analysis, public health study, and monitoring efforts. All, or nearly all, of the \$1.5 million has been spent or encumbered by the departments and contractors.

Marcellus Shale Safe Drilling Advisory Commission Legislative Committee

In September 2012, the advisory commission established a legislative committee to recommend proposals to the advisory commission for consideration prior to the 2013 session. The commission considered 10 topics for potential proposals and ultimately recommended four proposals. Ultimately, two of these legislative proposals (relating to financial assurance requirements and the registration of “land professionals”) were introduced and passed by the General Assembly. However, the legislative committee did not reconvene (as of December 2013) in preparation for the 2014 session.