



# The State of Maryland

## Executive Department

EXECUTIVE ORDER  
01.01.2011.11

### The Marcellus Shale Safe Drilling Initiative

- WHEREAS, The Marcellus shale formation underlies portions of Western Maryland and may contain significant amounts of natural gas;
- WHEREAS, The production of natural gas could advance the cause of energy independence for the United States;
- WHEREAS, When burned to produce electricity, natural gas produces lower greenhouse gas emissions than oil and coal, helping to reduce the impact of energy usage as we transition to more renewable energy sources;
- WHEREAS, The exploration for and production of natural gas could boost economic development in Maryland, particularly in Garrett and Allegany Counties;
- WHEREAS, The production of natural gas from the Marcellus shale involves very deep wells with long horizontal sections and a process called hydraulic fracturing;
- WHEREAS, Advances in technology, along with economic and energy policy developments, have spurred a dramatic growth in the use of hydraulic fracturing across a wide range of geographic regions and geologic formations in the United States;
- WHEREAS, As the use of hydraulic fracturing has increased, so have concerns about its potential impact on public health, safety, the environment and natural resources;
- WHEREAS, Exploration for and production of natural gas from the Marcellus shale in nearby states have resulted in injuries, well blowouts, releases of fracturing fluids, releases of methane, spills, fires, forest fragmentation, damage to roads, and evidence of contamination of ground water and surface water;
- WHEREAS, Applications have been filed for permits to produce gas from the Marcellus shale in Maryland using horizontal drilling and hydraulic fracturing, but no permits have yet been issued;



WHEREAS, Section 14-110 of the Environment Article of the Maryland Code permits the Department of the Environment to place in a permit conditions that the Department deems reasonable and appropriate to assure that the operation shall not only fully comply with the requirements of the law, but also provide for public safety and the protection of the State's natural resources;

WHEREAS, Other states have or are in the process of reevaluating their regulatory programs for gas production or assessing the environmental impacts of gas development from the Marcellus shale;

WHEREAS, Congress directed the United States Environmental Protection Agency (EPA) to conduct research to examine the relationship between hydraulic fracturing and drinking water resources;

WHEREAS, EPA expects to publish an interim report of results from the EPA Study in December 2012 and provide additional results in a 2014 report;

WHEREAS, The plan for the EPA Study does not address air quality concerns, greenhouse gas emissions from gas wells, seismic risks, public safety concerns or impacts to terrestrial and aquatic ecosystems;

WHEREAS, Other federal agencies, including the Department of the Interior and the Department of Energy, have been investigating hydraulic fracturing;

WHEREAS, Research on Marcellus Shale, both academic and applied, is currently underway across the Mid-Atlantic region focused on natural resources, wildlife, community and economic implications and production technologies; and

WHEREAS, There is a need for sound scientific knowledge about the effects of gas exploration and production in the Marcellus shale;

NOW THEREFORE, I, MARTIN O'MALLEY, GOVERNOR OF THE STATE OF MARYLAND, BY VIRTUE OF THE AUTHORITY VESTED IN ME BY THE CONSTITUTION AND LAWS OF MARYLAND, HEREBY PROCLAIM THE FOLLOWING EXECUTIVE ORDER, EFFECTIVE IMMEDIATELY:

A. Established. There is a Marcellus Shale Safe Drilling Initiative. The initiative will be administered jointly by the Maryland Department of the Environment and the Department of Natural Resources.

B. Definitions. For the purpose of this Executive Order:

1. “Best practices” means methods and techniques that have consistently shown results superior to those achieved by other means, and which are used as benchmarks.
2. “Departments” means the Department of the Environment and the Department of Natural Resources.
3. “EPA Hydraulic Fracturing Research Study” or “EPA Study” means the study by the Office of Research and Development at the U.S. Environmental Protection Agency on the relationship between hydraulic fracturing and drinking water that may be developed and implemented beginning in 2011, with initial research products available by the end of 2012 with an additional report in 2014.
4. “Flow Back” means the fracturing fluids that return to the surface after a hydraulic fracture is completed.
5. “Fracturing Fluids” means a mixture of water or other fluid, proppant, and additives used to hydraulically induce cracks in a geologic formation.
6. “Hydraulic Fracturing” means injecting fracturing fluids into a target formation at a force exceeding the parting pressure of the rock, inducing fractures through which oil or natural gas can flow to the wellbore.
7. “Marcellus shale” means a Middle Devonian-age black, low density, carbonaceous shale that occurs in the subsurface beneath much of Ohio, West Virginia, Pennsylvania and New York. Small areas of Maryland, Kentucky, Tennessee, and Virginia are also underlain by the Marcellus shale. In Maryland, the Marcellus shale underlies parts of Garrett, Allegany and Washington Counties.

C. Purpose. The Marcellus Shale Safe Drilling Initiative will assist State policymakers and regulators in determining whether and how gas production from the Marcellus shale in Maryland can be accomplished without unacceptable risks of adverse impacts to public health, safety, the environment and natural resources.

D. The Advisory Commission.

1. The Secretaries of the Departments shall designate members of an Advisory Commission that shall include:
  - a. two representatives from local government in the western Maryland region;

- b. an expert on geology or natural gas production from a college or university;
  - c. a representative of a company in the gas industry;
  - d. a representative of an environmental organization;
  - e. a representative of a business in the western Maryland region;
  - f. a private citizen who resides in the western Maryland region, and
  - g. any other governmental agency representatives or other persons the Secretaries of the Departments jointly determine to be necessary.
2. The Secretaries of the Departments shall jointly designate a Chair of the Advisory Commission.
  3. The Departments shall provide staff support to the Advisory Commission.
  4. The Advisory Commission shall meet within 60 days of the effective date of this Executive Order.
  5. The Advisory Committee shall terminate on May 1, 2015.

E. Initial Task.

1. The Departments, in consultation with the Advisory Commission, shall initially investigate the desirability of enacting State legislation to establish:
  - a. one or more sources of revenue, such as a State-level severance tax or other assessment, to fund State activities relating to hydraulic fracturing, including impact assessments, research, broad-area monitoring, remediation where no liable entity can be identified, and other State purposes; and
  - b. standards of liability for damages caused by gas exploration and production.
2. On or before December 31, 2011, the Departments, in consultation with the Advisory Commission, shall report their findings and recommendations on this initial task to the Governor, the Speaker of the House, and the President of the Senate in accordance with Section 2-1246 of the State Government Article.

F. The Study.

1. The Departments, in consultation with the Advisory Commission, shall undertake a study of the extraction of natural gas from shale formations in the State, including the Marcellus shale formation (the Study).
2. In planning and conducting the Study, the Departments shall consult with the Advisory Commission and, as appropriate, other State agencies, other states in the region, and federal agencies.

3. The Study shall include a review of the results, to the extent they are available, of the EPA Study, environmental impact statements of the state of New York, the Delaware River Basin Commission, and other studies of potential impacts to the public health, safety, the environment, or natural resources.
4. The Study shall address the short-term, long-term and cumulative effects of natural gas exploration and production in the Marcellus shale, best practices, and appropriate changes, if any, to the laws or regulations concerning oil and gas; including the following:
  - a. the risk of contamination of groundwater and surface water by fracturing fluids and gas.
  - b. the risks of contamination of, or negative impacts to, water and other natural resources from the transportation, storage, and handling of liquids, including fracturing fluids;
  - c. the risks of contamination or negative impacts to water and other natural resources from the handling and disposal of flow back and other wastewater and wastes;
  - d. the water resources required to support hydraulic fracturing activities and the availability of water resources to meet that need;
  - e. forest and habitat fragmentation and other environmental impacts due to the construction of drilling platforms, gathering lines, transmission pipelines, and other necessary infrastructure;
  - f. well spacing;
  - g. greenhouse gas emissions from exploration wells, production wells and transmission lines;
  - h. the risks of traffic accidents and damage to roads and bridges from truck traffic related to drilling operations;
  - i. impacts to local land use patterns and the character of rural areas and towns;
  - j. the capabilities of local emergency response agencies and the need for additional training;
  - k. impacts to state resource and recreation lands;
  - l. the projected positive and negative economic impact of hydraulic fracturing activities to the region and the State;
  - m. methods for disposal of flow back and other wastewater and wastes containing radioactive materials;

- n. the appropriate type and amount of insurance and bonding;
  - o. the appropriate scope of the environmental assessment required before permit issuance;
  - p. best practices for all aspects of gas exploration and production in the Marcellus shale in Maryland;
  - q. appropriate changes, if any, to the laws or regulations concerning oil and gas; and
  - r. any other issues jointly agreed upon by the Secretaries of the Departments.
5. The Departments, in consultation with the Advisory Commission, shall prepare draft reports, solicit public comment, and issue final reports on the Study as follows:
- a. No later than August 1, 2012, the Department shall issue a report addressing, at a minimum, best practices for all aspects of gas exploration and production in the Marcellus shale in Maryland.
  - b. No later than August 1, 2014, the Department shall issue a report addressing the remainder of the Study topics.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis this 6th day of June, 2011.

  
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Martin O'Malley  
Governor

ATTEST:



  
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John P. McDonough  
Secretary of State