



Facts About...

Marcellus Shale in Maryland

What is Marcellus Shale?

The Marcellus Shale has long been known as an organic-rich shale in the Appalachians, occurring at the surface and in the subsurface from New York to eastern Tennessee. Marcellus shale produces natural gas. The Marcellus Shale in Maryland is found in Washington, Allegany and Garrett Counties. The locations that have attracted the most interest for gas extraction are in Allegany and Garrett Counties. The Marcellus Shale in Western Maryland is found at depths of 3,500 to 7,000 feet.

What is required to drill a well for gas production in the Marcellus Shale in Maryland?

An applicant who wants to extract gas from the Marcellus shale must apply for a number of State permits to determine whether the proposed drilling meets state requirements. In addition to land disturbances, issues that are associated with drilling include the use of large quantities of fresh water in the hydro-fracturing process, the disposal of wastewater, and the use of large equipment.

What are the applicable statutory and COMAR requirements? Legal guidance may be found in Environment Article, Title 14, Subtitle 1 and COMAR 26.19.01 and .02.

What is the permit process?

An application must be filed for a Drilling and Operating permit. The review will determine whether the proposed project meets the requirements for approval. The permit review process will include:

- Location of the well
 - A well must be sited 1,000 feet from lands that are not leased for gas drilling purposes, schools, churches, and occupied dwellings to prevent drainage from unleased land and to avoid impacts to certain facilities
 - A well must have local approval, including zoning, if needed

- Drilling Process
 - Drilling and casing plan to ensure drilled wells protect water supplies
 - Sediment and stormwater control to protect nearby streams from sediment pollution
 - Containment plan for wastewater and fluids to protect adjacent resources from contamination
 - Safety plan for emergency response in case of accident or injury
 - Source for fresh water supply used in the drilling process to assess impacts on the resources and other users
 - Wastewater disposal plan to identify location where drilling and flowback waste will be disposed



- Post-drilling Procedures
 - Site restoration must include reclamation of disturbed lands, including any pits or ponds
 - Cuttings disposal plan - to determine how rock/soil material removed during the drilling operation will be disposed
 - Production procedures for successful wells to outline requirements for ongoing production operations
 - Product transport plan to include possible pipeline routes and storage areas (There are no mandatory permit requirements for transportation)
- Bond and Insurance
 - Bond up to \$100,000.00 per well or blanket to \$500,000.00 for site reclamation activities if a permittee defaults on a project
 - Insurance at \$5,000,000.00 per occurrence or accident
- Public Notice and Public Comment to obtain information from the Public about the proposed permit application
 - Property owners adjacent to the drilling site are notified about an opportunity to request a hearing individually
 - A newspaper notice provides the public at large an opportunity to request a hearing
- Other permits
 - Water Appropriation permits are required if the source of water for the drilling process is from springs, streams, rivers, ponds, reservoirs or water wells. The review ensures an adequate availability of water supply and that impacts to other users or the resources of the State are avoided or mitigated.
 - Contact: Water Supply Program - (410) 537-3702 (Estimated review time: 6-18 months)
 - Air Quality permits may be required for drill and support equipment. The review assesses impacts to air quality in the immediate area.
 - Contact: Air Quality Permit to Construct - (410) 537-3230 (Estimated review time 3-11 months)
 - National Pollution Discharge Elimination System (NPDES) permits may be required if a discharge is proposed. The review assesses impacts to receiving waters. Approval will also be required for indirect discharges (such as from tanker trucks) to individual wastewater treatment plants for disposal of waste water from drilling operations
 - Contact: Wastewater Permits Program - (410) 537-3599 (Estimated review time: 6-12 months)
 - Wetlands permits may be required. The review assesses impacts to wetlands and requires avoidance and minimization of impacts
 - Contact: Wetlands and Waterways Program (410) 537-3745 (Estimated review time: 10-12 months)
 - Federal permits will be required for transmission of the gas produced. Environmental and safety impacts will be assessed.

Questions concerning this issue may be directed to the Mining Program at (410) 537-3557.

