



**Maryland**  
Department of  
the Environment

# **AELR Hearing on COMAR 26.19.01**

December 20, 2016



# 2015 Legislation

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- “The Department shall adopt regulations to provide for the hydraulic fracturing (HF) of a well for the exploration and production of natural gas in the State.”
- The regulations may not be effective, nor may the Department issue a permit for HF, until October 1, 2017.

(Env. Art. § 14-107.1; Ch. 480 of 2015)



# Purpose of Proposal

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- Fulfill statutory obligation to adopt HF regulations
- Update regulations adopted before techniques like HF and horizontal drilling were widely used in this region
- Ensure any future oil and gas exploration and production occurs in a manner protective of public health, safety, the environment, natural resources, and surrounding communities



# History

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- Three years of meetings of the Marcellus Shale Advisory Commission (2011-2014)
- Three-part study published by the Department and DNR (2011-2014)
- Initial regulatory proposal with public comments (January 2015)
- Three public meetings on a series of issue papers (June 2016)
- Public comments received through July 2016



# Overview of Proposal

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- Striving for reasonable and balanced regulations with protective and achievable requirements
- Would be the most protective and comprehensive shale gas development regulations in the U.S.
- Many provisions of the January 2015 proposal remain unchanged
- Some changes and additions in response to comments



# Protection of Drinking Water and Aquatic Habitat

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- **Well location**
  - 2,000 ft from private drinking water well
  - 1,000 ft from wellhead protection area (public well)
  - 2,000 ft from surface water intake
  - 300 ft from streams and wetlands of special state concern
  - 100 ft from other wetlands
  - Prohibited within watersheds of Broadford Lake, Piney Reservoir, Savage Reservoir, and Deep Creek Lake
- **Baseline data and environmental assessment**
  - 1 year of baseline water monitoring, including private water wells within 2,500 feet



# Protection of Drinking Water and Aquatic Habitat

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- **Drilling and well construction**
  - Protect potential drinking water zones with four concentric layers of steel casing and cement
  - Integrity and pressure testing during and after well construction, with certification of well integrity before conducting any hydraulic fracturing
- **Operation**
  - Lined well pad with secondary containment for tanks to capture any surface spills or leaks
  - Ongoing monitoring of water quality and replacement of contaminated water supplies, with presumption of causation within 2,500 ft of well



## Protection of Air Quality

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- Best available technology (BAT) for control of air emissions
- Leak detection and repair
- Reporting and offset of methane emissions from the well pad
- Baseline and ongoing air monitoring will involve regional and targeted local monitoring, rather than a pad-specific approach



# Public Participation and Access to Information

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- Mandatory comprehensive development plan with opportunity for public comment
- Public participation in the permitting process: public meeting and written comment
- Disclosure of chemical information
  - Trade secret information must be disclosed to the Department and (where necessary) to medical and public health professionals



# Proper Management of Wastes

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- Maximize recycling of flowback and produced water, with a requirement for at least 90% recycling unless demonstrated to not be practicable
- No disposal of flowback or produced water via underground injection or land application
- Wastewater treatment facility must have specific approval in its discharge permit to accept flowback or produced water
- Waste must be tested for radioactivity and disposed in accordance with federal, state, and local law
- Only fresh water may be stored in a surface impoundment



# Regulatory Oversight

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- Department approval of proposed start date for drilling a new well.
- Each operator may drill and fracture only one well at a time
- Detailed requirements for plugging and reclaiming wells (including bonding of at least \$50,000 per well), and identifying and locating historical abandoned wells
- Insurance requirements for personal injury, property damage, and environmental pollution liability
- Department authority to revoke permits or issue administrative orders, including to stop work and conduct corrective actions



## Other Requirements Applicable to Natural Gas Development

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- Sediment control and stormwater management at State and federal levels
- Non-tidal wetlands requirements
- Water appropriation and use
- New federal requirements related to methane emissions and pipeline safety



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Additional information:  
[www.mde.maryland.gov/marcellus](http://www.mde.maryland.gov/marcellus)