



Department of the Environment

Water Use and Appropriation

**Marcellus Shale Safe Drilling Commission
Advisory Commission**

**January 6, 2014
Presented by Jay Sakai, MDE**



STATUTORY AUTHORITY

- ***Subtitle 5* of the Annotated Code of Maryland (§5-204)**
- “In order to conserve, protect, and use the water resources of the State in accordance with the best interests of the people of Maryland, it is the policy of the State to control, so far as feasible, appropriation or use of surface waters and groundwaters of the State.”

REASONABLE USE DOCTRINE

Basis of Maryland water law

- All land owners have the right to make a reasonable use of the water associated with their property
- Their rights are limited by the rights of others and impacts to the resource

REASONABLENESS CRITERIA

Address the Reasonableness of:

- The requested quantity
- The impact to the resource
- The impact on other users

How much water is needed for Hydrofracturing ?

- Water needs are typically 3-5 million gallons of water per well in tight shale formation (SRBC, webpage)
- Wells may need to be hydrofractured several times during their productive life
- Total annual need in Maryland will depend on level of drilling activity.

What are anticipated sources ?

- Municipal supply – hauled to drilling site
- Treated effluent – hauled to drilling site
- Stream withdrawals – piped or hauled to drilling site

How do these sources and quantities relate to water appropriation permit application requirements ?

- No additional permits needed if obtaining from public water system or reuse of wastewater – public water system must have surplus capacity to supply
- Permits for sources less than 3.65 million gallons per year (10,000 gpd) are considered small and do not require public participation
- MDE requests comments from DNR-environmental review for new requests for surface water withdrawal
- Applications must identify withdrawal location
- Applicants must show proof of permission of land owner to access surface supply

Impacts to resource – stream withdrawals – protection measures

- Permits will have flow-by conditions (Maryland method -85th percentile - seasonally determined)
- Permit will refer to USGS reference gauge as best indication when flow levels are below flow-by and withdrawals must cease
- Permits will have a maximum day withdrawal limit
- Intakes will have a screening requirement and may have time of year restrictions
- Permits will have duration relative to the drilling that is proposed to be supported by water source

Impacts to other users - stream withdrawals – how addressed ?

- Flow-by provides protection
- If consumptive loss over 1 mgd and withdrawal from mainstem, then Potomac Consumptive Use regulations apply

What if drilling companies apply to use on-site well water ?

- The applicants will need to demonstrate that all other alternatives have greater adverse environmental impacts
- Given anticipated maximum monthly need aquifer tests will be required to predict impacts on other users and water resources
- The process can be lengthy and contentious, depending on the location.

Public Participation for permits > 10,000 gpd

- Adjoining property owners notified by applicant of their request - local officials notified by applicant
- General public notified through subscription mailing list by Dept.
- When application is complete Dept. notifies adjoining property owners, local officials and publishes notice in newspapers

Public Participation (cont)

- Public can review file
- Public can request informational hearing
- Person with standing can request judicial review within 30 days of permit issuance