



LEAGUE OF WOMEN VOTERS®  
OF PENNSYLVANIA  
226 Forster Street, Harrisburg, PA 17102-3220  
717.234.1576

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April 1, 2009

To: House Republican Policy Committee

From: Olivia Thorne, President

Re: Marcellus Shale Issues

Thank you for inviting the League of Women Voters of Pennsylvania to give testimony to the House Republican Policy Committee.

Clean water is essential not only for life but for economic development. Policies to protect water resources should consider future as well as current needs.

The League believes that environmental protection and pollution control of water should be considered a cost of providing a product or a service. Consumers and ratepayers must expect to pay the true costs. Furthermore, keeping Pennsylvania's abundant supply of water clean now will save exponentially more money in the future.

Today we address some issues of concern related to the impact of Marcellus Shale natural gas extraction on water quality: protection of water resources; wastewater treatment and storage; enforcement of laws and regulations; transparency of information; and the gathering of solid information on which to base sound decisions.

#### PROTECTION OF WATER RESOURCES

The Federal Safe Drinking Water Act does not cover water wells serving fewer than 25 people. Protection of private water supplies from problems arising from gas well drilling should be addressed through legislation that extends the distance between the gas well drilling and the water supply to 2000 feet, extends the drilling company's liability for damaging the water supply from six months to two years, and requires third party, state certified water testing before drilling and two years afterwards. Presently water testing is voluntary; required testing would protect both the company and the property owner.

Any permitting for water withdrawals should guarantee protection of existing and future needs for in-stream and out-of-stream users.

Erosion and sedimentation control protects water resources. DEP requires a permit for land disturbance of five acres or more when a drilling company files a Notification of Intent; that acreage should be reduced. The number of well pads in an area should be considered when permits are granted. The separation distance between a gas well and a body of water or wetland greater than one acre is 100 feet. The separation between well drilling and the water resource should be increased.

Drilling in the Marcellus Shale involves hydraulic fracturing or fracing. The Energy Policy Act of 2005 exempts hydraulic fracturing from the Federal Safe Drinking Water Act regulations, leaving regulation to the states. Subsequent research in Wyoming has found that hydraulic fracing fluids are entering the drinking water systems (Lustgarten, 2009). A problem confounding the research in Wyoming was that Wyoming required no disclosure of chemicals. DEP requires disclosure of chemicals used and on-site posting of Material Safety Data Sheets. However, it does not require disclosure of either proportions or raw amounts. In a fracing operation that uses 4.5 million gallons of water, the amount of chemicals used could vary from 22,500 gallons to 90,000 gallons (Ground Water Protection Council & ALL Consulting, April, 2009). Regulation is needed to require ALL information on of the composition of fracing fluids be publicly available.

State law needs to protect waterways not protected under the Clean Water Act.

## WASTEWATER TREATMENT AND STORAGE

Wastewater treatment and storage must be monitored and the infrastructure to deal with wastewater must be improved. Wastewater treatment facilities operators need to know the chemicals, their proportions, and the heavy metals present in the flow back and production water. The plastic pond liners impounding drilling sludge and flow back should be sent to chemical disposal companies instead of being buried on site. Legislators should support development of a comprehensive cradle to grave monitoring system to identify contaminants and insure their proper treatment, and to track water used and discharged.

Water brought to the site for fracing and wastewater are hauled in trucks over roads not designed for repeated heavy loads, so road maintenance is a concern. Municipalities must have the authority to require adequate road bonds. Pennsylvania has too few wastewater treatment facilities to handle the wastewater that will be coming from the increasing number of gas wells. Deep well injection has been used in Texas, but Pennsylvania's geology makes injecting fracing fluid wastewater in old wells risky. The fracture traces or subsurface breaks in the bedrock become "raceways" for contaminated water to enter aquifers and above ground water supplies (Robinson, January 21, 2010). How will the solid matter removed from the water be managed?

## ENFORCEMENT OF LAWS AND REGULATIONS

Pennsylvania has good environmental protection laws and regulations, but they do not protect the environment and citizens if they aren't enforced. Legislation must support DEP with adequate funding and properly trained personnel. Expedited reviews should not be forced on Department staff when they compromise protection of public health and the environment.

Enforcement means having enough field inspectors to visit all well sites in a timely manner. Relying on citizens to report violations is good, but DEP needs enough inspectors to investigate quickly.

## COLLECTING TRANSPARENT AND ACCESSIBLE INFORMATION

Data must be collected and publicly available on the effects of single wells and groups of wells. Real-time monitoring, such as that begun by the Susquehanna River Basin Commission, needs to be done before drilling begins in state forest lands. We need to know more about fracing fluid injection and more about deep well injection in Pennsylvania. We need more wastewater treatment plants. Use of frac water needs to be studied. What happens to the frac water that does not return to the surface with the natural gas?

In conclusion, I would like to read Article I, Sections 27 of the Pennsylvania State Constitution: “The people have a right to clean air, pure water, and the preservation of the natural scenic, historic, and esthetic values of the environment. Pennsylvania’s natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”

#### REFERENCES

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