

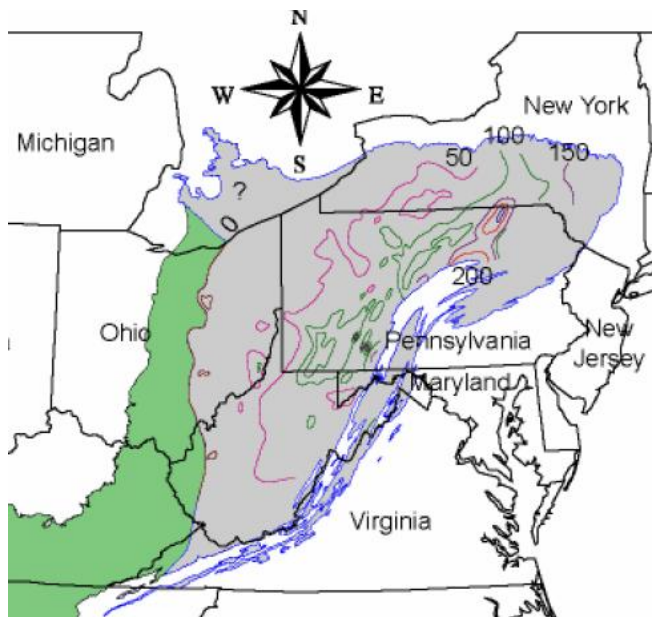
Gas Well Drilling and Your Water Supply

As the natural gas industry responds to increased energy market demands, Pennsylvania has become a hot-bed for gas exploration and development.

Gas well drilling has occurred for decades in much of western and northern Pennsylvania with about 40,000 active gas wells in the state and approximately 4,000 new wells drilled each year. Most of these wells tap gas reserves a few thousand feet below the earth's surface.

The hottest natural gas play in North America today is the Marcellus Shale. Geologists and energy companies have known for decades about the gas in the Marcellus Shale, but only recently have figured out a possible — though expensive — way to extract it from the thick black rock about 6,000 feet underground. The shale holding the best prospects covers an area of 54,000 square miles, from upstate New York, across Pennsylvania into eastern Ohio and across most of West Virginia — a total area bigger than the state of Pennsylvania. With discoveries of new gas reserves in the Marcellus shale and new drilling technologies to reach previously untapped gas reserves, both the number and depth of gas wells are expected to rise dramatically over the next decade.

Marcellus Shale Distribution



Gas well drilling can occasionally impact groundwater resources that are the source for wells and springs. A single gas well can produce hundreds of thousands of gallons of waste fluids during drilling and during years of gas production which could result in unintended and possibly harmful consequences.

Generally, the regulatory controls on gas well drilling activities are thin, particularly because the Federal Energy Policy Act (2005) exempts the industry from certain environmental protection laws, including some provisions of the Clean Water Act, the Clean Air Act, and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Two recent court decisions may change things: a legal challenge by the Natural Resources Defense Council resulted in a federal court ruling that struck down the Environmental Protection Agency (EPA) exemption of the gas and oil industry; and the Pennsylvania Supreme Court has agreed to review lower court rulings related to two Pennsylvania townships' attempts to restrict gas drilling.

Groundwater Protection

For each ground water well that supplies public drinking water, the state must delineate the land area that could contribute water and pollutants to the underground water supply. This approach results in a map that shows land areas where, if pollutants were spilled on or drilled through the surface, they could filter through to the ground water and be drawn into a particular well.

Gas well operators are required to present the following information to the Department of Environmental Protection before well drilling permits may be issued in Pennsylvania:

- Well type, either vertical or lateral with maps showing location of wells, laterals and property lines;
- Size and type of earth disturbances and locations of roads and pipelines;
- Preparedness, prevention and contingency plans;
- Anticipated water withdrawals, locations of withdrawal points, water management plans to protect surface and groundwater, and appropriate permits from the Susquehanna or Delaware River Basin Commissions if required.

Groundwater sampling / testing can be performed prior to drilling activities, establishing a baseline of water quality characteristics which may be used to determine whether groundwater resources have been impacted by drilling activity.

As a precautionary measure, RS&W receives immediate notification of any gas well drilling permits applied for through the Pennsylvania Department of Environmental Protection for Wayne and Pike Counties in order to take appropriate action.

For more information please visit:

http://www.dep.state.pa.us/dep/deputate/minres/OIL_GAS/oilgas.htm