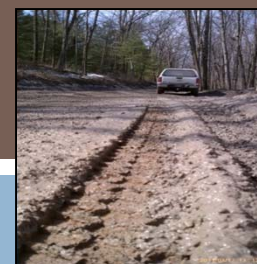


LOCAL IMPACT OF NATURAL GAS DRILLING

ELAM M. HERR
ASSISTANT EXECUTIVE DIRECTOR
PSATS



June 6, 2011

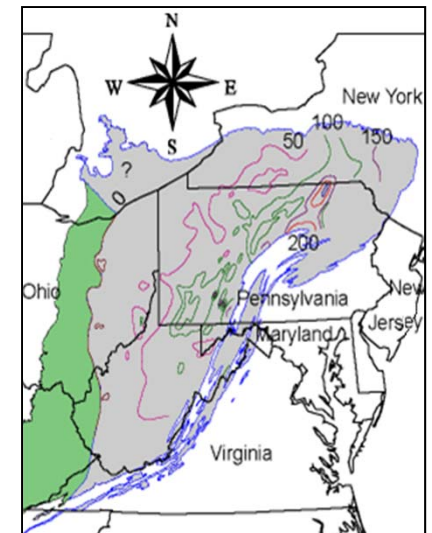


Local Government Impacts

Local Government Impacts

General Government

- In areas with heavy natural gas extraction activity, municipalities have reported a sharp increase in labor costs, particularly for skilled employees.
- Municipalities have had to increase hours or hire additional employees to keep up with the pace of development through road inspections and rebuilding and zoning and building code administration and enforcement.



Local Government Impacts

General Government

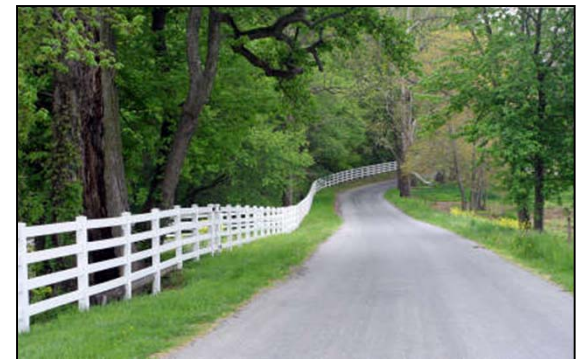


- Many municipalities do not receive prior notice before a company begins construction on a new well site.
 - ▣ Often the first notice has been the sudden arrival of heavy truck traffic.
- Municipalities receive little, if any, increased tax revenues due to this activity.
 - ▣ Natural gas not subject to property tax.
 - ▣ Royalties not subject to local earned income tax.

Local Government Impacts

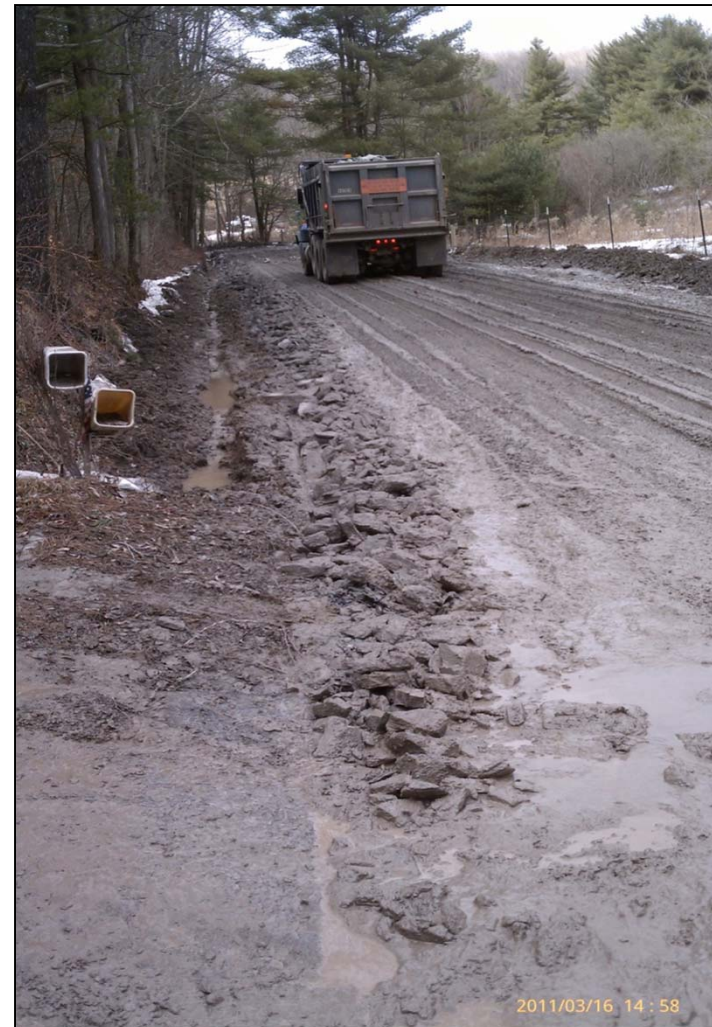
Transportation and Infrastructure

- There are approximately 122,000 miles of highways, roads, and bridges in Pennsylvania
 - ▣ More than all of the New England states and the state of New York *combined*
- PennDOT and other state agencies own 44,000 miles of roads
- Municipalities own 78,000 miles of roads
- Almost three-quarters of all roadways in Pennsylvania are considered rural.



Local Government Impacts Transportation and Infrastructure

Most drilling takes place in mountainous, rural areas, accessible only by low-volume roads, many of which are dirt and gravel.



Local Government Impacts Transportation and Infrastructure



These roads were not constructed to handle significant amounts of heavy truck traffic.

Local Government Impacts

Transportation and Infrastructure

- These roads must also endure extreme seasonal fluctuations over the course of the year.
- The constant freezing, unfreezing, and re-freezing during the frost/thaw cycle can see a road deteriorate from good condition to impassible within hours if it is being travelled by heavy truck traffic.
- When roads are damaged, total reconstruction is frequently required.



Local Government Impacts

Transportation and Infrastructure

- In many cases, gas companies are working well with municipalities to promptly rebuild these damaged or completely destroyed roads.

However...

- There are concerns that non-state certified materials are being used and it unknown how these materials will respond to wear.
- The speed at which the work is performed has not allowed for adequate stormwater planning.



Local Government Impacts Transportation and Infrastructure

- Municipalities may use posting and bonding to ensure that the entity damaging the roads pays for the damage.

However...

- The maximum bond is limited to \$12,500 for a paved road and \$6,000 for an unpaved road.
- The cost of reconstruction can approach several hundred thousand dollars.



Local Government Impacts

Pipeline Safety

- Owners of gathering lines and compressor stations should be required to communicate the location of their pipelines with local officials.
 - ▣ Not currently required to join Pennsylvania One Call as facility owners.
- While federal regulations exist for gathering lines, there is no state or federal enforcement mechanism to minimize danger from leaks and ensure that these regulations are followed.



Local Government Impacts

Water and Sewer



- ❑ Modern drilling techniques use large quantities of water that is treated with industrial chemicals.
- ❑ Residents in most rural areas depend on wells and groundwater as their primary source of drinking water.
- ❑ Rural communities are concerned that chemicals used in the fracking process may contaminate local water supplies.

Local Government Impacts

Water and Sewer



- ❑ Public water providers have concerns over the potential for negative impacts on both water quality, water quantity, or both.
- ❑ Careful monitoring is necessary to ensure that public water supplies are not negatively impacted by site preparation, road construction, drilling, or related activities.

Local Government Impacts

Water and Sewer

- Loss of access to potable water is a concern for both private wells and drinking water providers.
- The development occurring as part of the current play is likely to lead to water supply issues.
 - ▣ The cost to build and operate the necessary water supply and treatment infrastructure is extremely expensive in sparsely-populated areas.
- The loss of a potable water supply could have a negative influence on an area's economic development potential.



Local Government Impacts

Water and Sewer

- Due to its high salinity, wastewater from drilling activity is highly toxic to aquatic life and very difficult to treat.
- Current wastewater treatment capacity for this waste product is limited and without treatment, water supplies may become limited.
- However, many natural gas companies are now recycling fracing water to reduce the amount of water withdrawals and wastewater treatment needed.

Local Government Impacts

Water and Sewer



- Early on, some sewage treatment plants accepted raw frac water for treatment.
- Problems ensued and DEP no longer recognizes the treatment of raw frac water by sewage treatment plants as a viable option.
 - ▣ Currently, only pre-treated frac water may be discharged to sewage treatment plants for final processing and only a handful are engaged in this activity.

Local Government Impacts

Water and Sewer

- There is the potential for residual impacts to sewer plants from drilling activity.
- EPA's Chesapeake Bay TMDL has set limits on nutrient and sediment flowing into the Bay from Pennsylvania and identified point and non-point sources were given reduction goals by DEP.
 - ▣ However, natural gas activities, including forest-clearing and site preparation were not originally included in Pennsylvania's Bay projections.
- There is some concern that these newly created sources may be offset by required reductions from sewage treatment plants or non-point sources.

Local Government Impacts Stormwater Management



- Permit holders must remain responsible for financing long-term operations and maintenance of any required erosion and sediment control, or stormwater management operations related to drilling activity.

Local Government Impacts

Emergency Management

- Municipalities have a legal responsibility for emergency management, which includes planning for and responding to all types of emergencies.
- Drilling activity leads to the potential for many types of incidents for which response may be necessary.
 - Fires
 - Well blowouts
 - Chemical and fuel spills
 - Traffic accidents
 - Injured or trapped well site workers

Local Government Impacts Emergency Management

- ❑ Various accidents have occurred across the Commonwealth since the beginning of the current play.
- ❑ Until specialists can be called in to deal with the situation, volunteer fire departments and other local first responders must secure the site and take appropriate action.
- ❑ This requires additional emergency management planning at the municipal level.



Local Government Impacts Emergency Management

- Many drilling sites are located deep in wooded areas and can be difficult to locate and access by emergency personnel.



Local Government Impacts Emergency Management

- ▣ Equipping and training volunteer fire companies and emergency services personnel to manage emergency situations is time intensive and expensive.
- ▣ Some communities have experienced difficulties in obtaining copies of emergency operations plans for well sites.



Local Government Impacts Growth and Planning

- The explosive growth in natural gas activity in Pennsylvania was not an activity that communities could have reasonably anticipated.
- Even those with those municipalities with the best, most up-to-date comprehensive plans were not prepared for the rapid growth and development in their communities.
- Municipalities must balance the rights of the natural gas industry access their property, while reasonably mitigating its impact the community through land controls.



Local Government Impacts

Growth and Planning

- The Oil and Gas Act regulates the development of oil and gas drilling in Pennsylvania, and imposes duties on DEP, landowners, and drillers.
- The Municipalities Planning Code requires land use controls to be consistent with and not exceed the provisions of the Oil and Gas Act.
- The Pennsylvania Supreme Court has upheld this authority.
- To assist municipalities, the local government associations developed a model zoning ordinance with commonsense regulations to allow the continuation of exploration while maintaining reasonable local controls.
 - The model has been promoted and used.



Local Government Impacts Growth and Planning



- Municipalities must retain the authority to enact reasonable regulations as they pertain to natural gas development and be allotted the opportunity to plan for the impact of such activity on their communities.



Recommendations

Recommendations:

General Government



- Enact an impact fee provided that the majority of the revenues are retained in the affected communities to offset costs and avoid the need for property tax increases.
- Require employers submitting to a single earned income tax collector to notify their employees' home tax collection agency where the employer will be submitting earned income tax collection revenues.

Recommendations:

General Government



- Require natural gas companies to provide the host municipality, as well as those communities along the primary traffic route, with a 30-day advance notice prior to construction at the well site.
- Share a portion of the Commonwealth's proceeds from the leasing of state forestlands with the affected communities by amending the Forest Reserves Municipal Financial Relief Law to increase the annual payment per acre.

Recommendations:

Transportation and Infrastructure

- An impact fee on natural gas extraction should be levied to provide funding to mediate the impacts of gas drilling on local roads.
- The maximum bonding amounts should be increased to reflect today's actual costs for road repairs and reconstruction.
- Amend regulations or statute to specifically authorize excess maintenance agreements as effective tools to administer and enforce weight limits.



Recommendations:

Pipeline Safety



- Owners of gathering lines and compressor stations should be required to communicate the location of their pipelines with local officials.
 - ▣ Owners of gathering lines should be required to register with Pennsylvania One Call as a facility owner.
- The PUC should be given oversight of gathering lines to ensure that these lines comply with federal regulations.

Recommendations:

Water and Sewer



- Continued oversight, permitting, and inspection from DEP and the Susquehanna and Delaware Basin Commissions will be critical to protecting Pennsylvania's water resources.
- An impact fee on natural gas extraction could assist communities impacted by lack of available water due to contamination or reduced supply.
- Amend Oil and Gas Act to increase natural gas well minimum setback from water wells and buildings to 500 feet from current 200 feet.

Recommendations:

Stormwater Management



- DEP should revise its regulations to reflect the following:
 - ▣ Establish a post-construction stormwater management fund for oil and gas operations;
 - ▣ Require the final permit holder be responsible for long-term operation and maintenance of any required erosion and sediment or stormwater management plan.

Recommendations:

Emergency Management



- Require well operators to provide addressing and GPS coordinates to access roads and well pad sites.
- Implement an impact fee to offset costs for equipping and training volunteer fire companies and emergency services personnel.
- Require emergency operations plans for well sites to be shared with emergency management planners and responders.

Recommendations:

Growth and Planning



- Changes should be made to the Oil and Gas Law to strengthen local government regulation of zoning and floodplain management as authorized by the Pennsylvania Supreme Court.
 - ▣ Transferring the approval of soil and erosion permits from the conservation districts to a single statewide entity has not worked.
- State funding for DCED's Land Use and Technical Assistance Program should be restored to 2008-09 funding levels.