MARCELLUS SHALE UPDATE - 2016

A public service of the **Churchill Area Environmental Council (CAEC)**
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Since 2011 when the CAEC released the **"Marcellus Shale Primer"** advisory to its member municipalities (Chalfant, Churchill, Forest Hills, and Wilkins), the issue of Marcellus shale natural gas development in our area has "drilled" into the public interest. In this update, local events related to this topic over the past five years are reviewed.

In 2014-15 companies like EQT Corp. began evaluating the potential for natural gas drilling and hydraulic fracturing (fracking) in the Marcellus and even deeper Utica shale deposits of eastern Allegheny County, especially in sections of Wilkins Township and Churchill Borough. In April, 2015 some strategically located residents in both municipalities received letters from EQT offering natural gas lease agreements for their property mineral rights. Most area homeowners do not own the mineral rights underneath their lots. A surge of "not in my back yard" sentiment in our communities resulted in meetings and public hearings attended by overflow crowds in September, October, and November, 2015. Wilkins solicitor John Rushford said, "We are going to be as cautious as we can," but noted that, "Landowners also have rights."

There was general agreement from those public meetings that:

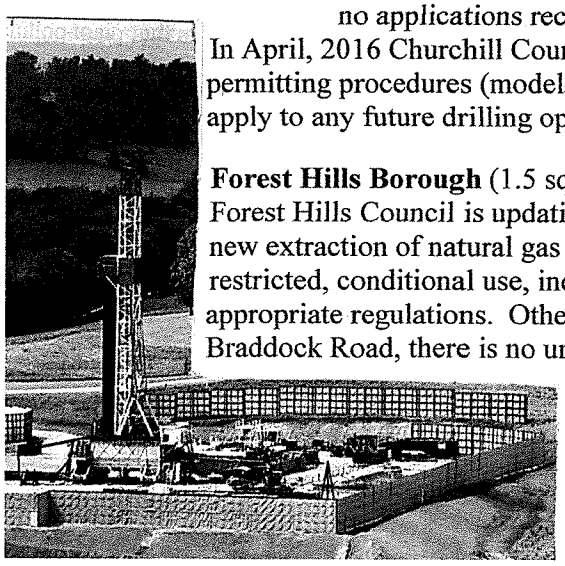
- Local zoning ordinances pertinent to oil and gas drilling had to be updated.
- Greater attention had to be given to regulation of pollution (air, land, water, noise), truck and traffic impacts, buffer zones, etc.
- Impacts on property values had to be considered.

The results of a survey of CAEC member municipalities conducted in the spring of 2016 are summarized below. Keep in mind that local municipalities must operate under state "preemption" rules that **prohibit outright banning** of activities like fracking, but **allow for appropriate regulation** of such activities. All ordinance changes must survive higher governmental approval and possible legal challenges.

Chalfant Borough (0.2 sq. miles; ~400 homes; ~825 residents)
Oil and gas drilling are not practical. There is no 5-acre parcel of undeveloped land - the minimum size required to support a drilling pad/rig(s). The borough is steeply hilly as it descends from Greensburg Pike to Ardmore Boulevard. No property within Chalfant Borough is suitable for fracking and no updating of ordinances is contemplated.

Churchill Borough (2.2 sq. miles; ~1,567 homes/condos; ~3,011 residents)
In December, 2015 Borough Council passed an Ordinance amending Section 304-37 "Gas and Oil Well Production" of its Zoning Code to:

Prohibit such activity in all five of its residential (R) districts and its C-2 district.
Permit such activity as a conditional use in a C-1 Commercial District (the former Westinghouse Research and Development property). As of this update, there have been no applications received by the Borough for permits to drill.



In April, 2016 Churchill Council passed a comprehensive Ordinance containing regulations and permitting procedures (modeled after Wilkins Township Ordinance #1060 - see below) that would apply to any future drilling operations.

Forest Hills Borough (1.5 square miles; ~3,040 households; ~6,477 residents)
Forest Hills Council is updating its Gas Ordinance #1017 adopted in October, 2011 which banned new extraction of natural gas within the Borough. The revised ordinance provides for a tightly restricted, conditional use, industrial area of about 5 acres for such possible use and specifies appropriate regulations. Other than two popular playgrounds and recreation facilities off Braddock Road, there is no undeveloped land of sufficient size for fracking within Forest Hills.

Wilkins Township (2.75 square miles; ~3,432 households; ~6,590 residents)
At its January, 2016 meeting the Wilkins Board of Commissioners unanimously approved Ordinance # 1060, Chapter 173, "Zoning Article II" relating to "Gas and Oil Well Drilling." The new Ordinance deals with definitions and regulations (e.g., 1,500' setbacks from protected structures like homes and schools, use of a closed loop drilling system [no storage pits], traffic surveys, fencing, natural/green screening, containment of air and noise pollution, and more). Drilling is restricted (as a conditional use) to a Manufacturing (M) Zoning District along the eastern portion of the Township (near Monroeville), with a second portion near Rodi Road. This comprehensive document is being used as a model for other municipalities in our area.

To summarize the status of fracking in our four municipalities:

- Little or no land exists that is suitable and large enough for natural gas production through drilling and hydraulic fracturing (fracking). Such activities are or will be restricted to very limited zones so as to have "minimal" impact on residential areas.

- Local municipalities are revising or have revised zoning and drilling ordinances to contain specific regulations that will have to be approved at the County level and survive potential legal challenges.

Over the past few years, new parallel trends have emerged that are changing the fossil fuel component of our energy economy, including natural gas.

- From 2014 to 2016 the price of oil collapsed from over $100/barrel to lows of $30 to $40/barrel, bringing bargain prices to gasoline, plastics, and other petroleum-based products. Current availability of cheap oil has **depressed the demand for natural gas** so much that many producers cannot cover the expense of production. Natural gas companies are, at least temporarily, laying off workers, capping wells, and postponing new drilling and fracking operations in the Marcellus and Utica shales. Some are filing for bankruptcy protection.

- Increased earthquake activity (magnitude ~2 to 3 - lower than humans can feel) has been detected in formerly low quake-prone areas of Oklahoma, Kansas, New Mexico, Arkansas, Ohio, and Pennsylvania (e.g., Lycoming County, near New Castle). These small quakes may be linked to drilling into deep Utica shale deposits and/or injection of fracking wastewater into the ground, increasing pressure on existing subterranean faults. This may cause fault slippage and produce tremors/forces that seismologists say "can take years to sort themselves out" (*New York Times* 3/29/16). An expanded network of 42 seismic monitoring stations (sponsored and operated by the DCNR, DEP, and Penn State) is expected to provide "open data" on a website starting in summer, 2016 (*Pittsburgh Post*-Gazette 4/29/16).

- Higher mileage, all-electric, and hybrid vehicles plus renewable energy sources (solar, wind, small hydroelectric) are challenging traditional, non-renewable fossil fuels (coal, oil, natural gas). There have been recent calls to leave remaining supplies "in the ground." Impractical as renewable technologies may be for meeting the high energy demands of the near future, progress toward their broader use has been steady. However, issues like start-up costs, reliance on government subsidies, battery storage limitations, and a lack of infrastructure for long distance transmission make green alternatives not yet ready as significant, reliable, and price competitive energy sources on a large scale.

- For our local communities, there will be updated, protective ordinances and a respite from the perceived threat of imminent fracking. In densely settled residential communities, drilling and hydraulic fracturing (fracking) appear to be impractical, highly unpopular, and, for perhaps the next decade, unprofitable.