



**Central New York Regional Planning & Development Board**  
126 N. Salina St., 100 Clinton Sq., Suite 200, Syracuse, N.Y. 13202 • Tel. (315) 422-8276 • Fax 422-9051  
Paul Vickery, Chairman David V. Bottar, Executive Director

## **AGENDA**

**Board Meeting**  
**April 21, 2010**  
**12:00 Noon – 1:30 p.m.**

**Central New York Regional Planning and Development Board**  
126 N. Salina Street - 100 Clinton Square Building  
Lower Level Conference Room  
Syracuse, New York

*Chairwoman Kathleen Rapp, Presiding*

- |    |  |                |
|----|--|----------------|
| 1. | Call to Order  | Kathleen Rapp  |
| 2. | Approval of Day's Agenda<br>and Minutes from the<br>February 17, 2010 Meeting                                      | Kathleen Rapp  |
| 3. | Marcellus Shale – Natural Gas Resources in CNY<br>-William Kappell, Hydrogeologist,<br>USGS, New York Water Center | William Kappel |
| 4. | Executive Director's Report  | David Bottar   |
| 5. | Old / New Business<br>-Board Meeting – June 16, 2010   | Kathleen Rapp  |
| 6. | Adjournment  | Kathleen Rapp  |



**Central New York Regional Planning & Development Board**  
126 N. Salina St., 100 Clinton Sq., Suite 200, Syracuse, N.Y. 13202 • Tel. (315) 422-8276 • Fax 422-9051  
Paul Vickery, Chairman David V. Bottar, Executive Director

## MINUTES

### **Central New York Regional Planning and Development Board Board of Directors Meeting April 21, 2010**

#### **ATTENDANCE**

**Board Members:** David Elleman, Kathleen Rapp, Roger Mills, Ann Petrus, Stephen Zabriskie, Larry Baker, Clarence Rycraft, James Rafte, Paul Vickery, Shawn Doyle, James Murphy, Danny Ross, Don Spaulding, Morris Sorbello, Mary Ann Messinger, L. Michael Treadwell, William Southern and Walter Tennant.

**Guests:** William Kappel - USGS, William Meyer-Onondaga County Legislature, Robert Trachtenberg-CNY Technology Development Organization, Kipp Hicks-Madison County IDA, Michael Riley-Cortland County Soil and Water Conservation District, Don Jordan-Syracuse Onondaga County Planning Agency Timothy Jones-USDA Rural Development, John Ferguson-Office of Assemblyman William Magnarelli.

**Staff:** David Bottar, Michael Rosanio, Bruce Keplinger, David Kubek, Kathleen Bertuch, Anne Saltman, Christopher Carrick, Samuel Gordon, Karen Novak, Jeanie Gleisner, Brian Pincelli and Theresa Stephen.

#### **BUSINESS MEETING**

##### 1. **CALL TO ORDER**

Chairwoman Kathleen Rapp called the meeting to order at 12:15 p.m. at the office of the CNY Regional Planning & Development Board and stated that a quorum was present.

## 2. APPROVAL OF MEETING AGENDA/ANNUAL MEETING MINUTES

The first order of business was a review of the day's agenda and minutes from the February 17, 2010 meeting. A motion was introduced and seconded to accept the agenda and minutes as presented; the motion was approved unanimously.

Ms. Rapp introduced two guests, Roger Mills, chair of the Cayuga County Legislative Planning Committee and a new member of the CNY RPDB, and Bill Meyer, a member of the Onondaga County Legislature.

## 3. PRESENTATIONS:

The next item discussed on the agenda was the feature presentation regarding the Marcellus Shale and natural gas resources in Central New York. Mr. William Kappel, hydrogeologist with the United States Geological Survey, was introduced and asked to provide his presentation. During the course of his introduction it was noted that Mr. Kappel has worked for over thirty years as a hydrogeologist and has been asked to speak extensively on this topic throughout Upstate New York over the past year.

Mr. Kappel initiated his remarks by directing attention to his power point presentation and also passed around a core of Marcellus Shale as a visual sample. Mr. Kappel explained that it is called Marcellus Shale because it outcrops in Marcellus and this geographic formation extends from southern New York across Pennsylvania and into western Maryland, West Virginia and eastern Ohio. Mr. Kappel noted that at various points the shale formation run very deep in the earth's crust. He also noted that trapped in this shale is a very clean form of methane gas which is highly desirable as a gas resource because it requires little processing once it has been extracted from the earth.

Mr. Kappel noted there is an existing commercially owned natural gas pipeline called the Millenium pipeline which moves gas from Texas to New York. He noted drilling is currently being done in the southern tier to characterize the shale and they are capturing this gas near the Millenium pipeline. Mr. Kappel noted the Marcellus shale is 300 feet thick in eastern New York and 25 feet thick in western New York. It is found 1,000 feet deep in the center of the State and up to 6,000 feet deep in the southern part of the State. The southeast area of the State is of particular interest to gas companies.

Mr. Kappel said that a lot of drilling is being done in northwest Pennsylvania and that gas mining is not new to New York State. He noted the first gas well was drilled in 1821 in Fredonia and that in 2007 there were reported to be 6,683 producing natural gas wells in New York.

Mr. Kappel explained that the natural gas contained in the deeper Marcellus formation occurs in horizontal fractures within the shale and that due to increasing natural gas prices and the development of directional drilling technologies, there are increased economic benefits to mining the Marcellus Shale.

Mr. Kappel referenced several slides in his presentation which illustrated the directional drilling technology used to initially drill a vertical well into the Marcellus Shale and then redirect the drill horizontally through the shale layer which creates an opportunity for intersecting a greater number of naturally occurring fissures. Mr. Kappel noted the gas drilling technique involves a well casing and

cementing program where multiple steel casings and high-strength cement are used to isolate the well from aquifers and groundwater.

Mr. Kappel went on to explain that hydraulic fracturing is done by sealing off a portion of the well and injecting a water based chemical gel mixture under very high pressure which fractures or creates cracks in the shale. To prevent the fractures from closing when the pressure is reduced, sand or other "propanant" is pumped down the well and into the fractured portion of the shale. Mr. Kappel noted that once that fracturing is completed the injected water is withdrawn from the well and methane gas travels naturally along fissures in the shale and collected at the well head.

Mr. Kappel depicted a traditional well site and compared this to the site for a hydro fracturing operation. The differences he noted were in the size of the site, the size of the water ponds, the number of trucks, the road conditions and truck traffic. Mr. Kappel provided photographs of a hydro fracturing site in West Virginia. This operation created a pond for drilling and hydrofracking. Mr. Kappel noted a typical site involves a 24 hour drilling operation, where the first drill is a traditional vertical drill, the second drill is done by a very big rig for horizontal drilling and then a third company provides compressor and frac tanks to draw the fluids back out of the well. Mr. Kappel described this drilling operation as lasting 2-3 months.

Mr. Kappel noted the source water for most hydro fracturing operations in NYS will most likely be from municipal water or surface water and that because the Marcellus Shale formation is so deep in places that millions of gallons of water are required to fracture a well. Mr. Kappel also indicated that a well drilled in the Marcellus shale may have to be fracked several times over the course of its life to keep the gas flowing and that each fracking operation may require more water than the previous one.

Mr. Kappel continued his remarks by noting that water used in the fracturing process must be recovered and properly treated because of the presence of chemical and natural contaminants. Mr. Kappel noted the recovered fluids include water, sand, chloride, heavy metals, organics, naturally occurring radioactive materials (NORM) and proprietary industrial chemicals. Mr. Kappel noted that Pennsylvania requires the fluid to be processed through waste water treatment plants, but some salts and brines are not removed successfully by treatment facilities and reports of high salinity in some rivers have been linked to the Marcellus Shale brines.

Mr. Kappel also commented on trends in the gas industry to try and use a deep well injection technique to dispose of spent fluids in abandoned wells but there are only four approved sites in the northeast and these sites do not have enough capacity to service the industry. Mr. Kappel noted the gas industry is also looking at the feasibility of recycling spent fluids for use in new drilling operations and establishing on-site treatment facilities.

Mr. Kappel outlined the local law resource concern as:

- Protection of surface water and groundwater during entire process.
- Drill pad construction, storm runoff, chemical storage and handling.
- Drilling & hydro-fracturing process- cuttings and fluid handling
- Transportation of water and waste fluids to and away from site.
- Flowback disposal- variable mineral and water-quality characteristics.
- Site remediation when done.

Mr. Kappel emphasized that water-quality data needs to be collected prior, during, and after drilling to determine the impact on the resources of NYS. Mr. Kappel outlined the regional resource concern as understanding the regional characteristics of the bedrock formations and providing information to all to help assess and monitor natural resources.

Mr. Kappel outlined other concerns regarding the large drilling operations. He said pipelines will be expanded and pipelines will be large, now nearing 2 foot diameter pipelines. Mr. Kappel noted the land disturbance to accommodate these pipelines will increase and gas development will significantly increase truck traffic and road use, with heavy equipment over rural roads resulting in damage to roads.

Mr. Kappel said “New York’s Oil, Gas and Solution Mining Law specifically supersedes all local laws or ordinances relating to the regulation of the oil, gas, solution mining and brine disposal industries but reserves to local governments jurisdiction over local roads and the rights of local governments under the Real Property tax law.” Mr. Kappel noted that local governments can exercise some control of the gas industry by do the following:

- Exercise jurisdiction of local roads by documenting the capacity of roads, bridges, including weight and traffic limitations.
- Regulate the location of wells by identifying environmentally sensitive areas
- Regulate the disposal of spent fluids and use of wastewater treatment plants
- Coordinate the assessment and revenue collection of various taxing districts
- Establish a intermunicipal data base to monitor and tract complaints filed with the County Health Department and other regulatory agencies.

At the conclusion of his formal remarks, Mr. Kappel answered numerous questions from members and guests.

Regarding questions about landowner leases to allow drilling operations onto private property, Mr. Kappel said once the lease is signed the owner has little control over the operation. Mr. Kappel noted that generally a gas company must own 60% of mineral rights within the assigned drilling unit in order to drill.

Regarding current regulations: Mr. Kappel pointed out the NYS DEC can only enforce the laws that are currently on the books and that the NYS Legislature must adopt new regulations if stricter enforcement is needed. Mr. Kappel noted the fee for a NYS DEC Drilling Permit is based on vertical depth of a well and does not include any provision for collecting additional fees based of the length of the horizontal leg of a well. Mr. Kappel suggested this is a major oversight which should be corrected so more revenue could be used by the State to hire additional inspectors.

Regarding the status of the Supplemental Generic Environmental Impact Statement regarding hydro fracturing that is currently being reviewed by the NYS DEC, Mr. Kappel noted the current draft is fairly narrow in its scope and needs to be expanded to account for other issues related to this drilling technique including impacts on water supply, water treatment, disposal issues, and

general community impacts. Mr. Kappel noted that over 14,000 comments have been submitted to the NYS DEC regarding the SGEIS.

When asked about the track record of accidents and contamination, Mr. Kappel said there are problems with 1 in 100 operations in Pennsylvania where there have been reports of contamination of landowner wells, fish kills, and industrial contamination at the operation site. In regards to the hiring of local labor, Mr. Kappel responded that initially local labor was used but more frequently Texas and Louisiana residents are hired. Mr. Kappel noted that one technique Tompkins County is trying to control the location of drilling operations is to designate “Critical Environmental Areas” to discourage drilling in certain parts of their community.

At the conclusion of the question period, Ms. Rapp thanked Mr. Kappel for his very informative presentation.

**5. OLD/NEW BUSINESS**

David Bottar announced the next Executive Meeting as May 19<sup>th</sup> and the next Board Meeting as June 16<sup>th</sup> with a possibility that it may change. He said the EPA will be coming to Syracuse to make an announcement regarding the Climate Change Showcase Grant and the CNY RPDB is trying to accommodate their schedule.

**6. ADJOURNMENT**

There being no further business, a motion was introduced and seconded to adjourn the meeting; the motion was approved unanimously.

Respectfully submitted,

---

David Elleman, Secretary