

# TOWN OF YORK, NEW YORK IMPACT RESEARCH GROUP 2015 REPORT



## OBJECTIVE:

In December of 2014 the Town of York passed a one-year moratorium on all high volume hydrofracking activities in the town. Subsequently, the Town Board facilitated the formation of a research group to attempt to gauge the impact on our community if the high volume hydrofracking industry (HVHF) came to York. This is their report.

## STEPS:

1. To research our community by gathering the most up to date information regarding the Town of York. It would be a snapshot (a baseline) of the current community conditions, which could include, but not be limited to, businesses, waterways, roads, green spaces, population densities, organizations, property values, etc.
2. To research how the community might change (the impact) if the HVHF industry came to York.
3. To present the Group's findings and nonbinding recommendations to the York Town Board.

## PROCEDURE:

A volunteer committee would be formed from those community members who would be interested in doing this type of research. The working meetings (held at the town hall) would be open to anybody and all attendees would have privileges of the floor. Groups or individuals could offer to research specific topics and bring that information back to the committee (similar to the Avon Study Group). Presentations to the community from those knowledgeable in specific fields could be part of this effort. Workshops encouraging community input could be held as well as a town referendum to gauge the feelings of the community regarding the issues. The working meetings could be held once a month and the Town Board would be updated after each session. In addition, the Town's website could be used for keeping the community updated.

There would be an understanding that the Impact Study Group would use the former Steering Committee's data and also that the new information gathered could be used in an update/review of the Comprehensive Plan and Zoning.

## Research Topics – Subcommittees:

1. Residential Property Values – David Rose
2. Quality of Life – Anne Roth-Blizzard, Lee Gratwick, Becky Lewis
3. Economics – Larry Smith, Patricia Gardner
4. Land, Natural Resources and Waste Management – Davies Nagel
5. Government and Services – Roberta MacLean
6. Town of York Geology and Shale Gas Development – David Deuel

## Other Participants and Interested Community Members:

Marta Nagel Burroughs, Kirk Richenberg, Grayce McLaughlin, Dan Hainey (Geneseo), Chuck Morgan (Avon), Mary Kummer, Molly Cummings, Fred Mingrino, Henry S. Fuller, Robert Deming (web-master), Nancy Fitzpatrick, Dean Gardner, Rene Lyness, Beth Rhodes, Melissa Alber, Paul Schneider, Paul MacLean, Jerry Ayers, Tim Barrett (Mt.Morris)

My area of concern about the impacts of High Volume Hydrofracking (HVHF) in the Town of York is residential property values. Below, I have quoted extensively from two articles that indicate that property values, homeowner's insurance and the ability to get a residential mortgage would all be negatively impacted by HVHF. I have also included documents about all of the negative impacts of HVHF on an economy such as ours in the Town of York.

For these reasons, I have concluded that the Town of York should implement a Local Law, similar to the Town of Dryden, that effectively prohibits all HVHF as well as all storage and/or treatment of HVHF waste products.

Although NY State currently has a ban on HVHF, the ban does not include storage and/or treatment of HVHF waste products. In addition, a state ban can be changed, usually with a change of administration. If the state lifts its ban, a local law banning HVHF would protect us.

I see no reason to extend our Moratorium since I believe that the Impact Research Group has shown due diligence in coming up with its recommendations, and so does not need more time.

Greg May  
Senior VP, Residential Mortgage Lending  
Tompkins Trust Company

As summarized, a gas lease or active fracking is in conflict with many items deemed prudent, necessary and required for traditional mortgage financing.

Quotes from Times Online from February 27, 2013:

“(Fracking is) deemed an exclusion in the same way earthquake or earth movement is,” said Mike Barry, vice president of media relations at the Insurance Information Institute, a nonprofit institute funded by the insurance industry.

“We would recommend that the homeowners check their homeowner’s or farm insurance before signing any leases,” said Roseanne Placey, spokeswoman for the Pennsylvania Insurance Department. “Check to see if they (the homeowners or farmers) would be at risk. These are commercial wells. You may need a commercial liability policy. “As a landowner, do you want to bear the liability risk? And if you do, do you have the proper coverage?”

Dave Phillips, a spokesman for State Farm Insurance Co. reported that State Farm has set specific guidelines regarding hydro-fracking operations. The company does not write commercial insurance for businesses conducting hydro-fracking operations or for commercial properties where fracking is taking place. State Farm does not have a fracking endorsement for private residences, but does have earthquake, earth-movement and sinkhole endorsements available in most areas, Phillips said. “But there needs to be a conversation as to whether fracking would be covered under that, if at all,” Phillips said. The endorsements don’t guarantee that fracking-related damage will always be covered.

“Our longstanding underwriting guideline is that we do not insure the oil and gas business,” Nancy Smeltzer, a Nationwide spokeswoman, said.

**TESTIMONY SUBMITTED TO THE NEW YORK STATE SENATE  
FEBRUARY 4, 2014 BY ELISABETH N. RADOW, ESQ. [ENRADOW@RADOWLAW.COM](mailto:ENRADOW@RADOWLAW.COM);  
[WWW.RADOWLAW.COM](http://WWW.RADOWLAW.COM)**

THE ABILITY TO FINANCE A RESIDENTIAL PURCHASE REPRESENTS A CRITICAL COMPONENT TO MOST HOME PURCHASES. GAS DRILLING INTRODUCES HAZARDOUS ACTIVITY AND HAZARDOUS SUBSTANCES, PRACTICES WHICH ARE EXPRESSLY PROHIBITED BY STANDARD MORTGAGES. LENDERS SUCH AS KEY BANK, JPMORGAN CHASE AND SANTANDER DO NOT WANT GAS DRILLING ON THEIR BORROWERS’ PROPERTY. ACCORDING TO JP MORGAN CHASE, SERVICERS AND LENDERS ARE BECOMING MORE UNWILLING TO APPROVE A LOAN ON THESE PROPERTIES. SANTANDER BANK NOW REQUIRES ALL RESIDENTIAL BORROWERS TO SIGN A MORTGAGE RIDER WHICH PROHIBITS THEM FROM ENTERING INTO A GAS LEASE.

NATIONWIDE AND STATE FARM REPRESENT TWO NATIONAL INSURANCE UNDERWRITERS WHICH HAVE PUBLICLY CONFIRMED THEY DO NOT INSURE HOMEOWNERS FOR RISKS RELATED TO FRACKING. ACCORDING TO NATIONWIDE, "THIS IS COMMON ACROSS THE INDUSTRY." LAST SUMMER, A HOMEOWNER IN LEBANON, NEW YORK HAD THE INSURANCE FOR HIS HOME AND FARM DENIED BECAUSE THE PROPERTY HAS A GAS WELL. NO MORTGAGE LENDER WILL MAKE OR MAINTAIN A MORTGAGE LOAN WITHOUT HOMEOWNERS INSURANCE. IT REPRESENTS AN INCURABLE DEFAULT.

THE TREND OF BANKS AND INSURERS NOT EXTENDING THE BASIC ECONOMIC SUPPORTS OF HOMEOWNERSHIP TO FRACKED PROPERTIES REPRESENTS 3

POTENTIALLY GRAVE IMPLICATIONS FOR COMMUNITY VITALITY AND PERSONAL WEALTH IN AREAS WITH FRACKING AND MUST BE UNDERSTOOD BY POLICYMAKERS. FURTHER, THE GROWING RELUCTANCE OF THE MORTGAGE AND INSURANCE INDUSTRIES TO HANDLE FRACKING-AFFECTED PROPERTIES--A RELUCTANCE DRIVEN BY THE LONG TRADITION OF OBJECTIVE CALCULATION OF RISK IN BOTH OF THESE INDUSTRIES--PRESENTS AN IRREFUTABLE ANSWER TO THE CLAIMS OF THE OIL AND GAS INDUSTRY THAT FRACKING OPERATIONS CAN BE PERFORMED SAFELY.

HOMEOWNERS EXPECT TO HAVE CLEAN WATER AND A SAFE ROOF OVER THEIR HEADS UNTIL THEY SELL THEIR HOUSE. YET, MOUNTING REPORTS OF WATER CONTAMINATION AND STRUCTURAL DAMAGE IN THE PRESENCE OF UNCONVENTIONALS DRILLING THREATENS THIS EXPECTATION. I HAVE FOR YOU A COMPILATION OF PERSONAL ACCOUNTS OF EVERYDAY AMERICANS LIVING IN CLOSE PROXIMITY TO DRILLING OPERATIONS, INCLUDING FARMERS, WHITE COLLAR AND BLUE COLLAR WORKERS, EVEN A MAYOR, JOINING THE EXPANDING NATIONAL DATABASE KNOWN AS *THE LIST OF THE HARMED*.<sup>1</sup> THESE AMERICANS AND THEIR PETS AND CATTLES HAVE EXPERIENCED SUCH IMPACTS AS LOSS OF POTABLE WATER, FULL LOSS OF THEIR PROPERTY VALUE, CANCERS AND DEATH. PERHAPS THE MOST ALARMING FACT IS THAT A NUMBER OF THESE PEOPLE HAVE NO PLACE TO GO, SO THEY REMAIN TRAPPED IN A LIVING HELL.

**Economic Realities of Shale Gas Development in New York State  
February 2014**

Submitted to accompany verbal testimony presented at Feb 4th Public Forum  
Hosted by Senator Tony Avella, Albany, New York, titled  
"Economic Realities of Hydrofracking"

Prepared by Jannette M. Barth, Ph.D., Economist, Pepacton Institute LLC

**Key Points**

- The oil and gas industry exaggerates estimates of economic benefits that will result from shale gas development, an open secret for years.
- Equally apparent, the oil and gas industry disregards shale gas development's important and significant economic costs to communities and states.
- Recent evidence and research confirms yet again the exaggeration of benefits and disregard of costs.
- Among the many staggering costs ignored by the industry are air pollution and health costs, road damages, increased demands on police, fire, and first responder services suffered by municipalities, declines in property values, and the deterioration of industries crowded out or otherwise incompatible with an industrial landscape and/or the risk of water, air and land contamination.
- Recent research at Cambridge University indicates that by 2020 fracking firms in the UK should pay 6 billion pounds (close to \$10 billion) per year to compensate for the impact of both CO<sub>2</sub> and methane released into the atmosphere from gas production and burning, based on a low methane leakage rate of only 2%. This is lower than most estimates, strongly suggesting substantially greater actual costs.
- Peer-reviewed research estimates that fossil fuel pollution in New York State alone causes about 4,000 annual premature deaths, with a cost to the state of about \$33 billion per year.
- The promised boom has not materialized in Pennsylvania, West Virginia and Ohio, the only three states on the Marcellus Shale that have allowed shale gas development, as predicted by the author and confirmed by recent empirical evidence.
- Various industry-friendly groups and consulting firms, understate or completely ignore the downsides of shale gas development and exaggerate the upsides. These are in marked distinction to findings of independent, unbiased researchers, many of whose results have been published in peer-reviewed journals.
- Estimates of the amount of recoverable shale gas reserves and employment impacts that will result from exploration and production vary widely.
- The variance in employment impact estimates is attributable the methodology used to estimate the impacts, as well as the widely varying estimates of recoverable gas.

- The amount of economically and technically recoverable reserves of shale gas in New York State is far less than claimed by industry and assumed by the DEC, according to an independent group which includes a geologist, a systems engineer and two retired oil and gas industry executives.
- The total number of jobs to be created in NYS ranges from 960 to 6400, based on new estimates of recoverable shale gas in NYS, and using job creation experience in comparable geological Pennsylvania counties.
- The DEC estimated that at maximum build out in year 30, the number of jobs created will range from 13,491 to 80,510, far higher than 960 to 6400.
- The DEC estimated that in its high development scenario, annual employee earnings and personal tax revenue to the state would be \$3,711.3 million and \$185 million, respectively. These estimates are in stark contrast to employee earnings and personal tax revenue that would result if the new potential gas estimates are correct, namely \$295.22 million per year and \$14.7 million per year, respectively.
- NYS DEC has not done the work necessary to provide accurate, unbiased estimates of economically recoverable shale gas reserves and accurate, unbiased estimates of all likely economic impacts, both benefits and costs.
- It is technologically feasible for NYS to transition to a 100% renewable energy infrastructure for all purposes, but political will and private capital are needed. Governor Andrew Cuomo was wise to create the Green Bank, but more is needed. Production and use of fossil fuels, including shale gas, must be reduced and investment, instead, be directed to renewable energy and conservation.
- Natural gas has a history of extreme price volatility, which is likely to continue, while the prices of wind, water and sunlight as inputs into an energy system based on renewable energy will always be zero.
- New York State's conversion to a wind, water and solar energy infrastructure will reduce air pollution, reduce health costs associated with mortality and morbidity, protect other important industries, improve national security, set an example for other states to work toward reducing the costs of global warming, and it will create many jobs, jobs for New Yorkers.
- If NYS would commit to the WWS plan, 4.5 million jobs would be created during construction and approximately 58,000 permanent annual jobs thereafter for energy facilities alone developed as part of the plan. That is 58,000 permanent ongoing annual jobs, more than even the 53,969 jobs estimated in the SGEIS for only one year, the year of maximum build out in the average development scenario. And of course, earnings and personal tax receipts to the state would be correspondingly much larger than those derived from shale gas development.

# IMPACT RESEARCH GROUP REPORT

## QUALITY of LIFE

### Introduction

The Comprehensive Plan for the Town of York presents the following vision for the community:

***Land Use - Comprehensive Plan for the Town of York\****

*The Town of York will remain a predominantly agricultural and rural residential community with a small town character. \**

*The planning program will emphasize the protection of York's important natural resources, productive agricultural soils and the community's significant environmental assets. \**

*This Comprehensive Plan for the Town of York serves as a guide for growth and preservation within the community and to accommodate future development in a manner that best protects the environment, preserves current community values and maintains the rural character of the Town. This Plan represents a summary of the desires, opportunities and policies of the Town of York at this point in time. \**

The Comprehensive Plan is an overall guideline for developing and protecting the diverse activities that support the vitality and well being of the town. By *protecting the environment, preserving current community values, and maintaining the rural character of the town*, we are nurturing community. We believe that quality of life, in the long run, is the basis for health and happiness.

One of the most important resources we have is water. Without clean water agriculture would be in crisis, without water industry would weaken, and without water people would not survive. Good air quality is another important natural resource that is essential to health. Without protection now, there is no guarantee that these precious resources will remain as they are today. This report explores some of the issues in relation to hydrofracking, compressor stations, and gas pipelines, and how the expansion of the gas industry could impact the quality of life in the Town of York.

The recently published Compendium of Scientific, Medical, and media Findings Demonstrating Risks and Harms of Fracking, Third Edition, documents that since December 2014, more than 100 peer-reviewed studies on the impacts of drilling and fracking have been published, and the overwhelming consensus is that there is significant potential for “harmful air impacts, environmental, and other risks from infrastructure.”



(Source: [concernedhealth.org/wp-content/uploads/2012/11/New-York-Infrastructure-10-13-15-SIGS.pdf](http://concernedhealth.org/wp-content/uploads/2012/11/New-York-Infrastructure-10-13-15-SIGS.pdf))

## **Water Quality**

The preponderance of natural gas wells in York are located in the same areas as those in which wells provide an essential source of water for residents. (Ref. Town of York Physical/Natural Features and Infrastructure map prepared by Clark Patterson Lee, 2012). There are approximately 500 families living in the northern and western portions of the town of York who use private wells as their source of water for drinking, bathing, cooking and other domestic uses. (Ref. Town of York)

Information on water quality has been obtained through minutes of Town Board meetings and informal anecdotal reports. Both volume and quality are problematic. Many residents need to supplement their water at great inconvenience. There are complaints of unpleasant odors from methane and sulfur. Informal polling completed by the Town of York has indicated general support for installation of public water lines in the Anderson, Limerick, Federal and Linwood Rd, area as well as other areas.

When the Principal Aquifer Overlay was prepared for purposes of planning for Natural Gas Development, it was based on mapping done by USGS in 1988 (Sources: <http://ny.water.usgs.gov/projects/bgag/aquifer.maps/aquifer1.maps.html> and <http://www.dec.ny.gov/lands/36118.html>) Principal Aquifer mapping has not been updated for our area, to our knowledge, since the dewatering of the Valley and resultant problems with domestic wells following the Retsof mine collapse in 1994. Before any serious planning for expansion of the natural gas or any other industry in the Town of York, updated aquifer mapping would be an important component to ensure protection of our aquifers.

We believe development or expansion of the natural gas industry beyond current vertical well drilling methods in those areas would not be in the best interests of those residents who depend on well water.

As summarized in the Avon study of High Volume Hydrofracking, there are currently over 1,000 chemicals used in hydraulic fracturing that have been detected in flowback and produced water. Some of these chemicals, such as benzene, toluene, ethylbenzene and xylene are known carcinogens. According to the Union of Concerned Scientists, a single hydrofracking well can result in 15,000 gallons of chemical waste from fracking fluids. [http://www.ucsusa.org/clean\\_energy/our-energy-choices/energy-and-water-use/water-energy-electricity-natural-gas.html#.Vfl\\_tCDBzRY](http://www.ucsusa.org/clean_energy/our-energy-choices/energy-and-water-use/water-energy-electricity-natural-gas.html#.Vfl_tCDBzRY)

While the gas industry is experimenting with safer ways to treat and dispose of wastewater, current processes and technologies pose significant risks to water resources. Fracking wastewater contains naturally radioactive material, heavy metals, and high concentrations of magnesium, manganese, chlorides, sulfates and total dissolved solids.

One of the primary issues related to water and the hydrofracking industry is the amount of water required. According to FracFocus, the national hydraulic fracturing chemical registry, managed by the Ground Water Protection Council and Interstate Oil and Gas Compact Commission, the multi-stage fracturing of a single horizontal shale gas well requires the use of 2 to 4 million gallons of water, far more than is used in conventional vertical drilling. Usually, most of the water is drawn from surface water, such as rivers and lakes, although groundwater is also used. <https://fracfocus.org/water-protection/hydraulic-fracturing-usage>

The extraction of so much water raises concerns about the effect on drinking water aquifers, as well as the cost in fossil fuels for the transportation of the water and the attendant air pollution. While the recently completed EPA study found no evidence of “widespread” pollution of drinking water, the study admits that there is insufficient scientific research. For example, the report cites insufficient data on pre- and post-fracturing water quality. The report did point to some of the riskiest points in the process: hydrofracking when water resources are low, spilling hydrofracturing fluids and produced water, fracturing directly into underground drinking water resources, underground migration of liquids due to intense pressures of hydrofracking, and the inadequate treatment or improper discharge of wastewater.

<http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=244651>

A recent analysis of data from 11 of the leading oil and gas producing states by the Associated Press found that more than 175 million gallons of fracking wastewater was spilled between 2009 and 2014. These spills “foul the land, kill wildlife, and threaten freshwater supplies.” <http://abcnews.go.com/US/wireStory/drilling-boom-brings-rising-number-harmful-waste-spills-33595086>

In 2014, the Pennsylvania Department of Environmental protection released data on 243 cases of contaminated private drinking water wells due to gas and oil production, from 2009 to 2014. The problems included methane gas contamination, spills of wastewater, and wells that dried up or became undrinkable.

<http://pittsburgh.cbslocal.com/2014/08/29/dep-cites-243-cases-of-well-water-contaminated-by-drilling-wastewater/>

Finally, as the New York State DEC Findings Statement (p. 5) noted, even with extensive mitigation, it will be impossible to avoid significant negative health and environmental impacts if high-volume hydraulic fracturing industry takes place.

### **Air Quality: Compressor Stations and Gas Pipelines**

Despite a statewide ban on shale gas hydrofracking, New York remains a strategic route for the transport of gas and oil to the east coast through pipelines and compressor stations. There is a compressor station, as well as pipelines owned by Kinder Morgan, currently located in the town of York, which has seen expansion over the past couple of years. In addition, there is a metering and regulating station owned by Dominion, also

recently expanded to increase capacity for transport of Appalachian supplies to Northeast markets. This expansion began in 2011 as part of a larger Northeast Direct project based in Wyoming County, and as such, was not treated with the usual due process afforded industrial projects that affect neighbors and the environment. No local public hearing was held. Permits were granted without due public process. It is expected that continued expansion and upgrades will occur as stated on the Kinder Morgan company website "The NED Project is being developed to meet the increased demand in the Northeast United States for transportation capacity of natural gas." (source: <http://www.kindermorgan.com/content/docs/NED%20Project%20posters.pdf>)

Compressor stations have various sources of air emissions: tanks, heaters, engines, and potential leaks. Depending on the size of the station and the composition of the gasses being compressed, these may release contaminants including carbon monoxide, sulfur dioxides, hazardous air pollutants (such as formaldehyde, benzene, toluene and xylene), volatile organic compounds (VOCs), fine and coarse particulate matter, nitrogen oxides, and greenhouse gases such as methane and carbon dioxide. (Source: [earthworksaction.org](http://earthworksaction.org)) Unfortunately, we have been unable to get information about the size of the compressor station in York as the permitting process does not require information about horsepower, turbines, hydrators, amount of time the station runs, or the frequency of maintenance "blowdowns." The only requirements of the building permit are the exterior specifications of the building.

As noted by the Concerned Health Professionals of New York and the Physicians for Social Responsibility in their October 14 letter to Governor Andrew Cuomo and Health Commissioner Howard Zucker, compressor stations are semi-permanent facilities that pollute the air twenty-four hours a day, with periodically extreme exposures to pollutants during compressor "blowdown" events during maintenance operations. (Source: [concernedhealth.org/wp-content/uploads/2012/11/New-York-Infrastructure-10-13-15-SIGS.pdf](http://concernedhealth.org/wp-content/uploads/2012/11/New-York-Infrastructure-10-13-15-SIGS.pdf)).

Air sampling and health symptom surveys conducted at two compressor stations in Pennsylvania found emissions of VOCs, Benzene, Toluene, Ethylbenzene, Formaldehyde and other hazardous pollutants as well as significant reports of health problems of residents living near the facilities, including dizziness, headache, nausea, fatigue and nosebleeds. Additional documentation from the Texas Commission on Environmental Quality and the Pennsylvania DEP indicated complaints of strong odors and upper respiratory irritation from residents living near compressor stations. When Volatile organic compounds combine with sunlight, ozone is formed, which has been known to aggravate respiratory problems such as asthma.

A recent issue of *Reviews on Environmental Health*, a quarterly peer-reviewed journal published an article, reviewed scientific evidence that the VOCs from compressor stations "pose a threat to human developmental and reproductive health," including birth defects, infertility, low birth rates, and miscarriages. (Source: *Rev Evion Health* 2014; 29 (4): 307)

We do not know the future of hydrofracking but there is no denying there are pipelines and a compressor station in our backyard now, presenting the potential for toxic emissions. In 2014 Livingston received the distinction, for the second consecutive year, of “Healthiest County in New York.” We are proud to be one of the towns in the healthiest county in New York State and we would like to remain so!

### **Conclusion**

In this report we have attempted to give an objective overview concerning the importance of protecting water and air resources in the Town of York. Ongoing research indicates that the gas industry involves a multitude of complex issues with still many unanswered questions. The possibility of substantial health risks persuaded NY State to issue a ban on the industry in 2014. Peer-reviewed research since the ban has confirmed the potential for significant negative health impacts through water and air pollution. In that the statewide ban could be modified or changed with a change in political climate, now is the time to protect and conserve the natural resources in the Town of York, before it is too late.

### **Recommendations:**

- Recognize and protect the private well areas from the contamination of heavy industry.
- Undertake a baseline study of the streams in York for monitoring possible water pollution.
- Encourage use of renewable energy by the Town of York.
- Encourage sound land use and community engagement by instituting a Conservation Advisory Council. See: “Conservation Advisory Councils and Boards”
- Residents should be notified and involved in the planning and permitting process for compressor stations and other industrial components of natural gas development.

## Impact Research Group Report Economics for the Town of York

### Facts About the Town of York

- The population of the Town of York was 3,397 at the 2010 census.
- There are about 10,000 cows distributed over 10 farms in York.
- The total area of the town is 49.15 square miles.
- About 25,000 acres are in the Agricultural District of the Town.
- The Town has about 1,200 housing units at an average density of 25.1 per square mile.
- There are at least 7 east/west roads and 6 north/south roads.
- Only Routes 36, 63, and 20 are capable of industrial use.
- Crops are grown to feed the dairies; vegetable crops are produced for fresh sale. A large acreage of wheat is grown along with soybeans and edible beans.

### Things As We Know Them Now

- The Town of York is a Right to Farm Community.
- The 2007 Census of Agriculture said that 87% of farms were owned and operated by individuals or families. In 2012 this Census said 97% of U.S. farms were family owned.
- Agriculture is the largest industry in the Town of York (and also in Livingston County).
- There are nearly 3 times as many cows in the Town as there are people.
- The *tax base* (needed tax revenue) currently rests on our farmers (dairy, crops, and farm output), and our residents (with city jobs); in addition to several other enterprises within the Town.
- The *roads and bridges* (infrastructure) in the Town of York are already challenged by Agricultural use. (Milk, grain, and manure are outbound, silage is inbound). The Town of York Highway Department Appropriation is the Town's largest expense.
- The *soil* in the Town of York is prime and productive and is among the best in Livingston Country. The river laid soil comes from the Genesee River Valley and upland lake soils created by glacial activity. Soils deposited by the Genesee River are some of the best in the world. Soils deposited by glacial activity are also some of the best.
- Historically, *water* quantity and quality have always been an issue in the Town and we still feel the effects from the 1994 mine collapse in Retsof.
- Only parts of the Town are on Public Water Supply (coming from Conesus Lake). Others are served by private water wells (about 500).
- Streams and aquifers typically provide the water supply necessary for animal consumption. Public water is necessary for washing equipment and in times of drought when ground water is less available.
- (**NOTE:** Dairy cattle need to drink 30 gallons of water per DAY to produce. We are already one of driest regions in N.Y.S.)

## Concluding Thoughts

### Definition of Economics

1. *of or having to do with the management of the income, expenditures, etc. of a household, private business, community, or government*
2. *of or having to do with the production, distribution, and consumption of wealth*

### Definition of Opportunity Cost

1. *a benefit, profit, or value of something given up to acquire or achieve something else*
2. *the loss of potential gain from other alternatives when one alternative is chosen*

“Among the many staggering costs ignored by the [fracking] industry are air pollution and health costs, road damages, increased demands on police, fire, first responder services suffered by municipalities, declines in property values, and the deterioration of industries crowded out or otherwise incompatible with an industrial landscape and/or risk of water, air, and land contamination.”

From “*Economic Realities of Shale Gas Development in New York State*”  
by Jannette M. Barth Ph.D.

The Comprehensive Plan for the Town of York serves as a guide for the growth and preservation within the community and to accommodate future development in a manner that best protects the environment, preserves current community values and maintains the rural character of the Town. (2006)

### Things About Hydrofracking in the Town of York that We Don't Now Know the Answer to

- effect on animals (sound and lighting, for example)
- effect on the livelihood for dairy farmers
- amount of increased truck traffic
- water usage demand and disposal
- potential for contamination of water and/or leakage

## Recommendations

1. Allowing hydrofracking groups into the community who take money and resources out of the community doesn't make sense. This is especially true where the agriculture and existing businesses in the York community, yield more net income than the proposed intruders.
  2. In the mean time hydrofracking for gas in the Town of York would cost more to produce than gas from other parts of the U.S. and the world.
  3. Gas has to be \$60 per barrel or more to make a profit even in fracking areas with acceptable gas holding rock structures.
  4. The existing businesses in the Town of York, along with commuters, use roads and bridges to the maximum now.
  5. To obstruct and use the assets of the Town of York for hydrofracking, when the assets of the Town are already fully used for greater returns and profits would define with classical style "opportunity cost".
- Update the Town's Comprehensive Plan (from 2006).
  - Create a "Conservation Advisory" Group to help preserve the rural character of the Town.
  - Be cognizant of jeopardizing the Agricultural/Economic balance in the Town and possibly destroying the generational livelihood for many of our residents.

## References, Readings, and Resources

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<http://www.slopefarms.com/2013/04/01/open-letter-to-the-ny-farm-bureau-research-shows-that-fracking-is-shrinking-the-pa-dairy-industry/>

<http://www.truth-out.org/news/item/25216-fracking-the-farm-scientists-worry-about-chemical-exposure-to-livestock-and-agriculture?tmpl=components&print=1>

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*The Economist*, February 2, 2013; January 17, 2015

*The New Yorker*, April 13, 2015

*Farm Journal*, Mid-February 2015

*Livingston County Agricultural News*, June 2015

*Livingston County News*

*Rochester Democrat & Chronicle*

*Wikipedia*

*Soil Survey: Livingston County, New York*

U.S. Dept. of Agriculture, Soil Conservation Service  
in cooperation with Cornell University, Agricultural Experiment Station  
Series 1941, no. 15, issued 1956

Jannette M. Barth, Ph.D., Economist, Pepacton Institute LLC, “*Economic Realities of Shale Gas Development in New York State*”, February 2014

Town of York Steering Committee on High Volume Hydraulic Fracturing:  
Final Conclusions and Recommendations to the Town Board (May 2013)

Letter from Lenape (John C. Holko) addressed to Landowner/Mineralowner (7/19/12)

Conversations with and information from:

Christine Harris, York Town Clerk  
Irene Sick, York/Leicester Food Pantry  
Town of York Farmers



Town of York – Impact Research Group (2015)  
Land, Natural Resources & Waste Management  
D. Nagel

1. What did the recent EPA Hydrologic Fracturing Study say?

*No widespread impact on drinking water, but does confirm specific instances that led to water contamination that the oil and gas industry has always denied. Unfortunately, there was no before and after baseline testing and the data was provided by the industry so more study is recommended. <http://www2.epa.gov/hfstudy>*

2. What could we do now to protect our water in the future?

*Baseline study of each of our creeks (\$40 Brockport.) A new report from the Environmental Working Group, leaving just a 35-foot buffer between fields of corn or soy and neighboring streams could significantly reduce nitrogen runoff and phosphorus runoff and so possibly may also be an important way to protect the water from any fracking runoff. As a personal side note, these hedgerows seem to be disappearing even though they are an important habitat for the many pollinators that are responsible for one-third of the food we eat. If a hedgerow is going to be removed there are groups that will relocate any honeybee colonies that may be found in the area. <http://www.takepart.com/article/2015/02/03/ag-runoff-drinking-water-pollution-solution>*

3. What would be the effects of an increase in truck traffic (i.e. fracking waste) especially along Route 63?

*Most people understand the safety issues involved especially at the intersection of 63 and 36. Newer research has focused on the health issues involved along a truck corridor, especially stop and go traffic. Diesel exhaust, a suspected carcinogen, and brake pad dust that can contain asbestos, lead and other heavy metals are both major health concerns. There is a higher risk of asthma for children living within ½ mile of a highway and there is a higher risk of asthma when exposed to traffic pollution at school. That's why our Comprehensive Plan puts a high priority on putting footpaths, trails and an open space on the north side of Route 63 across from the school. This configuration tends to slow down the traffic as it makes the area look more residential. Driving Harm: Health and Community Impacts of Living near Truck Traffic The Impact Policy Brief Series – January 2012.*

4. How do we better “understand the trade-offs, such as increased economic activity versus environmental degradation or harm to public health, that policymakers and community members face with respect to energy production?”

*This fall (October 2015), Elaine Hill, a researcher at the University of Rochester Medical Center has been awarded a \$1.25 million National Institutes of Health grant to “support her study of whether air emissions and water contamination from gas drilling increases the risk of adverse health outcomes for individuals living nearby.” In 2012 her research focusing on children born to women living near HVHF drill sites in Pennsylvania revealed “that mothers living near active drill sites were about 25 percent more likely to give birth to infants that were underweight and that received lower scores on a basic health assessment done shortly after birth.” This is just of one of the many studies being conducted to help determine what the risks of fracking might be. Needless to say the science regarding this question is far from complete.*

<http://www.democratandchronicle.com/story/news/2015/10/15/urmc-researcher-earns-125-million-grant/74003830/>

5. How should we look at our supply of freshwater in the Town of York?

*Less than 1 percent of the world’s freshwater is easily accessible. In ten years, according to studies by the United Nations, “two-thirds of the world’s population [will be] living in water-stressed regions as a result of use, growth, and climate change.” Living in York with our relatively clean streams, wells, and ponds may have caused us to take this all for granted but, one needs only to read the news coming out of California regarding their protracted drought to understand how lucky we are to live in an area with abundant freshwater. “The challenge we face now is how to effectively conserve, manage, and distribute the water we have.” Looking at our water supply in this way should make us very unwilling to take any risks that may jeopardize this most important resource.*

<http://environment.nationalgeographic.com/environment/freshwater/freshwater-crisis/>

Final Recommendation: At this time my recommendation to the Town Board would be to pass a ban on all high volume hydrofracturing related activities. This would be along the lines of the New York State DEC regulatory ban but, because it would be voted upon by the Town Board, it would be a legislative ban and carry an additional level of protection for the town.

## IRG Report: Topic 5 Government & Services (Roberta MacLean)

### A. Introduction

This topic focuses on potential issues for local government and the services it provides to citizens. It is not an all-inclusive investigation but an overview of challenges that the Town would face if the HVHF industry began to operate here.

### B. Summary

- Road Damage and Maintenance

The Town is already familiar with the upkeep needed for roads regularly traveled by large trucks and farm equipment. How would a significant increase in such traffic affect the workload for the highway department and how would the increase be paid for? See New York Municipal Insurance Reciprocal report, "*Protecting Our Local Roads*" (1)

- Tax Issues and Bonding

When an industry like HVHF begins operations there can be a lag time of several years before the first taxes are paid. The Town would have to negotiate with the industry, which can be complex and time-consuming.

In 2012 the Tompkins County Council of Governments issued a report addressing multiple tax issues and recommending steps to be taken by New York State (*White Paper on Taxation Issues Related to Gas Drilling*) (2) Has the State acted on any of these?

- Emergency Response and Preparedness Training

How would the Town respond to an increase in road accidents and possible chemical spills with related injuries? The County's Emergency Management Department would take the lead in training or providing outside expert training. What costs would be involved and would York have enough personnel to respond to such emergencies?

- Social and Human Resource Impacts

The early years of HVHF activities bring challenges with the rush to start production. Workers are needed and many come from other states where they have experience with the industry. They require housing, food, medical care and outlets for entertainment. It may sound wonderful from a commercial standpoint but the stress on local traffic, law enforcement and quality of life has been documented many times. The boom is often followed by the bust, with its own problems. One thorough study is *Energy Boomtowns and Natural Gas: Implications for Marcellus Shale Local Governments & Rural Communities* (3)

- Regulation and Enforcement

The State DEC and its Division of Mining Resources would be responsible for enforcing regulations regarding HVHF. Are the current regulations adequate? Does DEC have enough staff to investigate problems in a timely way? Does the Town have any authority to act if citizens become aware of a safety violation or a dangerous situation? These are just some of the questions that the Town Board would need to answer.

### C. Recommendation

The current state ban on HVHF activity may provide a false sense of security to the Town. While the ban and the recent market-driven slowdown in fracking reduce the immediate threat to the Town, these can both change. When the industry sees potential for financial gain in our area, they will be prepared to act quickly. Will York be able to respond quickly as well? Will the Town Board be prepared to ask the right questions and set proper safeguards?

A local ban on all HVHF activities is the best protection that the Town Board can provide for all of our citizens, our agricultural economy and our desirable quality of life.

### D. Sources

1. **New York Municipal Insurance Reciprocal** *Protecting Our Local Roads*;  
<http://www.nymir.org/pdf/NYMIR%20Marcellus%20Roads%20FINAL.pdf>
2. **Tompkins County Council of Governments** *White Paper on Taxation Issues Related to Gas Drilling*,  
[http://tompkinscountyny.gov/files/tccog/Gas\\_Drilling/Focus\\_Groups/Assessment%20Documents/White%20Paper%20on%20Taxation%20Issues%20Related%20to%20Gas%20Drilling%20in%20NY%20202-2012.pdf](http://tompkinscountyny.gov/files/tccog/Gas_Drilling/Focus_Groups/Assessment%20Documents/White%20Paper%20on%20Taxation%20Issues%20Related%20to%20Gas%20Drilling%20in%20NY%20202-2012.pdf)
3. **Jacquet Jeffery**; *Energy Boomtowns and Natural Gas Implications for Marcellus Shale Local Governments Rural Communities*; January, 2009  
<http://aese.psu.edu/nercrd/publications/rdp/rdp43/view>

## Town of York Geology as it Pertains to shale Gas Development

The focus of over 40 hours of research was to determine the probability of shale gas (Marcellus and Utica formations) within the Town of York. Resources were the NYSDEC 1992 GEIS and 2011 SGEIS sections on history and geology, the first 15 websites that came up under the search "Utica Shale Fairway in NYS" and a workshop held January 5, 2012 by the Livingston County Planning Department. The workshop entitled "Municipalities, Planning and Managing Potential Impacts of Marcellus Shale Natural Gas Development" was presented by David Kay and Rod Howe of the Community and Regional Development Institute, Department of Development Sociology at Cornell. Based on studies by state geologists at the NYS Museum, their assessment is shale gas development is very unlikely in this part of the state. See map #1, Utica Shale Fairway in NYS. The research I have done strongly supports this statement.

A short discussion of the geology in NYS as it pertains to gas and oil productions. A chart of the stratigraphy of the Town of York (#2) is included. This charts the findings of a gas exploratory well drilled by Lenape on the Simpson Farm in 2002. The Precambrian Basement was formed 4.5 billion to 600 million years ago. It is the foundation upon which younger sediments were deposited. The hydrocarbons in this layer have been cooked out by heat and pressure. No available gas or oil in this layer. The marine life of the Paleozoic Era that occurred 542 million to 251 million years ago is the basis of recoverable hydrocarbons in NYS. The sedimentary formations above the Precambrian Basement have potential for hydrocarbon production based on depth, thickness, total organic carbon content (TOC) and thermal maturity. The limestone and sandstone formations also need permeability for gas to migrate, porosity for gas storage (within the formation), and a dome or upheaval area for an economic amount of gas to accumulate. The Marcellus and Utica shales will be discussed further.

The Marcellus is not drillable in the Town of York solely based on its depth, less than 300 feet from the surface. Proposed regulations in 2011 SGEIS are no shale formation development less than 2000 feet deep. The Marcellus is also 25-50 feet thick in York. At a minimum, 50 feet of thickness is needed for HVHF. The Marcellus shale formation can be viewed in LeRoy under the Route 5 bridge over the Oatka Creek. The formation outcrops in the creek bed.

The Utica in York is 3200 feet deep, approximately 50 feet thick, and has a TOC of 0.5%. Favorable gas producing shales are at least 4000 feet deep (weight and pressure of overlying formations forces gas out along fractures), have a TOC above 2%, and at least 200 feet thick. The Utica in York meets none of these requirements. See maps #3, #4, and #5.

The geology of York does not support shale gas development. The four main sources I used were the 1992 GEIS and 2011 SGEIS, "Utica and Marcellus Potential in NYS" by Taury Smith and Jim Leone, NYS Museum, and "Update on the Regional Assessment of Gas Potential in the Devonian Marcellus and Ordovician Utica Shales in NY" by Nyahay, Leone, Smith, Marin, and Jarvis.

## WEB SITES REVIEWED

1. [www.ogj.com](http://www.ogj.com) – Unconventional Oil and Gas Resources
2. [https://esogis.nysm.nysed.gov/Talks/2011\\_AAPG\\_Utica\\_Marcellus\\_Potential\\_New\\_York\\_.pdf](https://esogis.nysm.nysed.gov/Talks/2011_AAPG_Utica_Marcellus_Potential_New_York_.pdf) – Utica and Marcellus Potential in NYS by Taury Smith & Jim Leone
3. <https://www.chemungcounty.com> – Utica Shale Fairway in NYS maps
4. [www.dec.ny.gov](http://www.dec.ny.gov) – Chapter 4 Geology- SGEIS
5. OilandGas Help.com
6. [www.nofrackingway.us](http://www.nofrackingway.us) – Utica Sour Spot in NY? By Chip Northrup
7. [livinginDryden.org](http://livinginDryden.org)
8. Town of Lansing
9. [Tomwilbur.blogspot.com](http://Tomwilbur.blogspot.com) – Shale Gas Review-What are the prospects for NY shale reserves?
10. [www.colgate.edu](http://www.colgate.edu) – Natural Gas Development in Central NY by Bruce Selleck- Dept. of Geology, Colgate University
11. [bbgs.platts.com](http://bbgs.platts.com) – Utica Shale's big natural gas flows and and Edvard Munch  
By Star Spencer
12. [geology.com](http://geology.com) – Utica Shale- The Natural Gas Giant Below the Marcellus
13. [www.searchanddiscovery.com/documents/2007/07101nyahav/images/nyahav.pdf](http://www.searchanddiscovery.com/documents/2007/07101nyahav/images/nyahav.pdf)  
Update on the Regional Assessment of Gas Potential in the Devonian Marcellus and Ordovician Utica Shales in NY by Nyahay, Leone, Smith, Martin, and Jarvis
14. [gdacc.org](http://gdacc.org) – Gas Drilling awareness for Cortland County
15. [thepttc.org](http://thepttc.org) – Syn-Depositional Faulting, Carbon Isotope Stratigraphy and TOC Distribution in the Trenton and Utica Groups, NYS by Taury Smith

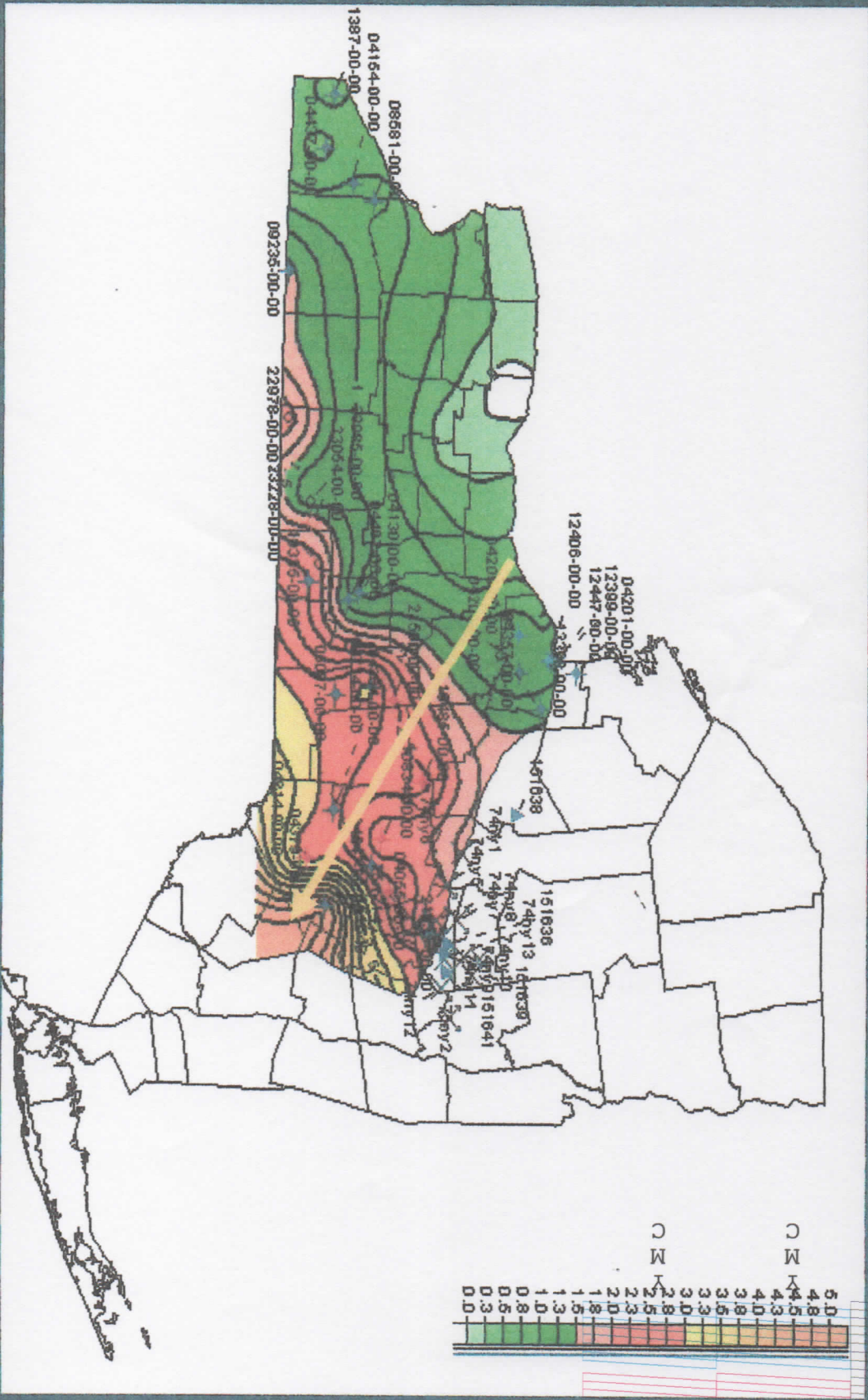




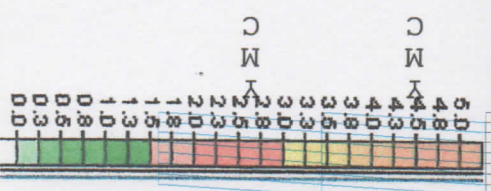
Period	Group	Unit	Lithology	Depth
Devonian	Middle	Hamilton	Marcellus Shale	Surface
		TriStates <sup>1960</sup> / <sub>1968</sub>	Onondaga Lst Oriskany Sst	270' 288'
	Lower	Heldeberg	Manlius Lst Rondout Dol Akron Dol	
		Salina	Bertie Shale Syracuse Salt Vernon Dol	820'
Silurian	Upper	Lockport	Lockport Dol	1,134'
		Clinton	Rochester Sh Irondequoit Lst	
			Sodus Shale	
	Lower	Medina <sup>1980</sup>	Grimsby Sst	1,504'
Ordovician	Upper		Queenston Sst Lorraine Sst Utica Shale	1,632' 3,294'
		Trenton/ Black River	Trenton Lst	3,439'
			Black River Lst	4,070'
	Lower	Beeman- town	Tribes Hill Lst Theresa Sst Little Falls Dol	4,552'
Cambrian	Upper		Potsdam Sst	4,986'
Precambrian Basement				

\* Note depths taken from Lenape Resources K. Simpson #3 York Township Livingston County, New York

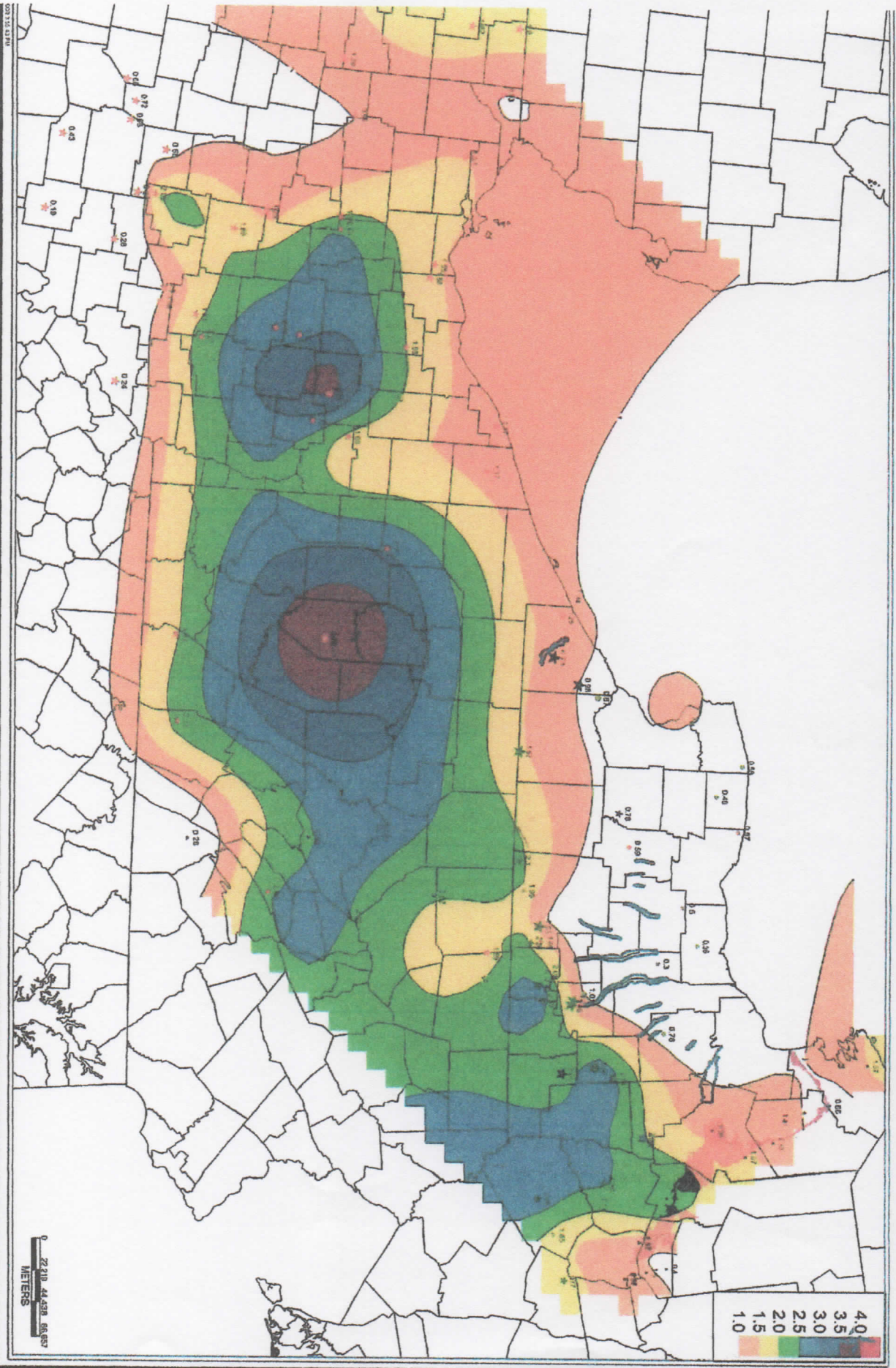
# Utica TOC Map



BK BK



TOC increases to the SE as Utica (Flat Creek and Dolgeville members) also thickens in that direction

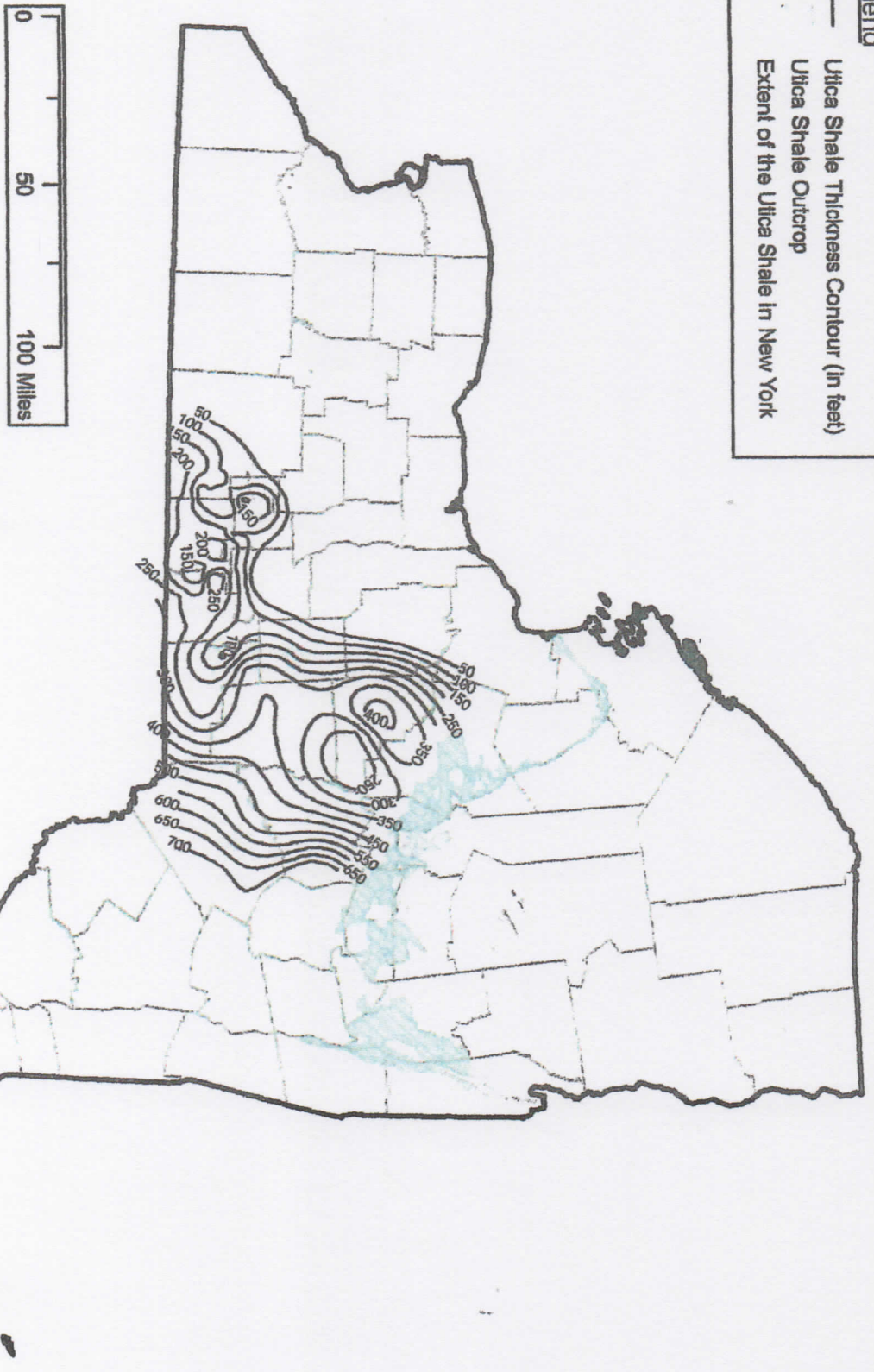


TOC map for Ordovician Utica Shale plotting highest value for each well in northeastern US – IN NY highest TOC to southeast

#5

**Legend**

- Utica Shale Thickness Contour (in feet)
- Utica Shale Outcrop
- Extent of the Utica Shale in New York



**FIGURE 4.6**  
**THICKNESS OF HIGH-ORGANIC**  
**UTICA SHALE**  
**IN NEW YORK STATE**



Technical Support Document to the  
 Draft Supplemental Generic  
 Environmental Impact Statement

**Note:**  
 - Contours show the combined thickness of the high organic carbon interval (> 1% TOC) lower Indian Castle, Dolgaville, Flat Creek members (New York State Museum - Reservoir Characterization Group, 2009).

## Research Topics - Subcommittees:

1. Residential Property Values – David Rose
2. Quality of Life – Anne Roth-Blizzard, Lee Gratwick, Becky Lewis
3. Economics – Larry Smith, Patricia Gardner
4. Land, Natural Resources and Waste Management – Davies Nagel
5. Government and Services – Roberta MacLean
6. Town of York Geology and Shale Gas Development – David Deuel\*

## Research Recommendations

- A. Four subcommittees (1,2,4,5) recommend the implementation of a local law that effectively prohibits all HVHF as well as all disposal, treatment, storage or use of HVHF waste products. One subcommittee (3) recommends the local ban if the NYS regulatory ban is revoked or in danger of being revoked.
- B. Five subcommittees (1,2,3,4,5) recommend encouraging land use and community engagement as well as preserving the rural character of the Town by instituting a Conservation Advisory Council.

### Additional Recommendations (possibly for a Conservation Advisory Council agenda):

1. Undertake a baseline study of the streams in York for monitoring possible water pollution.
2. Encourage use of renewable energy by the Town of York.
3. Update the Town's 2006 Comprehensive Plan.
4. Recognize and protect the private well areas from the contamination of heavy industry.
5. Notify and involve residents in the planning and permitting process for compressor stations and other industrial components of natural gas development.
6. Be cognizant of jeopardizing the general livelihood for many of our residents.
7. Undertake a study of the storage of any HVHF products.
8. Follow through with the high priority recommendation of our current Comprehensive Plan to slow down the traffic around the Rt 63/Rt 36 intersection by putting footpaths, trails and open space in that location especially in the areas adjacent to York Central School.

\*Recused himself from making any HVHF recommendations because he is a Town Board member.