

# **Marcellus Development Moving Forward?**

**Gregory H. Sovas - XRM, LLC**

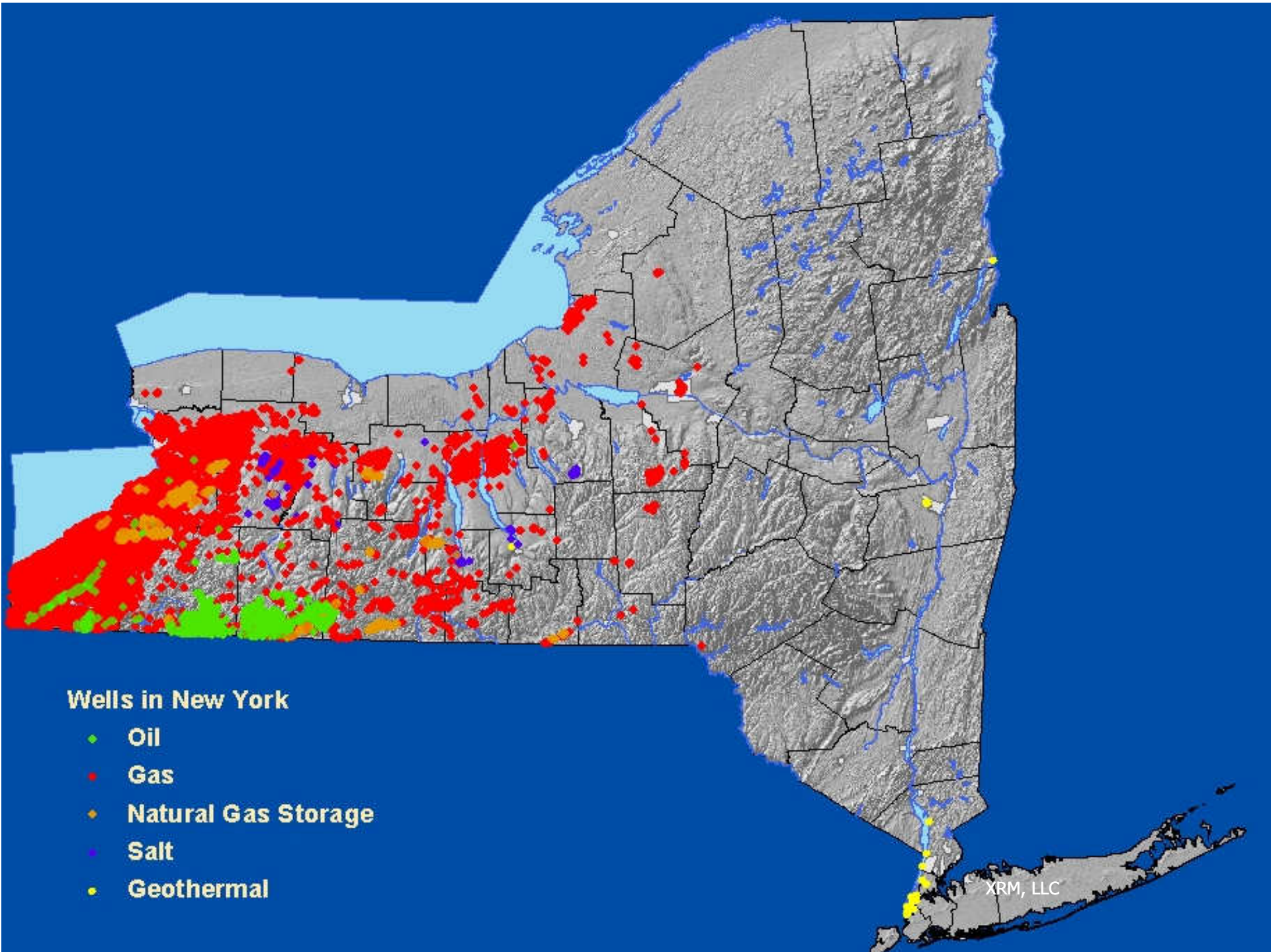
Young Sommer Environmental Breakfast Club  
Albany, NY  
September 8, 2011

# Background

- 33 years at NYSDEC, last 22 as Division Director, Mineral Resources
- Vice President, Governmental Affairs, Spectra Environmental Group
- Principal, Director – Lake Country FracWater Specialists, LLC
- Twin Tiers Landowners Coalition
- IOGA, PIOGA, IPAA member

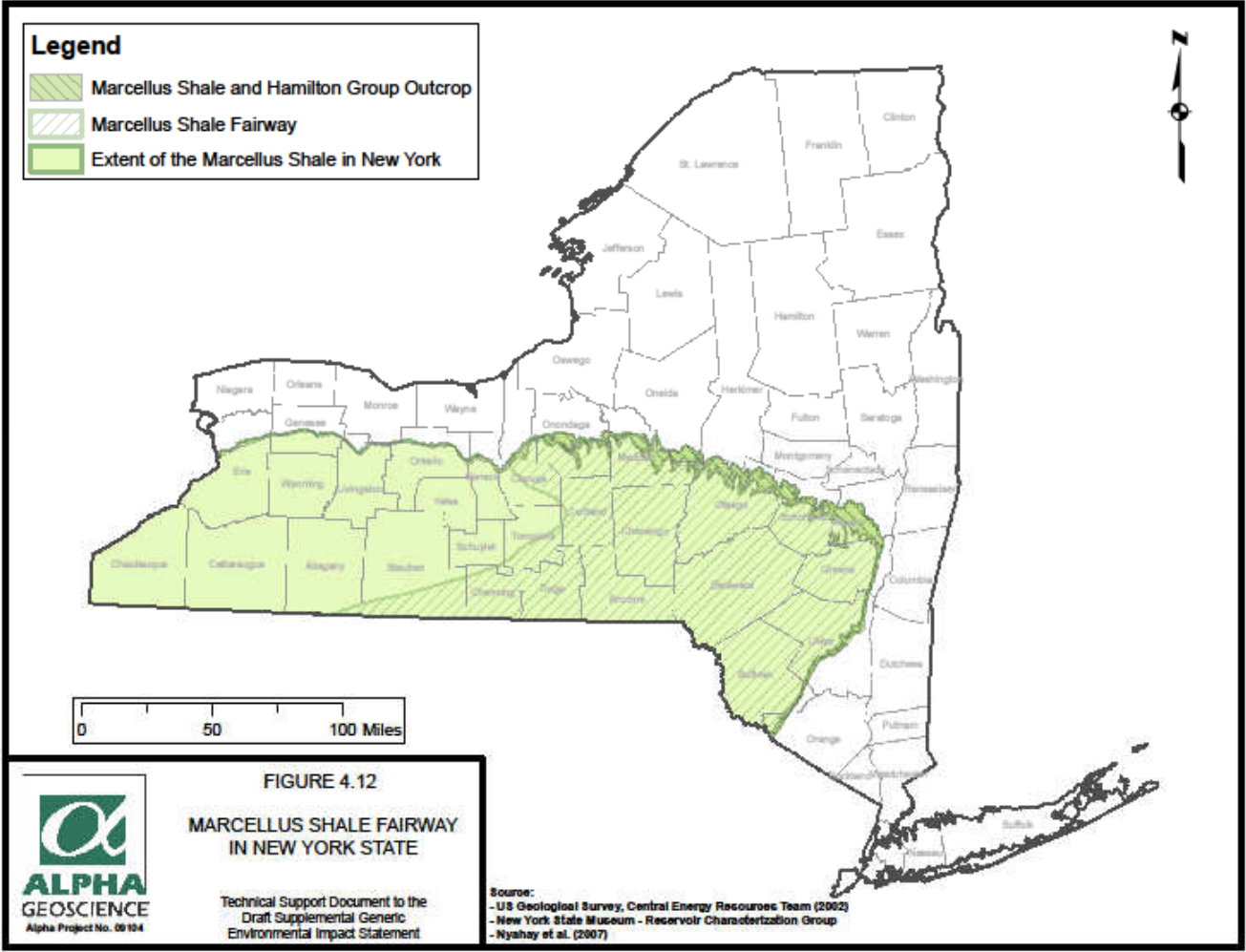
# Topics of the Day

- NYS Oil, Gas and Solution Mining Law and protection of groundwaters
- Spacing of wells
- Supersedure of local laws
- Local economics
- New draft SGEIS, implications, timing
- Parallel rule-making



# Natural Gas - Marcellus Shale

- 500+ trillion cubic feet of natural gas
- Environmentally-preferable fuel
- Technological advances to produce gas from shales now economic
- Near population centers, markets
- In depressed areas of NY, PA
- Second largest gas deposit in world



# NY's Oil and Gas Regulatory Program

- Modernized by 1981 Amendments
- Developed as a groundwater protection program, permits needed
- Spacing, protection of correlative rights
- Fees for new staff
- Supersedure of local regulation

# Casing and Cementing Conditions – 1980's

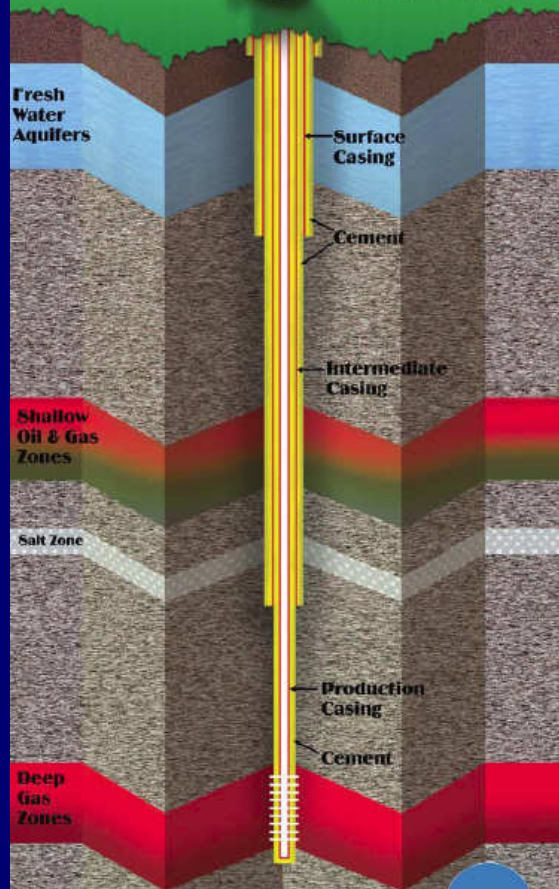
- Developed with industry input
- Redundant protection for groundwater  
- two strings of pipe, cement
- Relatively unchanged for 30 years
- No well has impacted groundwater in NY since at least the 1980's\*
- No lawsuit on well drilled since 1984

# Groundwater Protection

## Well Casing and Cementing Program

The Division of Mineral Resources' well casing and cementing regulations provide for the protection of the State's fresh water aquifers

Regulations require that wells be constructed and operated to prevent the movement of oil, gas or water from one zone to another



New York State Department  
of Environmental Conservation

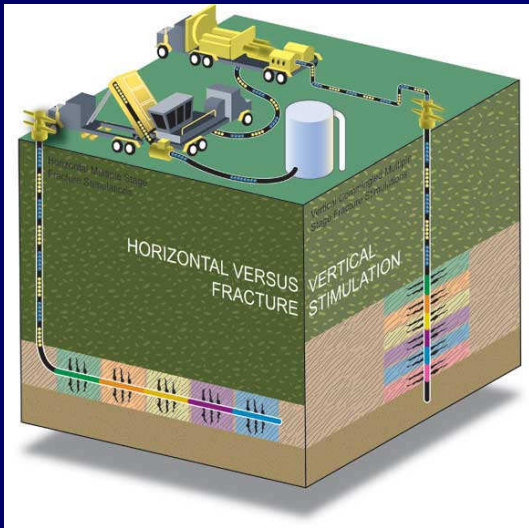


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# Hydraulic Fracturing

- First hydraulic fracturing (granite mining) 1903
- First oil and gas frack 1948
- First commercial oil and gas frack 1949
- Medina sandstone (NYS) 1960s
- First horizontal well frack (Barnett) 1995
- All Barnett wells fracked: over 14,000!

# Hydrofracking Experience



- More than 1 million wells hydrofracked since 1940
- Governmental organizations never raised any issues
- Nothing new in shale hydrofrack except more water and chemicals

Therefore, the injected fluid does not come into contact with groundwater; it is, in fact, injected into and recovered through a wellbore that has been specifically constructed to safely convey hydrocarbons under pressure to the surface without negatively impacting fresh water aquifers. The Department has ***no record of any documented instance of groundwater contamination caused by hydraulic fracturing for gas well development in New York, despite the use of this technology in thousands of wells across the state during the past 50 or more years.***

New York State Department of Environmental Conservation  
Division of Mineral Resources  
Bureau of Oil and Gas Regulation

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# NY Marcellus Spacing - Vertical and Horizontal

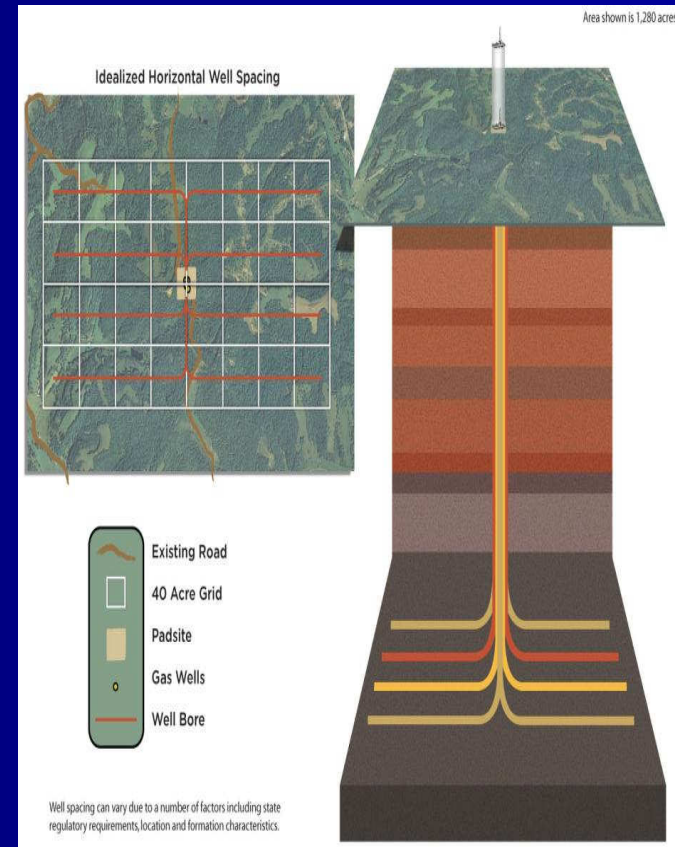
## 2005 & 2008 Legislation

Shale Gas (Vertical Well)	any depth	36 to 44	Wellbore within the target formation no less than 460 feet from any unit boundary
Shale Gas (Horizontal Well - written commitment to drill infill wells with all horizontal infill wells to be drilled from a common pad within three years of the first well drilled)	any depth	Up to 640	Initial horizontal wellbore or wellbores within the target formation approximately centered in the unit and no wellbore in target formation less than 330 feet from any unit boundary
Shale Gas (Horizontal Well - no written commitment to drill infill wells)	any depth	36 to 44 (plus, if applicable, the number of additional acres necessary and sufficient to ensure the horizontal wellbore within the target formation is no less than 330 feet from any unit boundary)	Wellbore within the target formation no less than 330 feet from any unit boundary

# Marcellus Land Impact Positive

- Four to five acre drilling pad, consolidated area
- Multiple wells from one location
- Horizontal wells for greater resource recovery
- Smaller footprint, landowner options
- Environmentally, farm friendly

# Horizontal Drilling – Reduced Footprint *Mandated in New York ECL § 23-0501(1)(b)(vi)*



# Final Draft SGEIS Released This Week

- Now includes economic and community impacts
- Comment period of at least 90 days
- Public hearings will be held in NYC and Marcellus areas

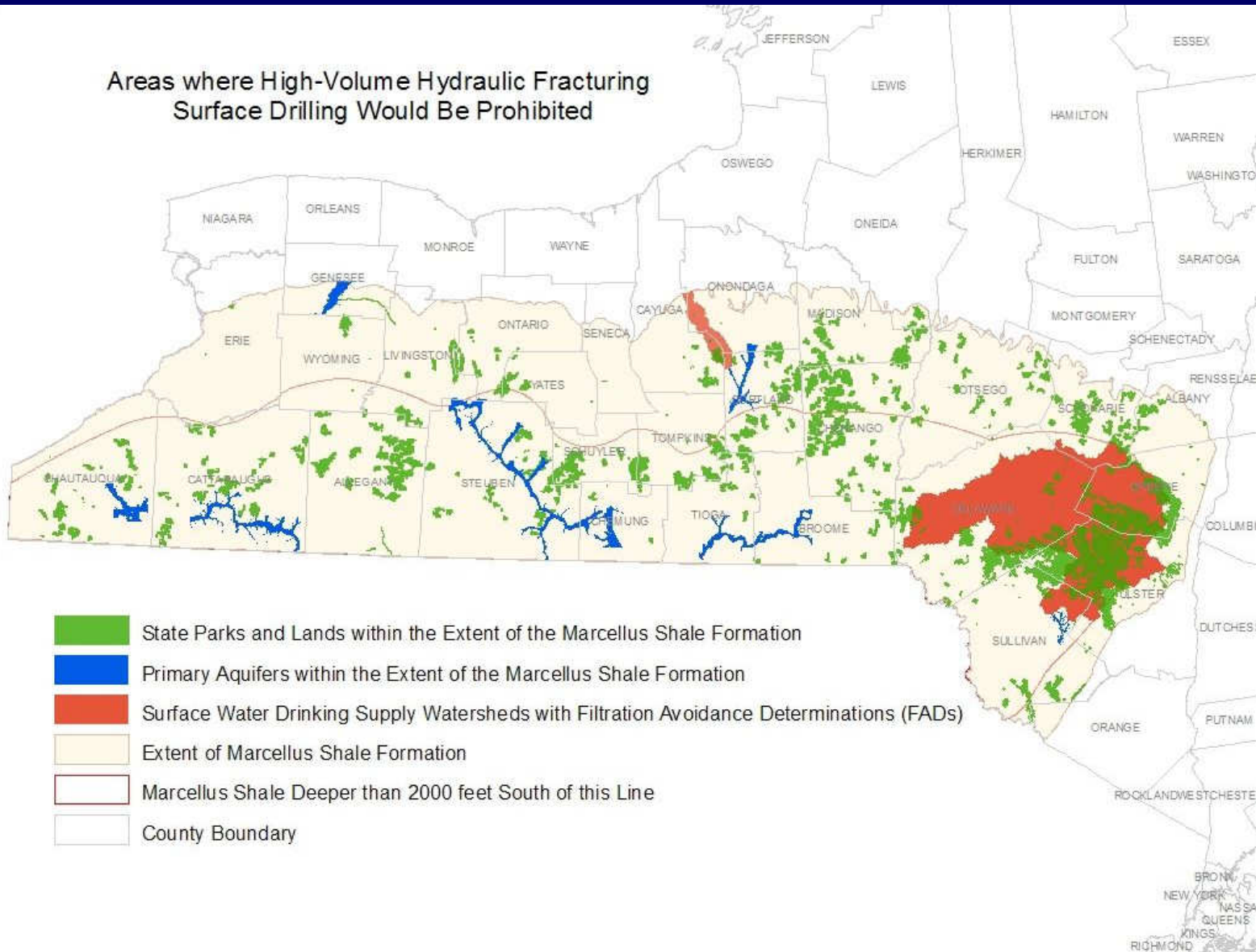


# What's New in SGEIS (September 2011)?



- Prohibitions and setbacks expanded
  - NYC and Syracuse watersheds out
  - No surface drilling in aquifers, floodplains
  - Streams, water wells, floodplains
  - Restrictions on private lands re forests, grasses
- No surface drilling on state lands
- Additional well casing
- Air, water issues, plans
- Noise, visual development accommodation
- Socio-economic and community impacts

## Areas where High-Volume Hydraulic Fracturing Surface Drilling Would Be Prohibited



# Impact of Prohibitions and Setbacks

- Removes drilling, recovery efficiencies
- Acreage available more like 40-50%
- Fragmentation of leased parcels
- More sites for same lease holdings, \$'s
- Increased land, traffic and environmental impact
- Lesser production, stranded acreage

# Supersedure Legislative Intent (1981)

- Clear intent to supersede all local regulation except local “roads and taxation”
- Includes zoning
- Given for democrats
- Verified after law was passed with Senate sponsor

# Why Zone Out

- Won't survive challenge
- May result in landowner 'taking' lawsuits
- Investment in leases lost - lawsuits?
- Companies may leave state
- What about the landowners?
- Keeping farms as farms, open space

# Supersedure and SGEIS?

- Applicant certifies consistency with local land use and zoning
- DEC will not review local law
- If not consistent, DEC another review
- No timeframes, criteria for decisions
- Sets up litigation between local government, industry, landowners

# What's Wrong with That?

- DEC thinks it is complying with SEQR
- But no need if superseded
- Refuses to confirm what it has done for thirty years
- Shifts litigation, costs to others
- Appeases environmental groups at expense of landowners

# Local Governments Hurt

- Will bear litigation costs, divisiveness in communities
- Will lose on supersedure issue – Anschutz v. Town of Dryden
- May facing 'takings' lawsuits from landowners
- Landowners may lose out by companies walking away

# Economic Impacts from SGEIS

- Jobs: 13,000 - 54,000
- Annual job impacts: \$621 million – \$2.5 billion
- State income tax: \$24 – \$125 million
- 413 v. 1,652 horizontal and vertical wells



# What About Owego, Tioga County, NY?

- 3 counties closest to NY in PA
- 101 horizontal wells with over 100 days
- Weighted ave. daily prod. = 3,034 mcf
- Assume one well is drilled on private, one public
- Use NY's current ad-valorem tax
- NYSORPS 2011 UOP (\$9.80/mcf)
- Current gas prices (\$4.8708/mcf) 12 month on 4/28/11
- Tax allocation from property tax bill

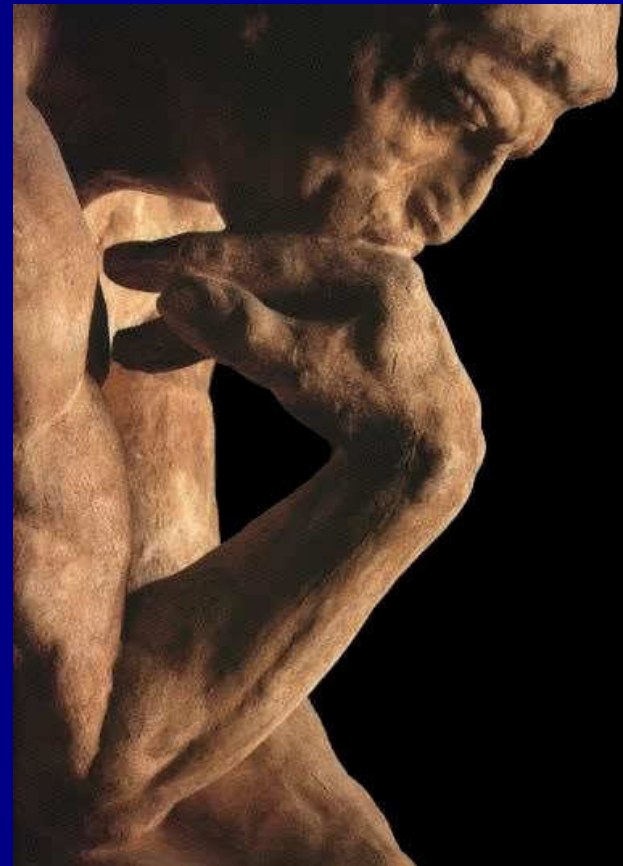
## NY Real Property Taxes Gas Production Projection for Marcellus Drilling (One Well, Town of Owego, Tioga Co.)

Avg Well Prod.	3,034	Mcf	
Annual Prod Total	1,107,410	Mcf	
NYS UOP Value	\$9.80	Per Mcf	2011 State Value
Uniform %	76%		
	Taxable Value	Tax Rate/m\$	Tax
County	\$8,247,990	10.788	\$88,979.31
Recycle	\$8,247,990	0.451	\$3,719.84
Townwide	\$8,247,990	0.869925	\$7,175.13
Part Town	\$8,247,990	2.200307	\$18,148.11
Apalachin Fire	\$8,247,990	2.154005	\$17,766.21
Owego/Appalachin School Tax	\$8,247,990	25.253141	\$208,287.65
Totals		41.716378	\$344,076.25

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# Key Points – Plus One Well on Town Property

- \$344,076 1<sup>st</sup> year local property taxes
- \$674,247 1<sup>st</sup> year royalty payments
- \$1,018,523 total annual payments to Town of Owego



# Cabot Oil & Gas Production – May 2011

- 69 horizontal wells N.E. PA
- Producing 420 Mmcf per day
- At \$5 per mcf, total value is \$2.1 million per day
- Royalties at 15%, landowners receive \$315,000 per day!!!
- Direct payments to landowners

# More SGEIS Issues

- Costly new requirements with questionable environmental benefits
- Legal authority cloaked in SEQR
- Selective regulation re other industries
- Multiple plans with each application
- Inconsistent with statutory mandate

# Regulatory Uncertainty

- Timing of applications re permits
- Multiple points of approval by DEC not internal to DMN
- External points of approval with local governments, DOT, DOH
- Phased development, local approvals?
- Impacts lease positions, contractors

# Parallel DEC Rulemaking

- DEC wants rulemaking to proceed in parallel with SGEIS (early October)
- Codify prohibitions, mitigations, additional requirements
- Not legally necessary re SGEIS
- Stakeholder meetings between DEC and IOGA

# Meeting with DEC

- Prohibitions and setbacks unworkable
- Codification of BMP's blunt technological advancements, flexibility
- New requirements for air and water unjustified
- Mitigations expensive and questionable environmental benefit
- Requirements unequally applied

# At this Point in Time...

- IOGA: NY uncompetitive
- Companies will invest in PA, WVA, OH
- Everybody loses
  - Landowners!!!
  - Local governments
  - State
  - Investment in NY re natural gas users

# Where Are We Now?

- Public comment by December 12
- Hearings in Marcellus areas, NYC
- Discussions w DEC, Governor
- Flurry of local laws/zoning
- Lawsuits on SGEIS expected
- Rule-making before SGEIS?
- No drilling until at least Spring 2012

# What Other Industry ---

- Can be immediate source of employment
- Not looking for handout from the state
- Pay many and all state and local taxes
- Direct 'production' taxes (real property) to locals instead of state
- Direct payments to landowners

# Marcellus Natural Gas Development

----- May be the greatest economic development opportunity in depressed areas of the state that we will see in our generation ----- BCNY 2009

- No environmental compromises
- Produce clean-burning natural gas
- NY landowners deserve to share in the wealth, particularly in depressed areas

# Empire Energy Forum

- Great source of NY public information
- Intended to provide public education on technical issues, such as hydrofracturing

[www.empireenergyforum.com](http://www.empireenergyforum.com)

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