Introduction

For over a year Riverkeeper has tracked the prospect of industrial gas drilling in New York State. While gas drilling in New York is not new, what is new is the magnitude, scope, and location of the proposed drilling method of high-volume hydraulic fracturing. Indeed, industrial gas drilling throughout the Marcellus Shale and other shale reserves in New York (such as the Utica Shale) has the potential to impact the environment and communities dramatically.

*Riverkeeper’s Industrial Gas Drilling Reporter* is intended to collect the many issues associated with this activity – from New York’s ongoing environmental impact study to reported drinking water contamination in states where industrial gas drilling already occurs.

Our goal is to update our members and the general public on the many issues associated with this important and dynamic topic, and to help concerned citizens make informed decisions during the public participation component of New York’s upcoming draft Supplemental Generic Environmental Impact Study. Riverkeeper will update this reporter periodically.


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Acknowledgements

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Riverkeeper is grateful for the support and generosity of our members, and to the New York Community Trust, the Robert Sterling Clark Foundation and the Scherman Foundation, Inc. for support of our Watershed program.

Cover photo of a well site during active Marcellus Shale drilling in Upshur County, West Virginia, in 2008. (An additional water storage pit is not in the photo.) Used by permission of West Virginia Surface Owners’ Rights Organization: www.wvsoro.org. Copyright WVSORO, June 2008.

Riverkeeper is an independent environmental organization dedicated to protecting the Hudson River, and its tributaries, and the New York City drinking water supply. Riverkeeper is a signatory to the 1997 New York City Watershed Memorandum of Agreement, and is a member of the Clean Drinking Water Coalition. For more information about us please visit www.riverkeeper.org.

Riverkeeper is a founding member of the Waterkeeper Alliance (www.waterkeeper.org) an international organization that works with more than 180 Waterkeepers to protect waterways around the globe.

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Background

What is the Marcellus Shale?

The Marcellus Shale is a layer of deep sedimentary rock, deposited by an ancient river delta, with the remains of it now forming the Catskill Mountains. The vast Marcellus Shale extends from Tennessee, through most of West Virginia, across Pennsylvania and eastern Ohio, and into the Southern Tier of New York, including the Catskills and the West-of-Hudson portion of the New York City Watershed. New York’s portion of the Marcellus Shale is approximately 18,750 square miles and is very deep – over 1 mile below ground.

What is Hydraulic Fracturing?

New technology, called hydraulic fracturing, allows drilling companies to extract natural gas from this shale. Natural gas is trapped within fractures between the grains of this fine-grained rock. Drillers drill down vertically into the shale, turn 90 degrees to drill horizontally (sometimes over a mile in length), and then inject water, sand and chemicals under high pressure to release the gas. The pressurized water forms fractures in the rock, which sand and chemicals then prop open.

What are some of the Environmental Impacts?

There are many environmental impacts associated with hydraulic fracturing, or “hydrofracking.” Among them are water consumption and wastewater disposal, toxic chemicals used in hydrofracking, substantial truck traffic, air pollution, noise from the loud hydrofracking operations, and surface water runoff from these large industrial sites. The cumulative effect of these impacts may indeed transform entire communities – turning previously rural, agrarian areas into “fractured communities.”

Hydraulic fracturing requires up to 3 million gallons of water per hydrofrac, and typically each well is hydrofracked many times. The water must be trucked in, stored on-site, and the wastewater disposed of properly (nearly all of the fracturing fluid injected returns to the surface, bringing with it materials from underground including brines, heavy metals, radionuclides, and organics). Even though the gas industry claims that toxic chemicals represent less than 1% of hydrofrack fluid, the U.S. Geological Survey (USGS) explains that for a typical 3 million gallon hydrofrac this results in 15,000 gallons of chemical waste. In existing Marcellus wells outside of New York this waste is stored on-site in large holding ponds until trucks haul it away.

What is the New York City Watershed?

The New York City Watershed, largely in the Catskills, is the source of tap water for over half the State’s population. Specifically, the Croton, Catskill and Delaware watersheds deliver approximately 1.2 billion gallons of pristine, unfiltered drinking water each day from 19 upstate reservoirs to more
than nine million people living in New York City, Westchester, Putnam, Orange and Ulster Counties. The entire New York City Watershed comprises approximately 4.2% of the State’s land, yet supplies unfiltered drinking water to half the State’s population. All surface water and stormwater runoff within the New York City Watershed drains into large reservoirs and travels via gravity through tunnels and aqueducts to consumers’ taps. The 1,560 square mile system in the Catskills (1 million acres) includes six reservoirs and their drainage basins, hundreds of miles of aqueducts and tunnels, and is home to approximately 60,000 people. The New York City Watershed, including its infrastructure, is perhaps the State’s greatest natural resource and the City’s greatest capital asset.

Riverkeeper played an instrumental role in protecting the source of this tap water when it helped structure the 1997 Watershed Memorandum of Agreement, a landmark agreement that establishes ground-rules for protecting the City’s water supply. This agreement set the stage for the City to continue to receive a waiver from federal laws otherwise requiring filtration, known as the filtration avoidance determination (FAD). The FAD allows the City to avoid building a new $10 billion water filtration plant to filter City water in exchange for strong watershed protection programs.

Beyond the New York City Watershed, Riverkeeper is also concerned with the potential effects hydraulic fracturing may have on other significant environmental areas, including the Catskills, the Delaware River watershed, and in the Hudson River watershed, including parts of the Utica Shale that underlie the Mohawk River basin.

**New York State Environmental Review**

No hydraulic fracturing into the Marcellus Shale or other shale reserves will take place in New York until the State completes an update to its 1992 Generic Environmental Impact Statement (GEIS), pursuant to the State Environmental Quality Review Act (SEQRA). Riverkeeper helped shape the scope of review for this study. Each Industrial Gas Drilling Reporter will provide a status update on this critical environmental review.
Fractured Communities

VIDEO OF LANDOWNERS WHOSE PROPERTY WAS “FRACKED”

Watch and listen to landowners tell their own story about hydraulic fracturing. Also watch video from a June 15 panel discussion featuring Dr. Theo Colburn, a world renowned environmental health specialist and founder of The Endocrine Disruption Exchange.


GAS LEASING INFORMATION FOR LANDOWNERS

Riverkeeper strongly encourages landowners that are considering signing gas leases to make informed decisions. Cornell University Cooperative Extension, NYS Attorney General Cuomo, the New York Department of Environmental Conservation (DEC) and the New York Farm Bureau all have information regarding leases. Landowners should be fully aware of their rights, liabilities, and potential environmental impacts before signing a gas lease.

See: http://gasleasing.cce.cornell.edu/

From Attorney General Cuomo:
http://www.oag.state.ny.us/bureaus/environmental/pdfs/Gas%20Brochure%20-%20final%20rc%20edit%208.20.pdf


From the NY DEC: http://www.dec.ny.gov/energy/1532.html

EXPERT CAUTIONS THAT NY DRILLING REGULATIONS NEED MORE SCRUTINY

At a June 23 gas drilling forum hosted by Catskill Mountainkeeper, Wilma Subra, a member of the EPA National Environmental Justice Advisory Council, warned that New York State is seriously lacking oversight of its oil and gas drilling regulations and is overdue for an independent assessment. In 1988 the U.S. EPA and Interstate Oil and Gas Compact Commission began to review state oil and gas regulations. A non-profit, multi-stakeholder organization called STRONGER (State Review of Oil and Natural Gas Environmental Regulations) was formed to continue this process. STRONGER review teams, comprised of stakeholders from the oil and gas industry, state environmental regulatory programs, and members of the environmental/public interest communities review state oil and gas programs against a set of Guidelines developed and agreed to by all the participating parties. New York was last assessed in 1994; that review provided a series of recommendations.

http://www.theithacajournal.com/article/20090624/NEWS01/906240356/Activist++Drilling+in+N.Y.+needs+scrutiny

Catskill Mountainkeeper: http://www.catskillmountainkeeper.org/

STRONGER website: www.strongerinc.org

View STRONGER’s 1994 review of NY regulations:
RESIDENTS ALLEGEDLY FRACKING IS CAUSING EARTHQUAKES IN TX

Residents in Cleburne, TX suspect that hydraulic fracturing in their city is causing earthquakes. Five small earthquakes have occurred in the past month. More earthquakes have been detected in the area since October than in the previous 30 years combined. Although the industry claims there is not any evidence linking the quakes to gas production, further study is needed.

Read a Wall Street Journal Article: http://online.wsj.com/article/SB124476331270108225.html
http://www.google.com/hostednews/ap/article/ALeqM5jtXgj9bjgW7kWV88lqthqBaPvyfwD98PAf00
Listen to an NPR story about Texas earthquakes:

EARTHQUAKES IN ALBERTA, CANADA

Alberta, Canada does not often experience earthquakes. However, geophysicists from the University of Alberta have deployed 11 high-tech seismometers in the Alberta area in order to monitor seismic activity. They are trying to monitor the effects of industrial drilling on old fault lines. It is believed that the water from the drilling process can get into an old fault and make it easier to slip, causing an induced seismic event.


GAS INDUSTRY EXPECTS 100+ GAS WELLS IN TIOGA COUNTY, PA BY YEAR’S END

East Resources Inc, Chesapeake Energy and Fortuna Energy told a group of 100 people at a meeting at Wellsboro High School that they anticipate having permits on more than 100 wells in Tioga County by the end of 2009. Chesapeake Energy estimates that a well can remain on a piece of property for 18 to 24 months. In August and September 2008, natural gas producers were operating between 1,700 and 1,800 rigs in PA. That number is now under 600 rigs, with the number expected to decrease to fewer than 500 by the end of June because of a decrease in prices.

See: http://www.sungazette.com/page/content.detail/id/527679.html?nav=5011

WAYNE COUNTY, PA IS ASKING RESIDENTS TO REPORT ABANDONED WELLS

The Wayne County Conservation District is concerned that hydraulic fracturing could cause fractured material to come back up abandoned wells from the 1960s and 1970s and contaminate groundwater or the surface. They are asking residents to report abandoned wells. There may be as many as 180,000 unknown, orphaned, or abandoned wells in Pennsylvania.


DRBC DETERMINES GAS DRILLING INDUSTRY MUST OBTAIN DRBC PERMISSION FOR ACTIVITY WITHIN SPECIAL PROTECTION WATERS OF THE DELAWARE RIVER

On May 19, 2009 the Delaware River Basin Commission (DRBC) asserted its power to regulate industrial gas drilling activity within the Special Protection Waters of the Delaware River. Specifically,
industrial gas drillers may not start any gas extraction within the drainage basin of these waters (including water withdrawals) without the DRBC’s approval. No party challenged this determination.

The text of the Determination can be found here:

http://www.state.nj.us/drbc/EDD5-19-09.pdf

PUBLIC HEARING – JULY 15, 2009 – DRBC WILL CONSIDER PERMIT APPLICATION TO USE DELAWARE RIVER WATER FOR INDUSTRIAL GAS DRILLING

On July 15, 2009 Delaware River Basin Commission (DRBC) will hold a public hearing in Bethlehem, PA on the first permit application to allow Delaware River water to be used for industrial gas drilling.

Find out more information here:

http://www.state.nj.us/drbc/commeet.htm

Submit a letter to the DRBC through the Delaware Riverkeeper:


FORUM IN MORRISVILLE, NY ADDRESSES INDUSTRIAL DRILLING

A forum for local officials was held Saturday, June 20 at Morrisville State College. About 100 officials from Madison, Onondaga, Tioga, Chenango, Tompkins, Otsego, Cortland, Yates, Delaware and Sullivan counties attended. Officials are concerned about water quality, safety and damage to local roads.


SUSQUEHANNA RIVER BASIN COMMISSION APPROVES WELLS IN PA

The Susquehanna River Basin Commission (SRBC) approved the use of water from the Basin to fracture 20 wells. The SRBC monitors the amount of water removed from this Basin and regulates how companies properly dispose of waste water. Some are concerned about water quality and the possibility of industrializing the countryside.


For more information on the SRBC and its regulations on water withdrawals and other Marcellus issue, see: http://www.srbc.net/programs/projreviewmarcellus.htm

MARCELLUS WEBSITE LAUNCHED

Legislative Update

NEW YORKERS SUPPORT THE FRAC ACT

Newspaper editorial boards and citizens around New York State are expressing support for the FRAC ACT (Fracking Responsibility and Awareness of Chemicals Act). New York Representative Maurice Hinchey co-sponsored this bill to remove the “Halliburton Loophole” from the Safe Drinking Water Act, and allow this important federal law to regulate industrial gas drilling in relation to drinking water. The FRAC ACT would also force drilling companies to reveal the chemicals used in hydraulic fracturing. Companion legislation was introduced in the U.S. Senate by New York state Senator Charles Schumer and Senator Casey (D-PA).

Star Gazette in Elmira, NY:
http://www.stargazette.com/article/20090616/VIEWPOINTS01/906160312/1121/Truth+in+drilling

Read Riverkeeper’s Letter-to-the-Editor in support of the FRAC ACT:
http://www.stargazette.com/article/20090623/VIEWPOINTS03/906230308/1121/Backing+Safe+Drinking+Water+Act+change

Daily Gazette in Schenectady, NY:

Riverkeeper’s Letter-to-the-Editor in Response:

Link to the FRAC Act:

NYS ASSEMBLY PASSES RESOLUTION TO SUPPORT FRAC ACT

Assemblywoman Barbara Lifton authored a resolution calling on Congress to enact H.R. 2766, repealing the 2005 “Halliburton Loophole” for hydraulic fracturing in the Safe Drinking Water Act.

See:

OIL AND GAS INDUSTRY ATTACKS FRAC ACT

Dozens of industry organizations established the Energy in Depth front group to denounce fracking legislation. Industry has launched a multimillion-dollar lobbying and public-relations campaign to defend hydraulic fracturing; the campaign includes websites, Twitter feeds, Facebook groups, and an aggressive ad campaign.

See:
http://industry.bnet.com/energy/10001413/one-big-fracking-problem-for-drillers/
http://wonkroom.thinkprogress.org/2009/06/12/frack-attack/
http://www.philly.com/philly/business/20090619_Oil_firms_boost_lobbying_effort.html

CONGRESSIONAL APPROPRIATIONS COMMITTEE APPROVES A PROVISION URGING THE EPA TO CONDUCT A NEW STUDY ON HYDRAULIC FRACTURING

The House Appropriations Subcommittee on Interior, Environment, and Related Agencies, approved language that would formally urge the U.S. Environmental Protection Agency (EPA) to conduct a new study on the risks that hydraulic fracturing poses to drinking water supplies. New York Congressman Maurice Hinchey authored the provision. The full Appropriations Committee subsequently approved the bill and report. The measure now moves to the House floor. The Bush Administration’s EPA conducted a study on the matter in 2004. However that study focused on shallow coal-bed methane fracking and is widely considered flawed for a variety of reasons, including the way it selectively collected data from sources that had a vested interest in the oil and gas industry and ignored other relevant information.

http://www.newschannel34.com/content/developingnews/story/House-Appropriations-Committee-Advances-Hinchey/qrEOi8V-gEmPuw6WUyw-wg.aspx

A link to the 2004 EPA study can be found here:

NY LEGISLATION SEEKS TO RE-ESTABLISH OVERSIGHT OF GAS DRILLING

The State Assembly unanimously passed a bill, proposed by Assemblywoman Donna Lupardo, to re-establish the New York State Oil, Natural Gas and Solution Mining Advisory Board. The board has not met since 1994. The board is similar to that established years ago, but would be expanded to include input from municipalities and landowners. The State Senate is considering a similar bill.


An article discussing both the provision for a new EPA study and the NY legislation to reestablish the Advisory Board can be found here:
http://www.stargazette.com/article/20090618/NEWS01/906180387/Bills+would+force+more+scrutiny+on+gas+industry

NY ASSEMBLY AND GOVERNOR PROPOSE TO REGULATE WATER WITHDRAWALS

Assemblyman Robert K. Sweeney introduced a bill to regulate water withdrawals in NY State, which could have a major impact on industrial drilling activities. The bill places a 50,000 gallon threshold for reporting withdrawals to the regulatory agency, and a 100,000 gallon threshold for obtaining a permit. Permit fees would benefit the Environmental Protection Fund. The bill sets forth several exemptions, namely for agriculture, emergencies, residential purposes and public water systems.
Assemblyman Sweeney’s bill can be found here:
http://assembly.state.ny.us/leg/?bn=A08806&sh=t

Governor Paterson is circulating a bill to regulate water withdrawals in NY State. The Governor’s bill would amend existing permitting procedures and proposes a 100,000 gallon threshold. The permit fees would benefit the Department of Environmental Conservation’s Environmental Regulatory Account. It also gives the DEC exclusive authority to regulate water withdrawals.

The bill support memo can be found here:
http://www.state.ny.us/governor/bills/pdf/gpbm_51.pdf

The text of the bill can be found here:

GOVERNOR PATerson PROPOSES A TAX ON GAS DRILLING

Governor Paterson has circulated a bill to create a severance tax on gas drilling in NY State. The bill would impose a four percent tax on natural gas wells.

The bill support memo can be found here:
http://www.state.ny.us/governor/bills/pdf/gpbm_47.pdf

The text of the bill can be found here:
http://www.state.ny.us/governor/bills/pdf/gpb_47.pdf

NYC COUNCIL RESOLUTION PROPOSED

A group of New York City Council members, led by Councilman James Gennaro, proposed Resolution 1850, which calls on the New York State Legislature, the New York State Department of Environmental Conservation, and New York State Governor David Paterson to prohibit drilling for natural gas within the boundaries of the watershed of the New York City drinking water supply. The New York City Council has not yet passed the Resolution.

The text of the resolution can be found here:

LAWS ON DRILLING CONSIDERED IN SULLIVAN COUNTY, NY

The Sullivan County Legislature’s environmental committee is considering two laws related to industrial gas drilling. One addresses procedures related to heavy vehicle traffic from drilling development. The other would prohibit seismic testing on county roads. They are also considering two resolutions asking the State legislature to consider measures pertaining to natural gas, and a third resolution advising the Delaware River Basin Commission of their concerns about the impact of drilling within flood-prone areas.

OTSEGO COUNTY CALLS FOR DISCLOSURE OF CHEMICALS AND SEVERANCE TAX

Otsego County passed a resolution calling for public disclosure of all substances intended to be used in industrial gas drilling, and for a severance tax to help pay for adequate regulation and oversight of this process.

http://www.earthworksaction.org/pubs-others/NY_OtsegoCounty_RES09153.pdf

PA BILL TO TAX INDUSTRIAL GAS IS APPROVED IN COMMITTEE

Governor Rendell of PA has been pushing for a tax on the extraction of industrial gas from the Marcellus Shale. The PA House Environmental Resources and Energy Committee approved a modified version of Rendell’s plan.

See:

http://kdka.com/wireapnewsfnpa/House_committee_OKs.21056764.html
Recent Gas Drilling Reports and Studies

GROUND WATER PROTECTION COUNCIL RELEASES REPORT ON SHALE GAS DEVELOPMENT

In April 2009, the Ground Water Protection Council (GWPC), in consultation with the gas drilling industry, prepared a “primer” on shale gas development for the U.S. Department of Energy. The GWPC is a non-profit entity comprised of state regulators. Because the GWPC is made up of state regulators, they typically advocate against any federal oversight. For example, the GWPC recently testified at a Congressional hearing that it is against repealing the Halliburton Loophole – the GWPC does not want the Safe Drinking Water Act to regulate hydraulic fracturing.

This pro-drilling document discusses “the importance of shale gas” and downplays any adverse environmental impacts, including the chemicals used and how the Energy Policy Act of 2005 exempted hydraulic fracturing from the Safe Drinking Water Act and other important federal environmental laws.

The primer can be found here:

SEQRA Review Update

ENVIRONMENTAL GROUPS CALL FOR EXTENDED PUBLIC COMMENT PERIOD

Riverkeeper joined a coalition of twenty local and national environmental groups asking Governor Paterson to extend the public comment period for the forthcoming Draft Supplemental Generic Environmental Impact Statement (DSGIES) to at least sixty (60) days. The groups also want at least seven public hearings that are convenient and accessible to interested parties, including one in New York City. Under SEQRA, the DEC is required to provide at least 30 days, but may extend this time period and provide a public hearing.


OTSEGO COUNTY NY CALLS FOR EXTENDED PUBLIC COMMENT PERIOD

Otsego County passed a resolution calling on DEC to extend the public comment period to at least 60 days.

Read the resolution here:
http://www.earthworksaction.org/pubs-others/NY_OtsegoCounty_RES09153.pdf

DEC EXPECTED TO RELEASE DRAFT SGEIS IN SEPTEMBER 2009

The DEC expects to be finished with their draft SGEIS by late September 2009. Rep. Maurice Hinchey has commended the DEC for giving this matter the scrutiny it deserves and not taking their time. At least one gas drilling company, however, would like to see this study conducted while it drills.

See:
http://www.theithacajournal.com/article/20090627/NEWS01/906270409/1126/Natural+gas+regulations+delayed++state+says
http://news10now.com/content/all_news/475762/dec-extends-marcellus-shale-study

On February 6, 2009 the DEC released its final scope for the forthcoming draft supplemental generic environmental impact statement (DGEIS). Riverkeeper and its environmental partners help shape this final scope. We now expect the DEC to issue the DGEIS near the end of September.

Read the final scope: http://www.dec.ny.gov/docs/materials_minerals_pdf/finalscopec copy.pdf

Riverkeeper helped shape the scope of this review. View our comments on the draft scope here: