



# New York's Rush to Frack

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# Overview

- What is hydraulic fracturing (“hydrofracking” or “fracking”)? What do we mean when we refer to fracking?
- Fracking’s harmful impacts
- Update on New York State’s rush to frack
- What you can do: How to comment on the state’s fracking proposal

# The Time To Act is Now

- DEC is accepting comments on its fracking environmental impact statement and regulations until **January 11.**
- The DEC is legally bound to read and respond to all comments. You may comment more than once. But you must comment by **January 11.**
- It is very important that you tell the Governor and DEC what you think of fracking now because this may be your last meaningful opportunity to do so.

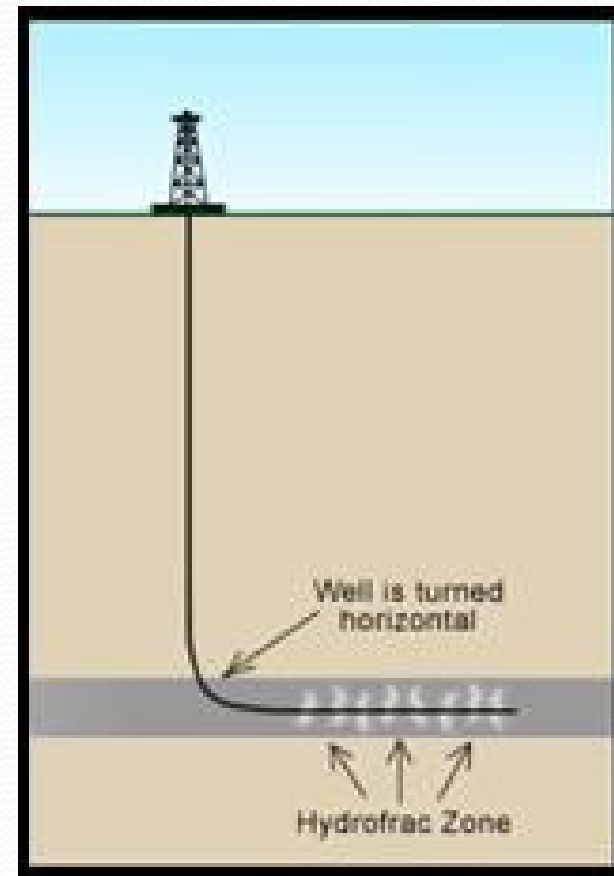


# Hydrofracking or Fracking

- The term hydrofracking or fracking is used as short hand to describe the entire shale gas extraction process, which includes:
  - Site development (the building of the well pad, access roads, pipelines)
  - Drilling
  - Hydraulic Fracturing
  - Production of the gas
  - Wastewater disposal

# Hydraulic Fracturing

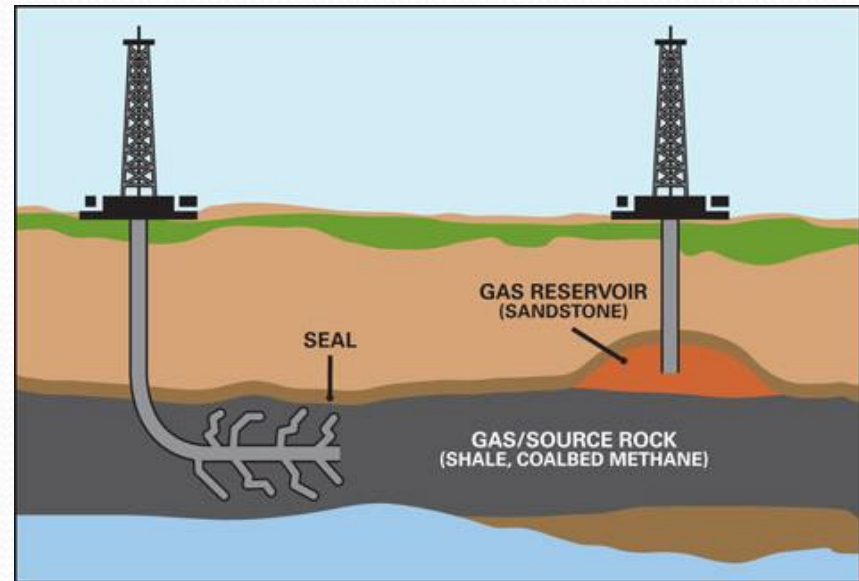
- Hydraulic fracturing itself takes place after drilling and involves injecting toxic chemicals, sand, and millions of gallons of water under high pressure directly into shale formations. This toxic brew, along with any naturally occurring brines, heavy metals, and radioactive material then flows back to the surface with the natural gas.





# Drilling can be horizontal or vertical

- Horizontal drilling is not new.
- Vertical drilling is not new.
- Vertical hydrofracking is not new.
- **Horizontal hydrofracking** is what is not currently allowed, but is being considered in NY and is more damaging than vertical hydrofracking.



# Why is horizontal fracking more dangerous than vertical fracking?

- Horizontal hydrofracking, as compared to vertical hydrofracking, involves:
  - 2x-3x the surface disturbance;
  - At least 7x greater water usage (750k gallons versus 7-8 million gallons);
  - Thousands more truck trips (4000 trucks per frack for horizontal); and
  - Other adverse impacts, including longer drilling and fracking times.

<http://www.knappap.com/content/vwells.pdf>.





## Marcellus shale

This map shows the extent of the Marcellus shale in New York state. The area has the potential for natural gas drilling.



Source: NYS Department of Environmental Conservation The Post-Standard



# Harmful Impacts of Fracking

- Fracking:
  - Contaminates our water
  - Pollutes our air
  - Permanently alters the land
  - Changes community character





# Marcellus Shale Gas Extraction Impacts

## 1: Land use alteration & infrastructure

- Well pads
- Access roads
- Transport vehicles
- Onsite, open waste storage pits
- Compression stations
- Pipelines





## 2: Three-Five million gallons of water used to fracture each well

- Significant quantities of water withdrawal from surface water resources required



## 3: Mixture of water, sand and chemicals injected into well produces large quantities of wastewater:

- Flowback (10-35% of chemically-laced fracking fluids can return to surface)
- Production brine – materials naturally present deep underground are brought up to the surface (heavy metals, brine, and radioactive materials)



## 4: Mishandling of wastewater may lead to:

- Spills and leaks at drill site
- Illegal disposal/improperly treated wastewater



Source:

[http://weblogs.baltimoresun.com/features/green/2011/03/fracking\\_wastewater\\_dumped\\_in.html](http://weblogs.baltimoresun.com/features/green/2011/03/fracking_wastewater_dumped_in.html)



# NY Times Findings on Wastewater Handling in Pennsylvania

- More than 1.3 billion gallons of wastewater were produced by Pennsylvania wells over the past three years. Most was sent to treatment plants not equipped to remove many of the toxic and radioactive materials in the drilling waste.
- Twelve sewage treatment plants in three states accepted gas industry wastewater and discharged waste that was only partly treated into rivers, lakes and streams.
- Wells producing wastewater with high levels of radiation reported levels of radium or other radioactive material 100x as high as the levels set by federal drinking-water standards. At least 15 wells produced wastewater more than 1,000x the amount of radioactivity considered acceptable.

# Water Contamination Proven!

- A study by Duke University researchers in 2011 found higher levels of leaked methane in well water collected near fracked sites. The researchers were able to trace the methane to the fracked wells.
- A pair of environmental monitoring wells drilled deep into an aquifer in Wyoming were found to contain high levels of cancer-causing chemicals, at least one of which is commonly used in hydrofracking according to new water test results released November 15 by EPA.



# Documented Impacts in Other States

- In 2011, a catastrophic blowout in Pennsylvania of a Chesapeake Energy natural gas well resulted in a release of thousands of gallons of hydrofracking fluid, much of which spilled over nearby farm fields into an adjacent river. The spill forced seven families to evacuate their homes.
- In Texas, water wells near fracking sites have been found to have high levels of hexavalent chromium and other carcinogens.
- A study found air pollution caused by natural gas drilling in the Barnett Shale surpassed that produced by all vehicle traffic in the Dallas-Fort Worth area.

# NY's Rush to Frack

- Since 2008, there has been growing industry interest in and pressure to allow fracking in New York.





# Background on NY Process

- **1992** – Generic Environmental Impact Statement on Vertical Gas Drilling.
- **2008** – DEC called for updated impact statement based on growing interest in hydrofracking in NY.
- **2009** – Draft Supplement General Environmental Impact Statement (SGEIS) released for comment. DEC receives more than 13,000 comments.
- **2010** – Governor Paterson orders revised draft of SGEIS.

# NY's Rush to Frack

- **July 1, 2011** – DEC releases incomplete revised draft SGEIS (missing community and economic impacts sections) in response to direction from Governor Cuomo.
- **September 7, 2011** – DEC releases revised draft SGEIS for public comment.
- **September 28, 2011** – DEC releases draft hydrofracking regulations and draft general stormwater permit.
- **November 2011** – DEC will hold four public hearings on the SGEIS, regulations, and stormwater permit.
- **December 12, 2011** – Deadline to comment on SGEIS, regulations, and stormwater permit.
- **Update – Comment period extended until January 11, 2012.**



# NY Limiting Public Right to Comment

- DEC is providing a comment period on three documents: the 1500 page SGEIS, the draft regulations and general stormwater permit, all running simultaneously.
- Spirit and intent of environmental review statute is for SGEIS to be completed first.
  - DEC fully acknowledged this in its July 1, 2011 SGEIS, in which it indicated that it would release regulations *after* the SGEIS process is complete because it would then “be in a position to rationally determine what additional measures or procedures” should become part of the Department’s existing regulatory framework. This language has been deleted from the September SGEIS.
- Because hydrofracking permits are not like other DEC permits, this will be public’s only opportunity to comment.

# The permits are coming...

- DEC has not committed to finalizing regulations before moving forward with permitting. Agency officials have publicly stated that they intend to begin processing permits as soon as the environmental review process is complete sometime in 2012.





# What you can do

- DEC is accepting comments on its fracking environmental impact statement and regulations until **January 11**.
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The documents are **thousands** of pages long, so how do you begin? Here are some ideas...



New York State Department of Environmental Conservation

Revised Draft

Supplemental Generic Environmental Impact Statement  
On The Oil, Gas and Solution Mining  
Regulatory Program

**FLAWED**

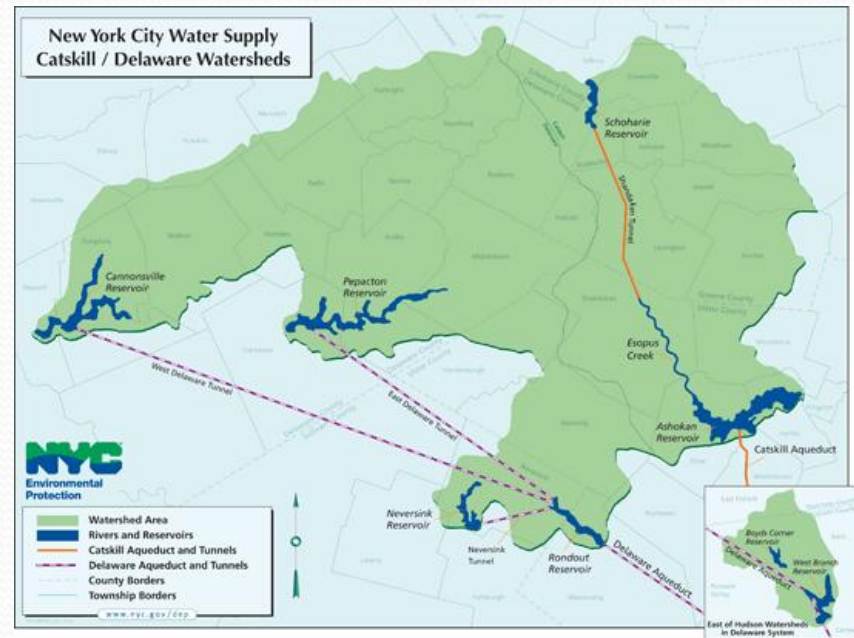
Well Permit Issuance for Horizontal Drilling  
and High-Volume Hydraulic Fracturing to  
Develop the Marcellus Shale and Other  
Low-Permeability Gas Reservoirs





# DEC has failed to protect the tunnels, aqueducts, and dams that deliver NYC's water.

- The state has only proposed establishing a heightened review for wells proposed within 1000 feet of infrastructure.
- Horizontal drills from surface wells sited within a mile, but outside the 1000 feet buffer, could easily reach under the infrastructure.



# NYC Watershed is not fully protected

- Although the DEC proposes to put the watershed that supplies New York City's unfiltered drinking water off limits to drillers, the watershed is not adequately protected:
  - Horizontal drills and fracking could still reach under watershed lands.
  - This does not prevent wastewater disposal issues or problems associated with truck traffic, water withdrawals, pipelines, and air pollution.
  - Drilling involving less than 300,000 gallons of water allowed.





# Inadequate plans for wastewater disposal

- There are no wastewater treatment plants in New York State designed to treat wastewater from high-volume fracking operations.



# Failure to analyze true costs

- DEC's Economic Assessment Report, a part of the impact statement, contains hundreds of pages discussing possible economic benefits of fracking, and yet dismisses the potential negative economic impacts.
  - **There is no estimate of costs to communities.**
  - No explanation of how **hundreds of millions of dollars in annual road damage** will be accounted for.
  - Report completely ignores the potential **negative impact to agriculture** from land and water contamination risks.
  - Potential **negative impacts on tourism** are similarly dismissed.



# Failure to consider health impacts

- The state completely omitted potential health impacts from its draft environmental impact review.
- A coalition of more than 250 doctors and health care professionals recently petitioned Governor Cuomo to request that an independent school of public health conduct a Health Impact Analysis for fracking.



# Threat to Water Supplies

- **Principal Aquifers Should Be Off Limits.** Principal aquifers are aquifers whose geology suggests abundant potential water supply, but which are currently only minimally used as sources of water supply by major municipal systems. DEC only proposes that applications for fracking within 500 feet of these areas be subject to additional environmental review.
- **Private Water Supplies Should be Protected.** DEC has proposed a 500 foot setback from any private water wells within which drilling would be prohibited, but the property owner may chose to waive this protection.
- **Open pits should be prohibited.** DEC currently only requires a site-specific review to use open pits to store wastewater.



# Industrial Activities on Residential Lands: Mortgage/Financial Consequences

- Some banks refuse to offer mortgages to properties encumbered by gas leases due to potential hazards.
- Fracking operations likely cause decreases in property values resulting in lower local real property tax revenues.
- Fracking operations may hinder the homeowners' ability to obtain insurance, which leaves them unprotected from liabilities due to gas drilling.

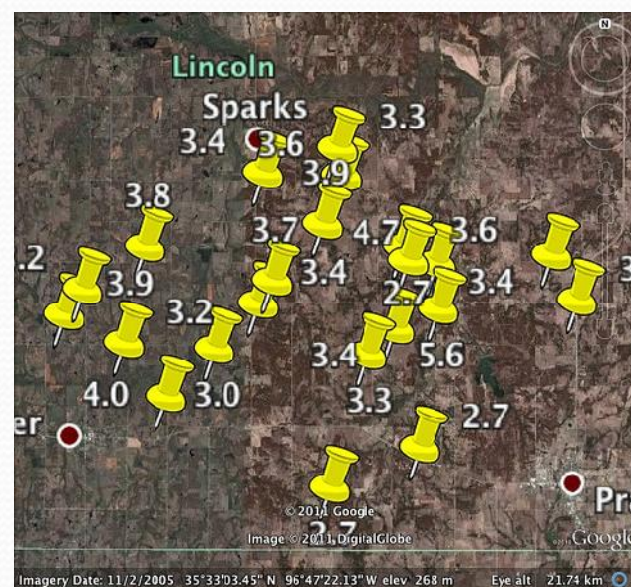




# The Fracking-Earthquake Connection

There is a strong correlation between fracking and quakes.

- **Quakes from waste injections:** The US Geological Survey has confirmed that earthquakes have been caused by injection of fluids into deep wells for waste disposal and recovery of oil.
- **Quakes from fracking:** British shale gas developer, Cuadrilla Resources, found it was “highly probable” that its fracturing operations caused quakes in England.



The Oklahoma Geological Survey found that fracking operations may have triggered a swarm of nearly 50 earthquakes earlier this year in Oklahoma.



# How to submit comments

- Comments on both the draft Environmental Impact Statement and the draft regulations are due by **January 11, 2012**.
- Comments can be submitted online or via mail.
- See handout for instructions or visit Riverkeeper's website at <http://www.riverkeeper.org/?p=16018> for more information on how to comment.
- Computers are available at the library to comment today!

Thank you!

Questions?

Please visit Riverkeeper at:

[www.riverkeeper.org](http://www.riverkeeper.org) or  
[www.Dontfrackwithny.com](http://www.Dontfrackwithny.com)

