



# Fracking legislation 2013

Jennifer Walling

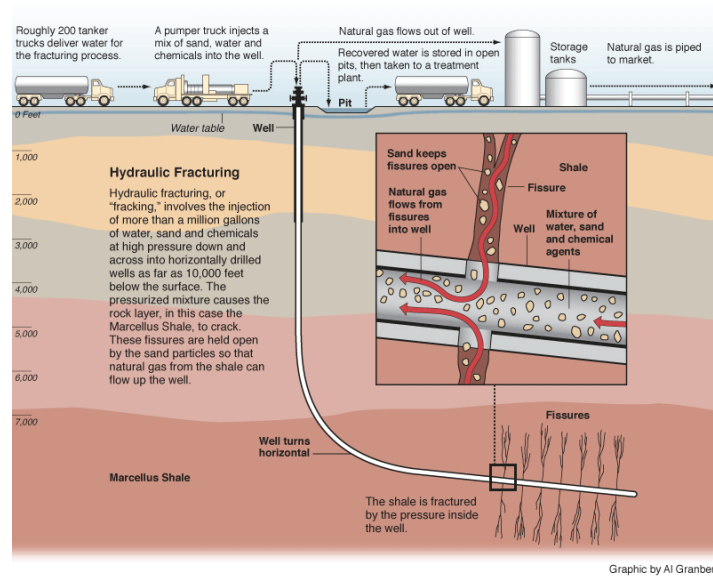
Illinois Environmental Council

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## Just some of the environmental issues related to fracking...

- Toxicity of compounds used in fracking process.
- Volume of water used in the process.
- Contamination of groundwater and surface water.
- Storage and toxicity of wastewater.
- Air emissions, including methane.
- Changes related to new traffic and development in rural areas.
- Issues related to storage in injection wells (earthquakes, contamination).

# Water Contamination



- Mixing of the chemicals
- Leaking well casings
- Flowback
- Storage of waste water onsite
- Storage of waste water (deep well injection)





**ILLINOIS DEPARTMENT OF NATURAL RESOURCES**  
Office of Mines and Minerals

Division of Oil and Gas (217) 762-7756  
One Natural Resources Way  
Springfield, Illinois 62702-1271



**OG-9 WELL COMPLETION REPORT**

**TYPE OF REPORT:**

NEW WELL  CONVERSION  DOPH  DEEPENING  WORKOVER

**TYPE OF WELL:**

OIL PRODUCER  GAS PRODUCER  CLASS II INJECTION WELL  WATER SUPPLY  
 OBSERVATION  GAS STORAGE  D&A  SERVICE  COAL BED GAS  COAL MINE GAS

PERMITTEE: Campbell Energy, LLC PERMITTEE #: 4440  
WELL NAME: Salem #H-1 PERMIT #: 061739  
LOCATION: Q330N 0320E SWc SW REFERENCE #: 213857  
COUNTY: White SECTION: 22 TOWNSHIP: 6S RANGE: 10E

**DRILLING DATA:**

WELL NOT DRILLED, PERMIT EXPIRED  WELL NOT CONVERTED, PERMIT EXPIRED

DATE DRILLING BEGAN: 2/2/12 FINISHED: 2/2/12  
ELEVATION: KB 383 DF 382 GR 371  
ROTARY: FROM 0 TO 674 CABLE: FROM      TO       
T.D.: 3780 F.B.T.D.     

**TEST DATA:**

WERE ELECTRIC OR OTHER WIRELINE LOGS RUN:  YES  NO  
TYPE OF LOG: Micro log / Gamma Ray Photo Density Comp Unit DATE: 2/10/12  
TYPE OF LOG: Arcey Induction Gamma Ray DATE: 2/10/12  
TYPE OF LOG: Lithology Strip Logs DATE: 2/20/12  
WAS WELL CORED:  YES  NO INTERVAL CORED:       
DRILL STEM TEST RUN:  YES  NO - ZONE TESTED:     

**CONSTRUCTION DATA:**

CASING	SIZE	SETTING DEPTH	SACKS CEMENT	HOLE SIZE	TOP OF CEMENT	TOP DETERMINED BY
SURFACE	9 5/8"	200'	333	12 1/4"	surface	circumfered to pits/surface
INTERMED./MINE STRING / OR LINER						
PRODUCTION	7"	4067	420	8 3/4"	surface	circumfered to pits/surface
OTHER						

TUBING: TYPE: EVERS SIZE: 2 7/8  
PACKER: 1. BRAND AND TYPE:      SETTING DEPTH:       
2. BRAND AND TYPE:      SETTING DEPTH:     

**WELL COMPLETION DATA FOR PRODUCTION / INJECTION FORMATIONS:**

FORMATION NAME	LITHOLOGY	PERF. INTERVAL	OPEN HOLE INTERVAL	ACIDIZED / FRACTURED / OTHER (LIST AMOUNTS USED AND OTHER DETAILS)
Salem LS			4065-674	10,000 Gal Acid 7 Stage Frack With 569,600 lb sand and 15,241.7 Bbl water

**PRODUCTION INFORMATION:**

PRODUCING FORMATIONS: Salem LS  
DATE OF FIRST PRODUCTION (OIL TO TANK) April 11th  
DATE OF TEST (STARTED TESTING TO TANK) April 10th  
LENGTH OF TEST: Still Producing  
INITIAL PRODUCTION RATE:  
OIL 204 BBL PER DAY WATER 260 BBL PER DAY GAS ? MCF  
*Handwritten: 15,241.7 x 42 = 640,157*  
*Handwritten: 600,000*  
*Handwritten: Ref. 213857*

**INJECTION INFORMATION:**

INJECTION / DISPOSAL FORMATION(s):       
TYPE OF INJECTED FLUID:  FRESHWATER  SALTWATER  OTHER (SPECIFY)       
SOURCE OF INJECTED FLUID:       
DATE OF FIRST INJECTION:       
RATE PER DAY:      BBL WATER AT      PSI  
     MCF GAS AT      PSI

UNDER PENALTIES OF PERJURY, I DECLARE THAT I HAVE EXAMINED THIS REPORT, INCLUDING ACCOMPANYING STATEMENTS AND DOCUMENTS, AND TO THE BEST OF MY KNOWLEDGE, IT IS TRUE, CORRECT, AND COMPLETE.

SIGNATURE OF PERMITTEE OR DESIGNEE: [Signature] TITLE: Member  
1327 CR BOON DATE: 6-13-12  
ADDRESS: Carr, IL 62821  
CITY, STATE:     

This form complies to reporting requirements of information that is necessary to meet the regulatory program as outlined in the IL Compiled Stat. Ch. 231 par. 721 et. seq. Failure to disclose this information will result in this form not being processed. This form has been approved by the Illinois Management Center.



# Fracking Legislative History

- SB2058/SB664 – Hydraulic Fracturing Disclosure (2011) – Died in House
- SB3280/ HB3897 – Hydraulic Fracturing Disclosure and then fracking moratorium (2012)
- SB3534 – Industry Fracking Bill (2012)
- HB2615 – Regulatory bill
- HB3086/SB1418 – Fracking Moratorium and Task Force

## Current laws

- Process is exempt from Resource Conservation and Recovery Act and the Safe Drinking Water Act. Exemptions from Comprehensive Environmental Responsibility, Compensation and Liability Act, Clean Air Act, Clean Water Act, and other federal laws.
- Current Illinois is insufficient to protect people and the environment from risks associated with fracking.

# List of Chemicals used in fracking from fracfocus.org

- Hydrochloric Acid
- Glutaraldehyde
- Quaternary Ammonium Chloride
- Quaternary Ammonium Chloride
- Tetrakis Hydroxymethyl-Phosphonium Sulfate
- Ammonium Persulfate
- Sodium Chloride
- Magnesium Peroxide
- Magnesium Oxide
- Calcium Chloride
- Choline Chloride
- Tetramethyl ammonium chloride
- Sodium Chloride
- Isopropanol
- Methanol
- Formic Acid
- Acetaldehyde
- Petroleum Distillate
- Hydrotreated Light Petroleum Distillate
- Potassium Metaborate
- Triethanolamine Zirconate
- Sodium Tetraborate
- Boric Acid
- Zirconium Complex
- Borate Salts
- Ethylene Glycol
- Methanol
- Polyacrylamide
- Petroleum Distillate
- Hydrotreated Light Petroleum Distillate
- Methanol
- Ethylene Glycol
- Guar Gum
- Petroleum Distillate
- Hydrotreated Light Petroleum Distillate
- Methanol
- Polysaccharide Blend
- Ethylene Glycol
- Citric Acid
- Acetic Acid
- Thioglycolic Acid
- Sodium Erythorbate
- Lauryl Sulfate
- Isopropanol
- Ethylene Glycol
- Sodium Hydroxide
- Potassium Hydroxide
- Acetic Acid
- Sodium Carbonate
- Potassium Carbonate
- Copolymer of Acrylamide and Sodium Acrylate
- Sodium Polycarboxylate
- Phosphonic Acid Salt
- Lauryl Sulfate
- Ethanol
- Naphthalene
- Methanol
- Isopropyl Alcohol
- 2-Butoxyethanol



# Water contamination

- Complaints from nearby property owners after fracturing operations have begun.
- Dispute over methane contamination of water.
  - Pavillion, Wyoming
  - Osborn, Stephen G. et al. "Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing." Proceedings of the National Academy of Sciences. April 14, 2011



Photo of contaminated water by Pavillion Area Concerned Citizens provided by Natural Resources Defense Council

# Chemical Disclosure Provisions in SB1715

- All chemical information must be posted on a state website and provided to the public.
- Unlike in many states, fracking companies may not simply withhold information they deem to be a trade secret; rather, they must provide all chemical information – including trade secrets – to the Department.
- The public can challenge the claim that something is a trade secret, and even trade secrets must be disclosed to health professionals.

# Testing of wells

- Pre-testing of area wells and surface waters is required, and if post-fracking water testing reveals contamination of those water sources, the operator is presumed responsible for the contamination. (In most states, the burden of proof would be on the landowner to show that the operator was responsible.).

- Fracking waste water must be stored in closed tanks rather than open pits. Open pits are a key source of runoff and discharge into local water sources.



An open pit pond holding slurry from hydraulic fracturing  
Photo by J. Henry Fair

# Water Supply

- A single well can use 2 million to 8 million gallons of water.
- Under SB1715, permit applicants must submit a water management report.
- IDNR may suspend, revoke, or deny a permit under emergency circumstances.

# Water

- Strong well construction standards to prevent possible leakage,
- A ban on injecting dangerous diesel compounds,
- Fracking permit applicants must submit a water management plan describing methods used to minimize water withdrawals, and the bill requires reporting of total water used in fracking,
- Setbacks from from houses and sensitive structures (such as hospitals, schools, nursing homes, etc.), Setbacks from water supply intakes and other water sources (wells, lakes, ponds, rivers, reservoirs, developed springs),
- Well plugging requirements and standards.



# Air emissions

- Natural gas has fewer overall emissions than coal, but
- Natural gas has greater global climate change potential than carbon dioxide emissions.
- Volatile organic compounds and other toxics may be released from both the fracking equipment and from increased truck traffic in the area.



Flaring Natural Gas.  
Photo from EARTHWORKS

# Air Protections in SB1715

- Must use natural gas or flare the gas.
- Exceeds federal air standards.

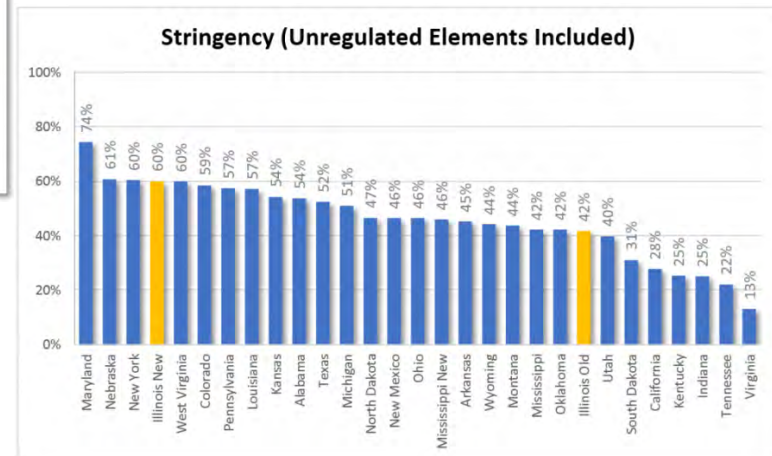
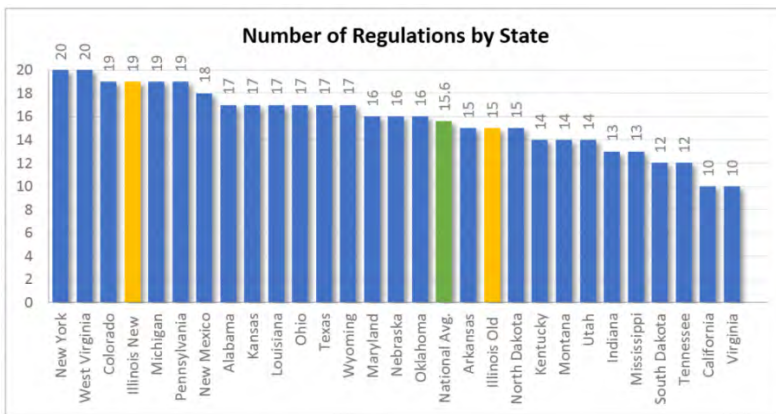
# Public Participation

- Robust opportunities for public participation in the fracking permitting process,
- Ability of citizens to appeal permits,
- Ability of citizens to enforce the law through citizen law suits.



**Fracking** on the Pinedale Anticline formation in Pinedale, **Wyoming**.  
Picture from the National Wildlife Federation.

# Passage of SB1715



From Resources for the Future <http://common-resources.org/2013/are-illinois-new-shale-gas-regulations-the-strongest-in-the-country/>

# Administrative Rules

- *Storage tanks requirement.* The HFRA requires that polluted fracking wastewater be stored in tanks, and allow above ground pits (which can leak and spill) to be used only in an emergency. But the draft rules would encourage routine, non-emergency use of the pits.
- *Information for emergency responders.* The HFRA requires that DNR provide information about fracking chemicals to health professionals in an emergency even if it is trade-secret protected. But the draft rules make supplying that information discretionary, and provide a completely unworkable system for emergency responders who need the information.
- *Applicability threshold.* HFRA uses broad language to include fracking wells that have been fracked in the past (and are still conducting operations that can be regulated), and all wells over a low gallonage threshold. But the rules attempt to truncate the reach of the statute, both by limiting its retroactivity and failing to address certain types of fracks that could potentially slide under the gallonage threshold.
- *Presumption of liability.* The HFRA established a presumption that where pollution occurs within 1500 feet of fracking operations, those operations were the cause. But the rules drastically limit the types of pollution the presumption applies to.
- *Modifications:* The HFRA requires that any permit modification that significantly deviates from the original permit must go through an entirely new approval process. But the draft rules provide an extremely narrow definition of what a significant deviation is, meaning that many significant permit changes could be approved without public input.
- Plus 30 Pages of other issues

## Other legislation from 2014 that might be of interest to ILMA

- SB2727 – Bans microbeads from personal care products.
- HB4382/SB2780 – Clean Water Initiative
- HB5648 – Definition of aquatic life expansion
- SB2699 – Urban flooding
- SB3424 – Bans fracking on public lands
- HB4599 – Coal tar ban



# Contact Information

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