

# HYDRAULIC FRACTURING: DISCLOSURE AND TRANSPARENCY

A PRESENTATION BY:  
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OMB Watch

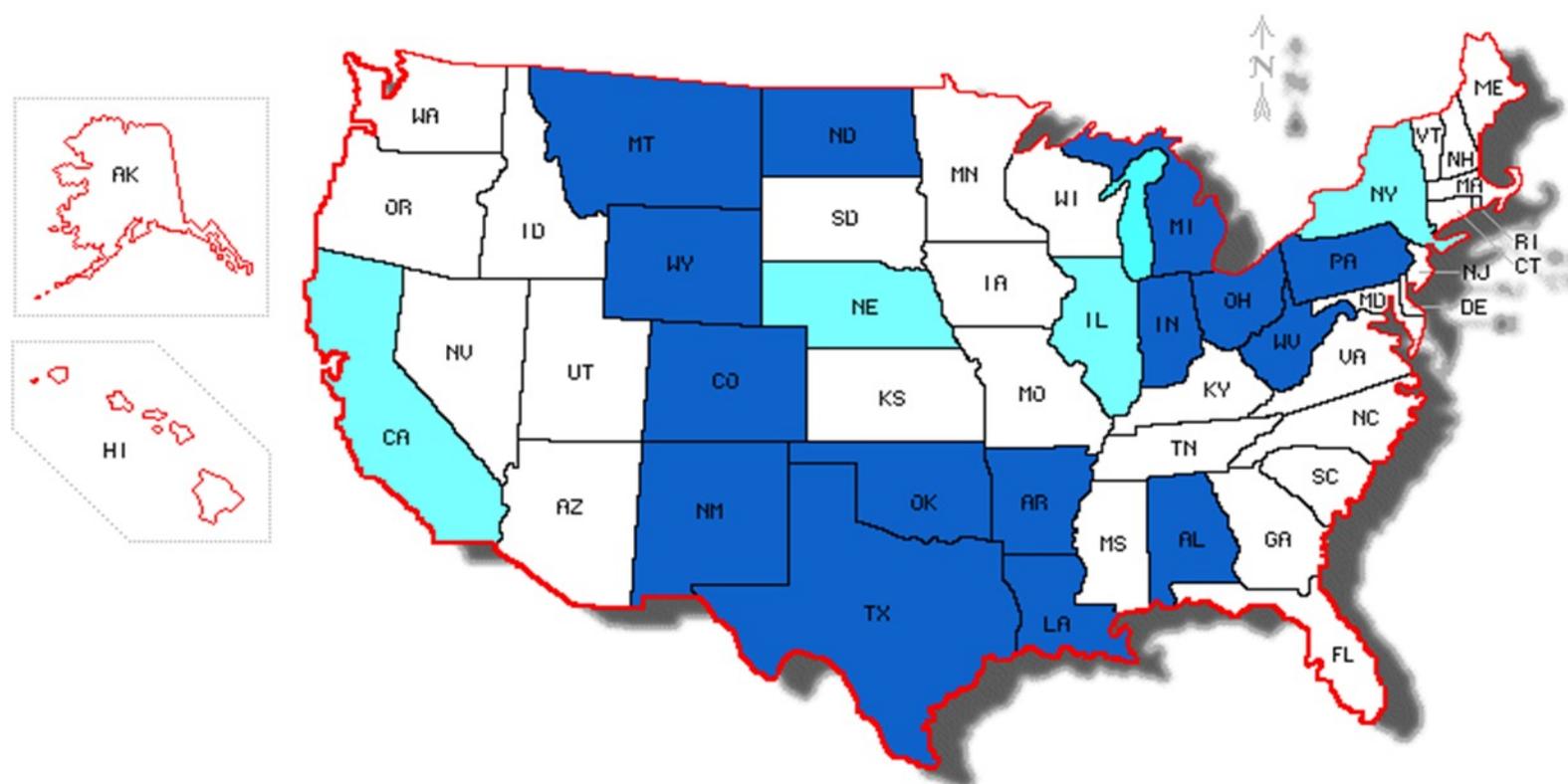


# THE RIGHT TO KNOW, THE RESPONSIBILITY TO PROTECT

- Reviews the expansion of natural gas drilling
- Examines evidence on health risks of drilling
- Lays out elements of an effective chemical disclosure policy
- Examines oversight of chemicals in the states
- Evaluates efforts of 19 chemical disclosure policies that have passed or have been proposed.

## Fracking Disclosure Policies in the States, passed or proposed

- - Passed
- - Proposed



Roughly 200 tanker trucks deliver water for the fracturing process.

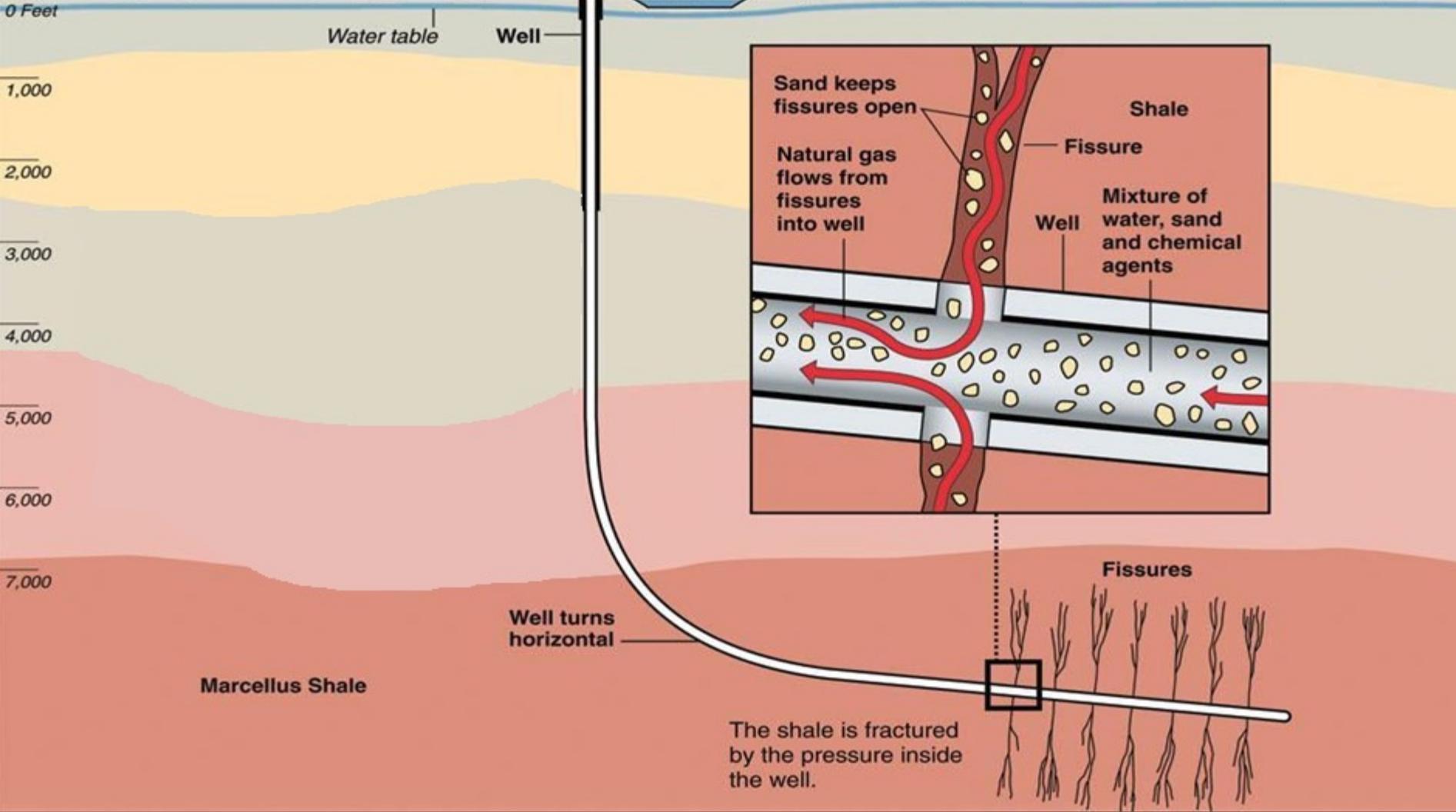
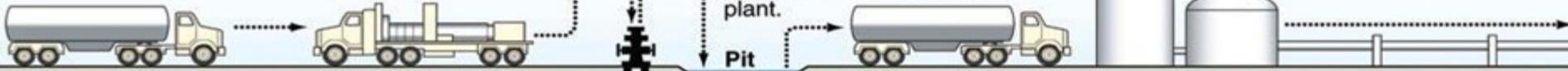
A pumper truck injects a mix of sand, water and chemicals into the well.

Natural gas flows out of well.

Recovered water is stored in open pits, then taken to a treatment plant.

Storage tanks

Natural gas is piped to market.



Sand keeps fissures open

Natural gas flows from fissures into well

Shale

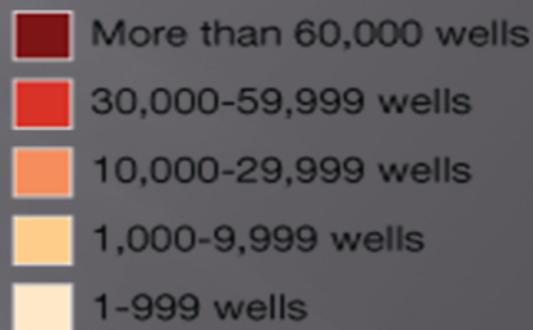
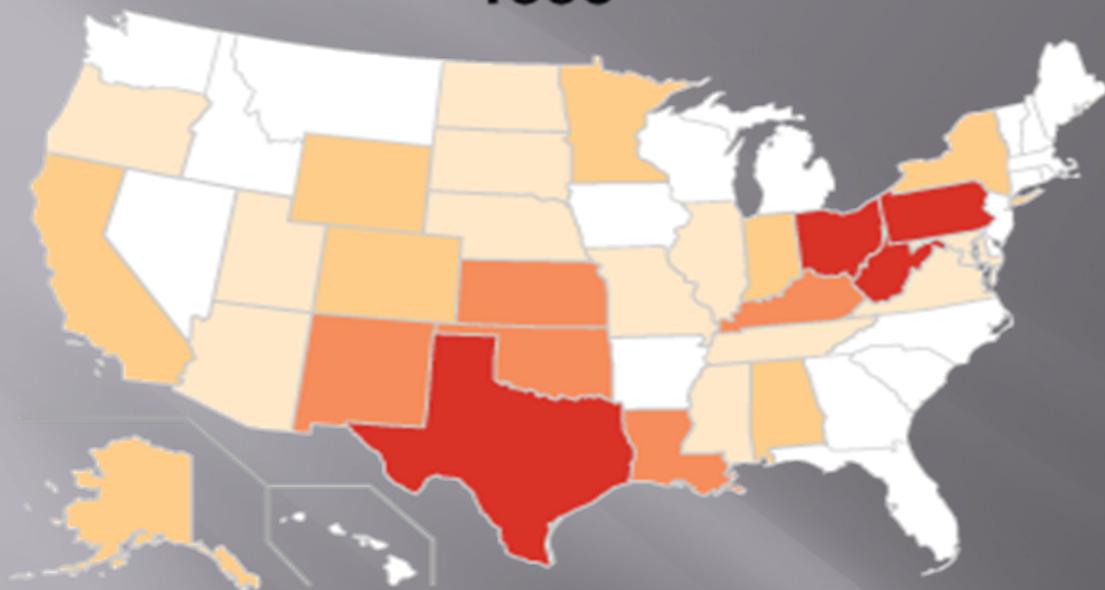
Fissure

Well

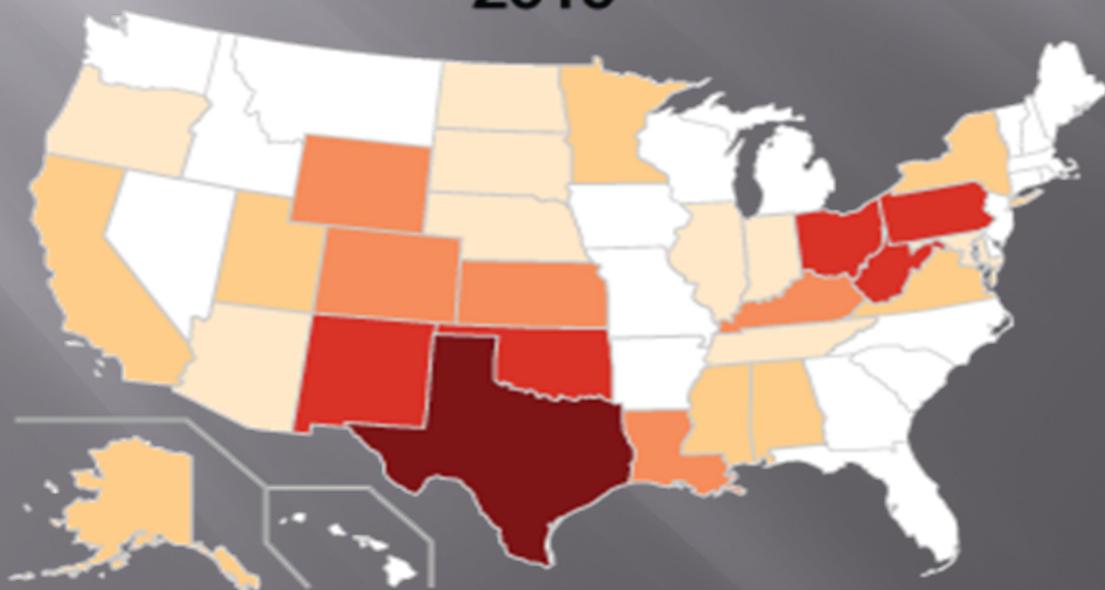
Mixture of water, sand and chemical agents

The shale is fractured by the pressure inside the well.

1990



2010



Natural gas is still hailed as a clean energy source by those extracting and producing it.

**An amazing resource for Americans. A responsible way to produce it.**

New drilling technologies combined with a three-step process called hydraulic fracturing are extracting vast amounts of clean-burning natural gas from shale rock—vast geologic formations that were once considered unusable.

Thanks to these innovations, the United States now has an estimated 200 trillion cubic feet of natural gas reserves. That's enough to meet our needs for over 100 years.

So many Americans want to know more about shale gas. Can it be produced safely, with protected water supplies and the environment?

The answer is yes. Here's how:

- The average depth of a shale gas well is more than 1.5 miles, with thousands of feet of geologic rock between the surface and the natural gas.
- In addition, multiple layers of steel and cement are installed in strategic wells to keep the natural gas and fluids contained in the production process safely within the well.
- Advanced processes are used to manage air quality and to reduce or recycle the volume of water. We are continuing to work with the industry to develop best practices for the safe handling of produced water.

Advanced shale gas reserves are expanding almost 2 million barrels a day. Government policies and regulations are also in place to ensure that this low-produced water well remains safe.

Visit [www.eia.doe.gov](http://www.eia.doe.gov)

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# RISKS OF FRACKING

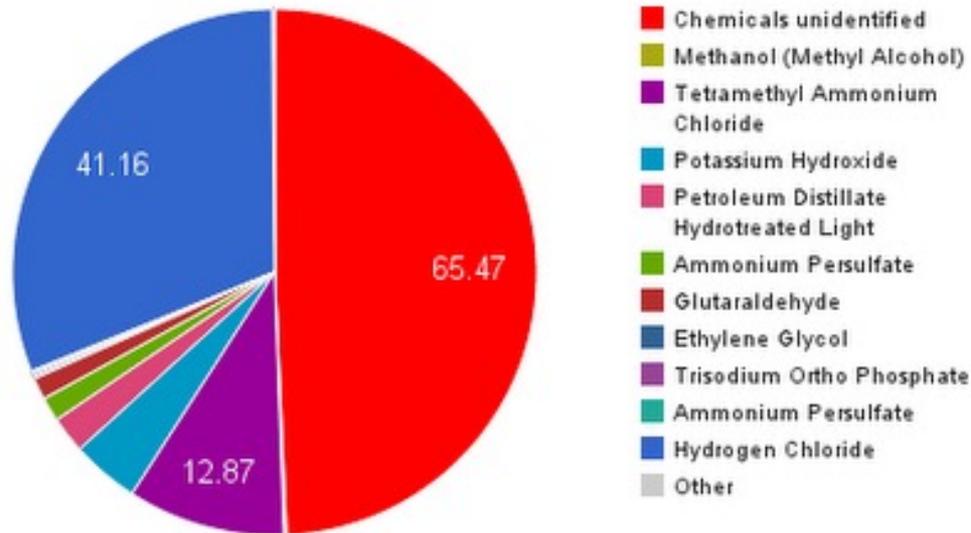
Health effects associated with chemicals in fracking fluid\*

Chemical	Percent of volume	Skin, eye & sensory organs	Respiratory	Gastrointestinal & liver	Brain & nervous system	Immune	Kidney	Cardiovascular & blood	Carcinogen	Mutagen	Developmental	Reproductive	Endocrine disruptor	Other uses
Diammonium peroxodisulphate	29	■	■	■		■		■						bleach, laboratory cleaning
Distillates (petroleum), hydrotreated light	17	■	■	■	■							■		kerosene
Guar gum	15	■	■			■								food additive
Tetramethylammonium chloride	9	■	■	■	■			■						chemical catalyst
Vinylidene chloride/methylacrylate copolymer	6	Not available		■	■									plastic wrap
Methanol	5	■	■	■	■	■	■	■		■	■	■	■	fuel & chemical synthesis (formaldehyde)
1, 2, 3 - Propanetriol	4	■	■	■	■		■	■						sweetener & preservative
2,2',2"-nitrotriethanol	2	■	■	■	■	■	■	■	■	■		■	■	chemical manufacturing
Sorbitol	2	■	■	■		■		■						sweetener & laxative
Sodium tetraborate decahydrate	2	■	■	■	■		■	■			■		■	cleaning products & insecticides
Sodium borate (borax)	1	■	■	■	■		■	■			■		■	cleaning products & insecticides
Acrylamide-sodium 2-acrylamido-2-methyl-1-propanesulfonate	0.9	No health effects												drilling
Ethoxylated branched C7-9, C8-rich alcohols	0.8	■	■											industrial cleaning
Ethoxylated branched C9-11, C10-rich alcohols	0.8	■	■											industrial cleaning
Sodium hydroxide (lye)	0.8	■	■	■										soap & textiles
Bis(hydrogenated tallow alkyl)dimethylammonium bentonite	0.6	■	■			■								various industrial uses
Ethoxylated propoxylated 4-nonylphenol-formaldehyde resin	0.6	■	■	■	■	■	■	■	■	■	■	■		circuit board manufacturing
Heavy aromatic naphtha	0.4	■	■		■			■						gasoline & paint thinner production
Alcohols, C11-14-isoalcs, C13-rich, ethoxylated	0.4	■	■	■										chemical catalyst
Alkylbenzyltrimethylammonium chlorides, benzyl-C10-16	0.4	Not available												various industrial uses
Magnesium silicate hydrate (talc)	0.3	■	■	■	■			■	■					baby powder
Poly(oxy-1,2-ethanediyl)	0.2	■	■	■		■	■							pesticides
Alcohols, C12-13-alkyl, ethoxylated	0.2	■	■	■										chemical catalyst
Alcohol ethoxylate C-10/16 with 6.5 EO	0.2	■	■	■										industrial cleaning
Sodium chloride	0.1	■	■	■	■		■	■	■			■		table salt
Tetrakis(hydroxymethyl)phosphonium sulfate	0.1	■	■	■	■	■	■	■	■	■	■		■	pesticides
Non-crystalline silica	0.1	■	■	■		■								electronics
Boric acid	0.0042	■	■	■	■	■	■	■			■	■	■	insecticides
	100.0%													

\* Dependent upon degree and route of exposure.

SOURCES: WYOMING OIL AND GAS CONSERVATION COMMISSION; THE ENDOCRINE DISRUPTION EXCHANGE

# Chemicals identified vs. Chemicals left unidentified (in tons)



<http://www.businessinsider.com/there-are-many-scary-chemicals-in-fracking-fluid-at-this-pennsylvania-site-2012-5>

# TIMELINE

- **1974:** Congress passes Safe Drinking Water Act to protect groundwater as a source of drinking water
- **1996:** Fracking for methane in Alabama leads to lawsuit LEAF v. EPA, alleging that injection of fluids for fracking must be regulated by EPA
- **1997:** U.S. Court of Appeals for 11th Circuit rules that EPA must regulate fracking under SDWA
- **2001:** In response to lawsuit, EPA begins study of effects of fracking on drinking water. Vice President Cheney's Energy Task Force urges EPA to conclude that it should not regulate fracking.
- **2003:** President Bush publicly backs energy bill that would exempt fracking from regulation under SDWA.
- **2005:** Congress passes and Bush signs Energy Policy Act of 2005, officially exempting fracking from regulation
- **2009:** Legislation introduced in Congress to protect drinking water from oil and gas development.
- **2010:** House Committee on Energy and Commerce begins study of environmental impacts of fracking. At request of Congress, EPA announces it will further study fracking effects.
- **2010:** Wyoming becomes the first state to mandate that gas industry fully disclose to the public what chemicals are being used in each well at fracking sites. Many other states begin to follow suit.

# WHAT IS A GOOD FRACKING DISCLOSURE POLICY?

- ▣ Requiring chemical disclosure, baseline studies, full industry plans and high quality of construction as a condition of permitting
- ▣ Getting detailed information on all chemicals and from all companies involved
- ▣ Posting information online
- ▣ Limiting the use of Trade Secret Claims



# SCOPE OF INFORMATION

- ▣ Specific Information policies should mandate:
  - the unique ID number of each chemical
  - Concentration or volume of each chemical
  - Amount, type, and sources of base fluid pumped into well
  - That information be collected on all chemicals and from all companies involved.

# AVAILABILITY OF INFORMATION

- ▣ Information should be posted online
- ▣ Simple, standardized forms
- ▣ Website should be easily searchable by a number of criteria and downloadable
- ▣ State governments should run websites themselves, not pass to third party like [Fracfocus.org](http://Fracfocus.org)

# “TRADE SECRETS”

A good system for managing trade secrets claims would include the following:

- ▣ A very narrow definition of ‘Trade Secrets, or ‘Confidential Business Information’
- ▣ No exemptions for data related to health effects or toxicity, access for health providers and first responders.
- ▣ A requirement that companies explain how and why the information is a trade secret
- ▣ Mechanisms for the public to challenge a claim
- ▣ States should review claims of confidential business information

# HOW DO CURRENT STATE POLICIES STACK UP?

	Is chemical disclosure, comprehensive, specific, and timely?	Is baseline data collected before the drilling begins?	Is information readily available to the public online?	Are there limits on "confidential business information" exemptions?
Best Protections	Colorado	Wyoming	Colorado California*	Colorado
Some Protections	Arkansas California* Illinois* Indiana Louisiana Montana Nebraska* New Mexico North Dakota Pennsylvania Texas West Virginia Wyoming	Montana New York* Pennsylvania West Virginia	Illinois* Michigan Nebraska* New York* North Dakota Ohio Pennsylvania Texas	Arkansas Illinois* Louisiana Montana Nebraska* New York* Pennsylvania Texas Wyoming
Inadequate Protections	Alabama Michigan Ohio New York*	Alabama Arkansas California* Colorado Illinois* Indiana Louisiana Michigan Nebraska* New Mexico North Dakota Ohio Texas	Alabama Arkansas Indiana Louisiana Montana New Mexico West Virginia Wyoming	Alabama California* Indiana Michigan New Mexico North Dakota Ohio West Virginia
No State Action			Kansas Kentucky Mississippi Oklahoma Utah Virginia	

Key: Legislation and laws in black; rules adopted by state agencies in red; no state action taken in blue.

# REPORT RELEASE, June 28<sup>th</sup>

- ▣ Op-Ed pieces to send to state and local reporters
- ▣ Possible releases of state by state factsheets or 'state policy profiles'.

## Indiana

In 2010, wells in Indiana produced about 7 billion cubic feet of natural gas. About 90 percent of this production occurred in the New Albany shale formation in southern Indiana (see Map 2).

On Feb. 29, 2012, Governor Mitch Daniels (R) signed a bill (House Enrolled Act 1107) that would require the state's Natural Resources Commission to adopt rules for reporting and disclosing the chemicals used in fracking fluids.<sup>1</sup> The bill defines the terms "hydraulic fracturing" and "base fluid." Rep. Eric Koch (R-Bedford) sponsored the bill, which becomes effective on July 1.

The bill does not provide much detail but allows the commission to adopt rules on any other information it deems necessary.

### The Scope of Chemical Disclosure

- The bill refers to gas and drilling operations but does not provide detail as to the scope of disclosure.

### Specific Chemical Information

- Under the bill, the state's Natural Resources Commission would require oil and gas drilling operations to disclose: the volume and source of the base fluid used; a description of each additive used in fracking treatment; the volume of each additive "expressed as a percentage of the total fracturing fluid volume"; and the maximum surface and injection pressures that are used to obtain base fluid.

### Online Disclosure

- Online disclosure is not required.

### Baseline Data

- There is no requirement to report baseline data.

### Trade Secrets Process and Limitations

- There is no mention of trade secrets processes and limitations.



<sup>1</sup> "House Enrolled Act No. 1107." General Assembly of the State of Indiana, 2012. <http://www.in.gov/legislative/bills/2012/HE/HE1107.1.html>.

# TELL US HOW WE CAN HELP

- ▣ Materials, sample language
- ▣ Review draft policies in your state
- ▣ Information on messaging or strategic opportunities
- ▣ Sample press materials on this, or other themes that would be useful from your perspective

# CONCLUSION

- ▣ In the absence of federal legislative action, states must do more
- ▣ There is no evidence that disclosure requirements will cripple business
- ▣ This is a debate about public safety and corporate accountability and mitigating the environmental risks of fracking.