



[UNLEASHING THE POWER OF GREEN]

Horizontal Fracking

Melanie Houston,
Director of Water Policy &
Environmental Health

Ohio Environmental Council

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Today's presentation

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- Background on OEC + our position
- State of shale gas development in Ohio + quick overview of the process
- General environmental + public health risks
- Specific threats to Ohio
- Recent legislation +OEC's 2013 agenda
- What you can do + advice for landowners



Ohio Environmental Council

- « Advocacy, non-profit
- « Legislative initiatives
- « Legal action
- « Science and policy
- « Network and partnerships



Proposed Ohio Moratorium

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The Ohio General Assembly should immediately issue a moratorium ordering the Ohio Department of Natural Resources to withhold approval of new well permits involving high volume, horizontal hydraulic drilling, exploration, or extraction until such time as drilling practices are demonstrated to be safe for the environment and human health, and are properly regulated.

[illegible]

Source: Energy Inform
Updated: May 9, 2011



**Total wells
permitted = 601**

- Utica = 581
- Marcellus = 20

**Total wells
drilled = 291**

- Utica = 281
- Marcellus = 10

Potential Marcellus in Ohio

Potential Utica in Ohio



Utica shale drilling

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Utica-shale drilling

WELLS DRILLED

In Ohio, 187 Utica shale wells have been or are being drilled. Of those, as many as 114 have yet to produce natural gas, natural-gas liquids or oil. Ohio officials had predicted that as many as 250 wells would be drilled by the end of the year. Industry experts say low commodity prices and transportation issues have slowed the pace.

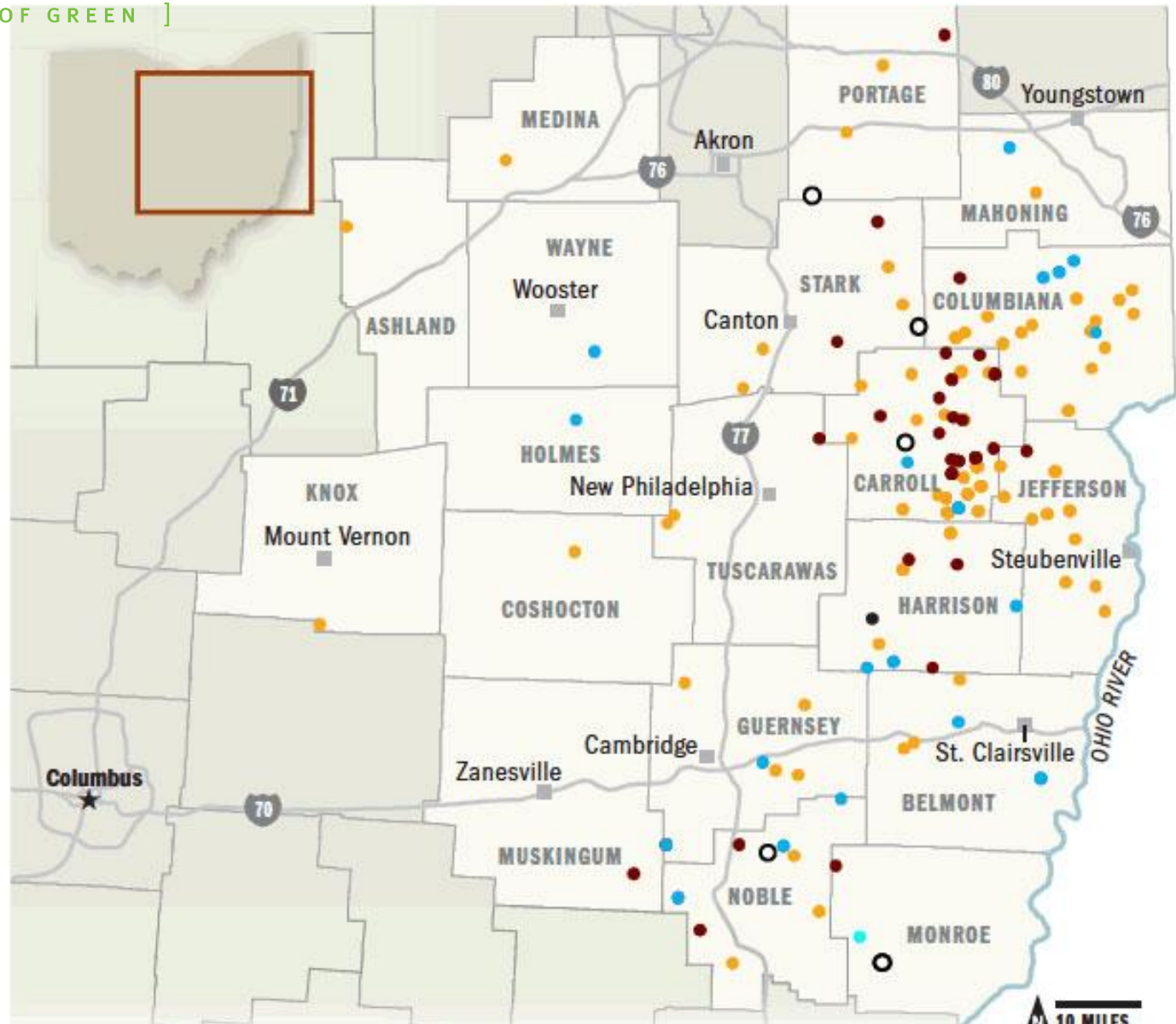
NO. OF WELLS, STATUS

- 22 Drilling
- 45 Producing oil and/or gas
- 114 Drilled but not producing
- 6 Plugged and not producing

Some locations include more than one well

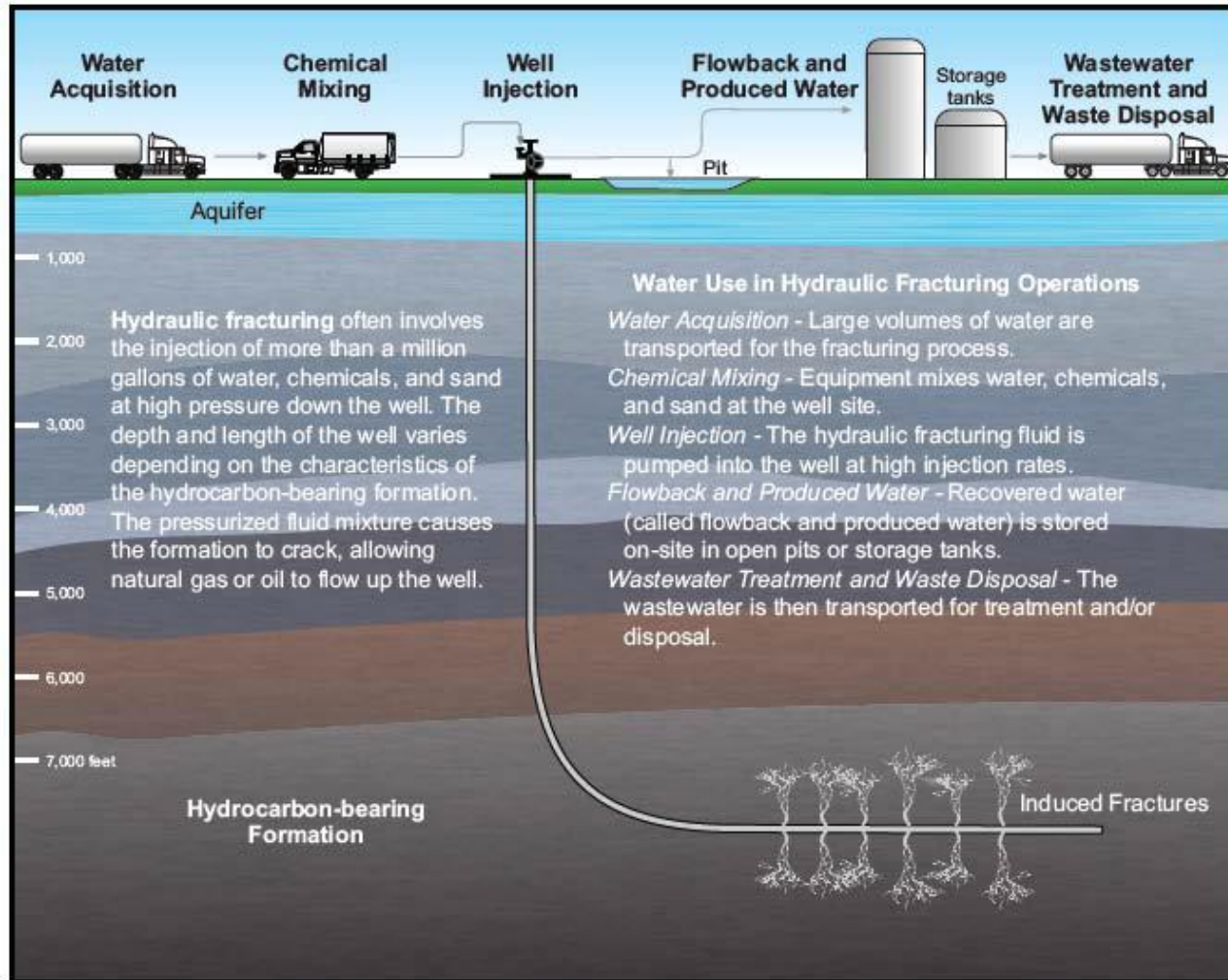
Source: *Dispatch* analysis of Ohio Department of

Columbus Dispatch,
Dec 3, 2012

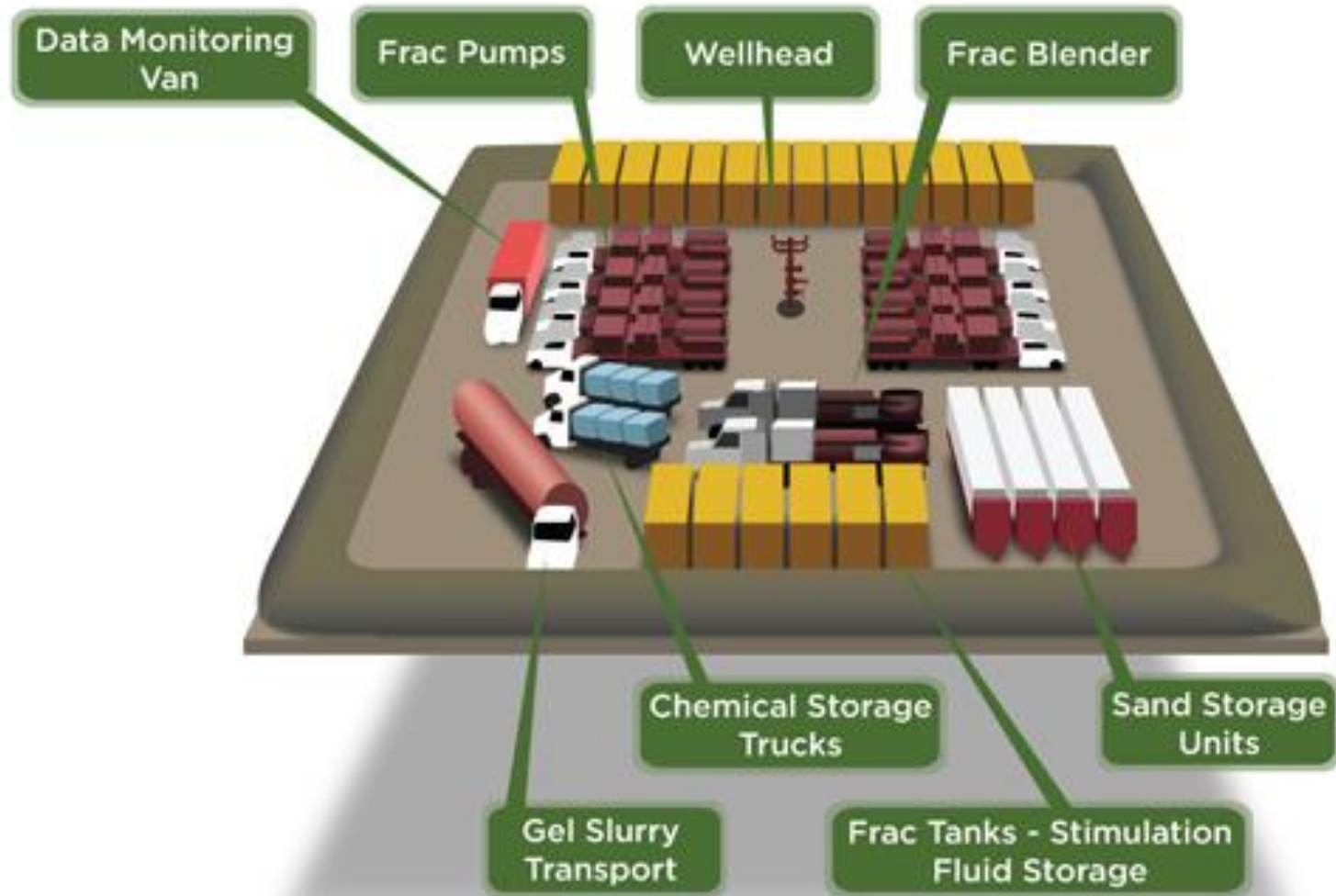


Potential for serious impacts to...

public health, environment, quality of life



Hydraulic fracturing equipment





QUINNIPIAC POLL

January 2012

Economy

- 2:1
- Ohio voters say the economic benefits of drilling outweigh environmental concerns

HOWEVER...

Environment

- 3:1
- Ohio voters says stop fracking until further studies reveal its impact.





Risks to water quality



- **Cornell University study**
 - “An uncontrolled health experiment on an enormous scale”
- **Duke University study**
 - Found methane concentrations 17X higher in drinking water wells closer to natural gas wells
- **Akron Beacon Journal**
 - 1 million pounds of chemicals used at a single well site



Risks to air quality



- Colorado School of Public Health:
 - “Our data show that it is important to include air pollution in the national dialogue on natural gas development that has focused largely on water exposures to hydraulic fracturing,” said Lisa McKenzie, Ph.D., MPH
 - “We also calculated higher cancer risks for residents living nearer to the wells as compared to those residing further [away],” the report said. “Benzene is the major contributor to lifetime excess cancer risk from both scenarios.”

<http://attheforefront.ucdenver.edu/?p=2546>



Risks to land & wildlife



- Habitat fragmentation
- Noise and light pollution
- Stream sedimentation



Specific threats to Ohio

- Water withdrawals
- Grand River – an endangered river
- Public lands: state and federal
- Waste disposal
- Seismic events
- Accidents & incidents
- Local impacts



Water Consumption & Water Withdrawals





Eastern hellbender | *Cryptobranchus alleganiensis*



ohioamphibians.com photo

The Eastern hellbender is the largest amphibian in Ohio and is listed as an endangered species.

- **Length:** 11.5 to 27 inches
- **Peak breeding activity:** August to September. Females lay as many as 500 eggs in a nest dug by the male under a large, flat rock. Young hellbenders hatch in two or three months and retain



Columbus Dispatch
article – Dec 3, 2012

Water withdrawals

There is no mechanism in place for ODNR to say “stop pumping.” In one instance...flow was affected 16 miles downstream from where industry was pumping. In that instance, the ODNR, Div. of Wildlife was trying to re-introduce a state-listed endangered species-

anonymous

‘FRACKING’ AND THE HELLBENDER

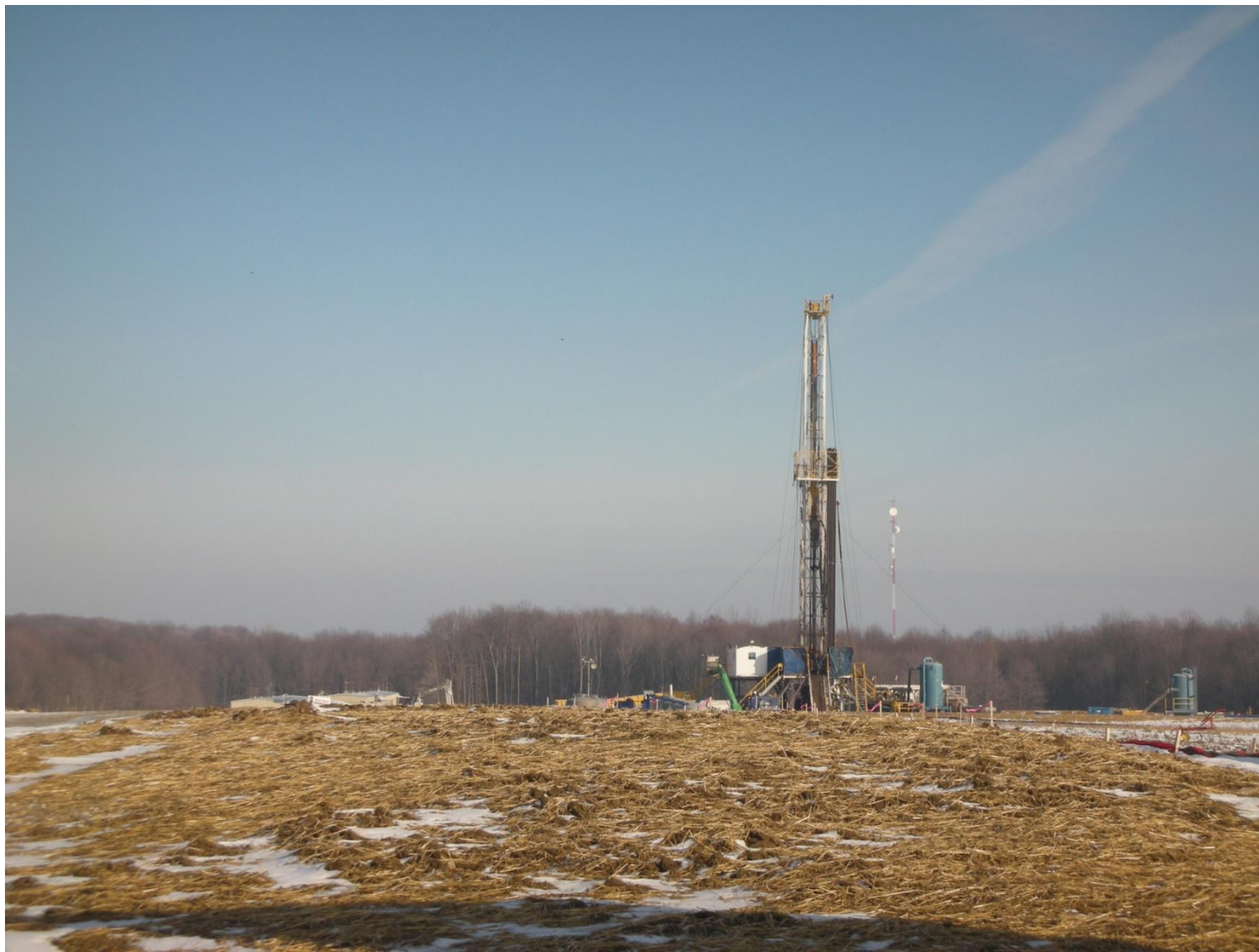
The state persuaded Chesapeake Energy not to take water for fracking from Little Beaver Creek in Columbiana County. Officials feared the company’s plans might threaten wildlife, including the hellbender.



Source: Ohio Department of Natural Resources



Well sites near ecologically sensitive areas





Ohio's state lands open to drilling

- Quail Hollow State Park
- Wayne National Forest

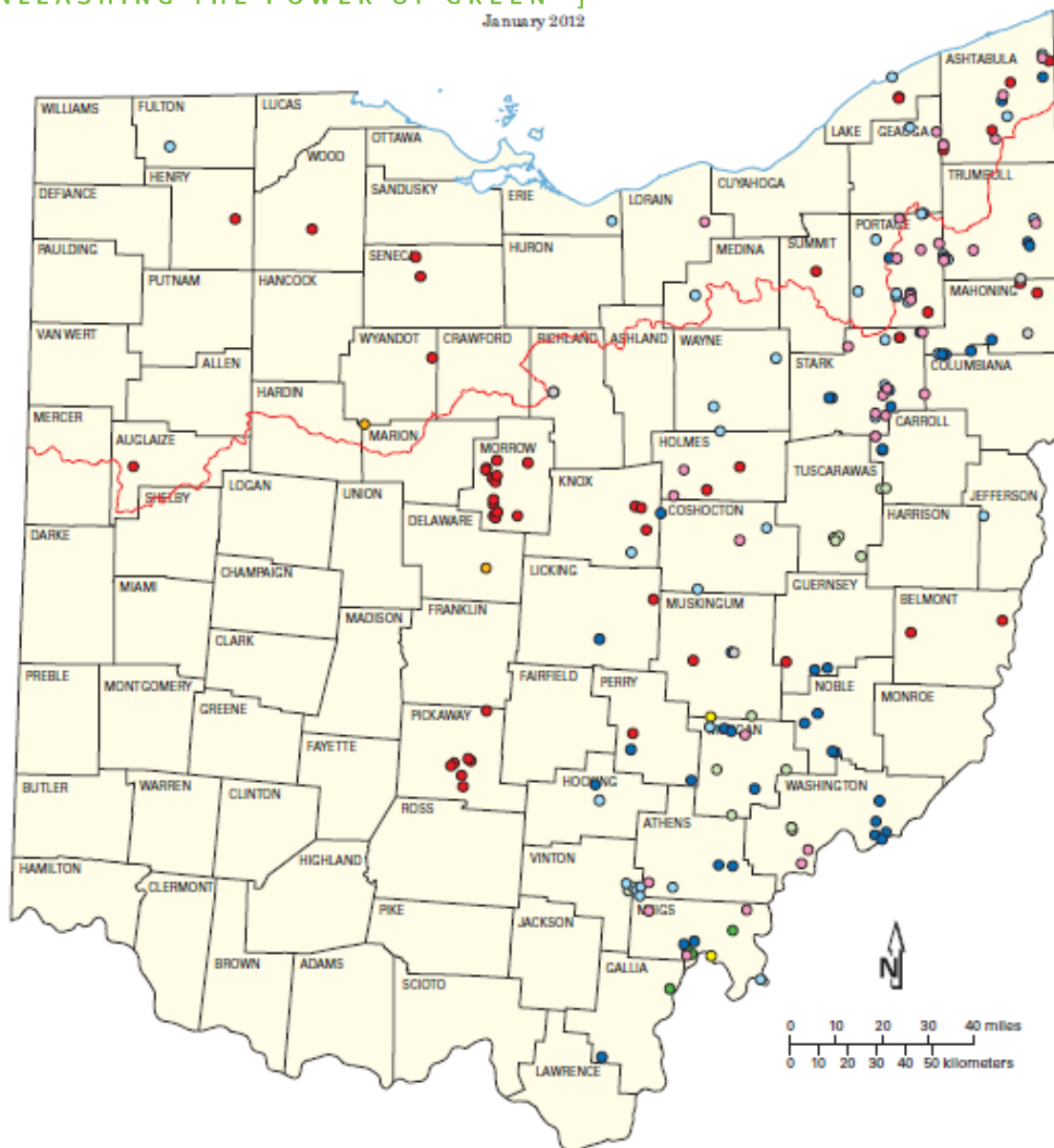


*Image of Wayne National Forest



Fracking Waste Storage + Disposal

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January 2012



Injection well numbers:

- 179 active injection wells in OH; 30 new permits being reviewed

- PA shipped 7 million barrels of waste fluid to OH in 2011 (only 5 injection wells in PA)

Waste fluids - OH:

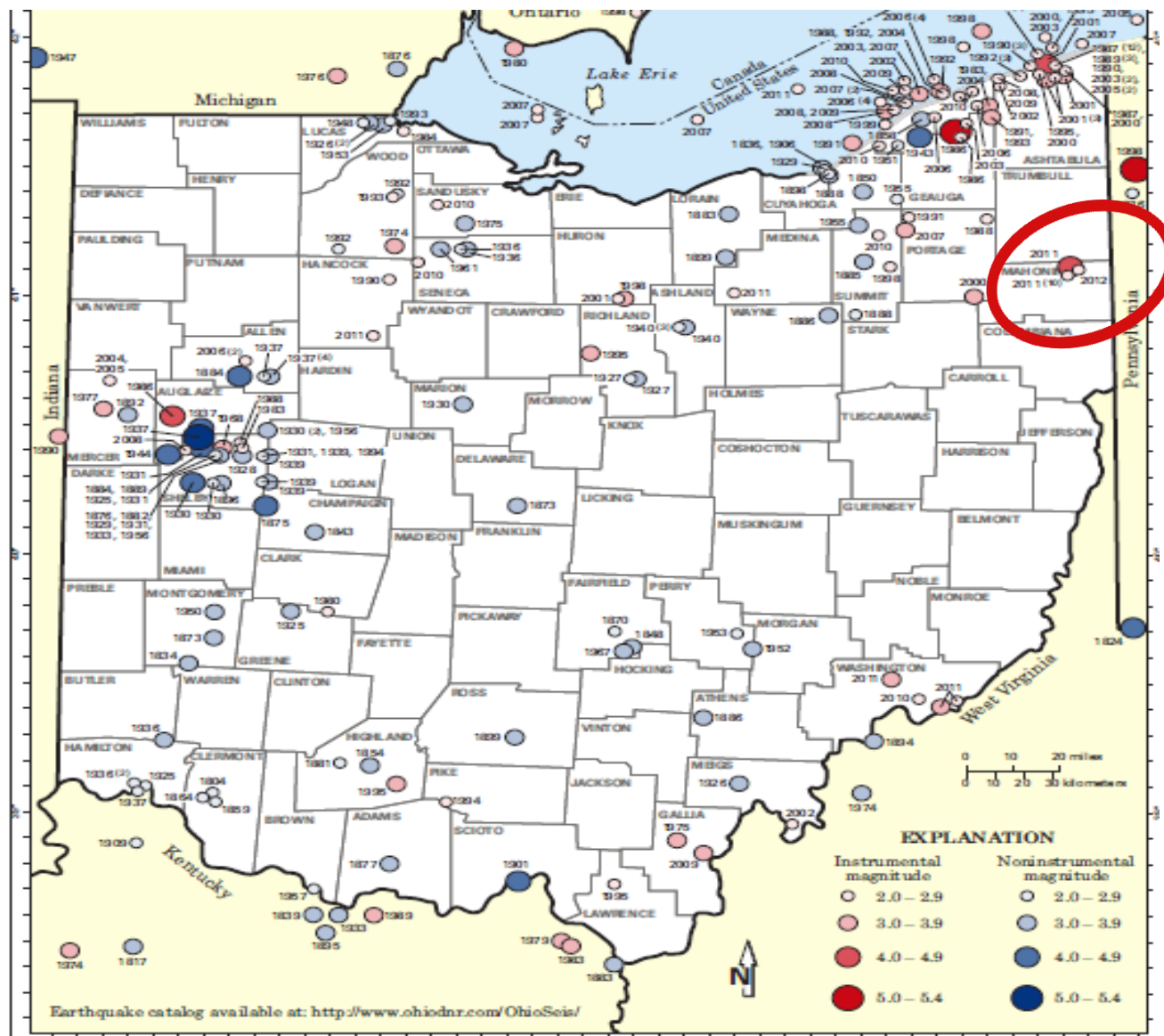
- 2011 = 12.8 million barrels

- 2012 = 14 million barrels (1/2 the waste from PA & WV)



Seismic activity

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Incidents



AREA NEWS

Major spill averted after tanker flips onto its side

Carroll County Emergency Management Agency (EMA) Director Tom Cottis said a major spill was averted Monday evening in Carroll County.

Cottis said an excellent response from a number of agencies may have kept a major spill of diesel fuel from happening near the intersection of Alamo and Pinto roads in Union Twp.

A tanker truck owned by a company known as Maxum was traveling south on Alamo Rd. at about 9:45 p.m. The truck was carrying 7,600 gallons of diesel fuel to be delivered to an oil drilling site on Pinto Rd. As the truck turned onto Pinto Rd., Cottis said the township road "broke away" and caused the truck to flip onto its side.

"Only about five gallons of diesel fuel and antifreeze spilled from the engine," Cottis said. "It could have been much, much worse."

He credited the "excellent response effort" of the HAZMAT team, Carrollton Village Fire Department and others involved with averting a major spill.

"It was a great team effort," Cottis said, adding emergency personnel remained on the scene for about

eight hours to and set the upright.

Officers from Highway Patrol and Carroll County assisted at the request of Massillon request of Maxum.



Dodson well – verified complaint has been issued to the Ohio EPA.
"I was walking my dogs down the valley on December 11 around 4pm and I noticed the stream ...was running white."

Brine dump in storm drain in Youngstown, Ohio (Feb 2012)

"Frack outs" in Harrison County



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Carroll County's water is under a triple threat:

1. Shale gas water extraction...for approximately 200 of the eventual 2,000 proposed wells
 2. Up to a reported 850,000 pounds of toxic hydraulic fracturing chemicals per well
 3. Flow-back waste water disposal
- *Plus a resurgence in surface and underground coal mining including two room-and-pillar mines

Local impacts





Recent legislation

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- Governor's energy bill (SB 315)
 - May 2012
 - Some good, some bad & some ugly
- SB 46 – Response to Youngstown Dumper
 - -Schiavoni (D) + LaRose (R)
- Budget Bill (HB 59)
 - Good: No brine spread on roads, prohibit Centralized Treatment Facilities
 - Bad: Radioactive waste provisions
- OEC's fracking mega bill



Recent news

Center for Sustainable Shale Development

- Pittsburgh-based
- Voluntary third party certification system
- Function like the “Underwriters Laboratories” or the Sustainable Forestry Initiative
- Self-policing system
- Includes water & air performance standards
- Partners: Environmental Defense Fund, Heinz endowments, Clean Air Task Force, EQT Corp. & Pennsylvania Environmental Council



OEC response to CSSD

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- OEC was not involved in process, no prior knowledge
- Troubled as to what's missing from standards
- Continue our call for moratorium + enforceable laws of highest standard
- Need for creation of a system that captures external costs of oil, gas and coal to Ohio communities + puts these industries on level playing field with renewable energy



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OEC's agenda for 2013

ODNR rule development
Megabill + additional protections
Monitoring, tracking & reporting





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Strengthen ODNR Rules

New regulations forthcoming under SB 315

1. Facilitating coalition of state and national eco groups to ID necessary rule changes
2. Conducting research on other states' regulations to look for best practices
3. Provide specific comments & recommendations with technical advice





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OEC to propose Fracking Megabill

Megabill summary:

- Follow up to our call for a moratorium
- What's missing after SB 165 & SB 315
- Seeking to close some of the regulatory gaps in oversight of shale gas development in OH





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OEC Fracking Megabill

To include provisions to require:

- Protection of public water sources & floodplains
- Increased air monitoring
- Increased public input (right to know & right to appeal permit terms + conditions)
- More inspectors + better reporting + tracking of incidents on ODNR website
- Waste fluid recycling + reuse
- Better regulation of waste materials





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Monitoring, tracking & reporting

ODNR -- >OEC will push for increased inspectors, improved access to public information on website

FracTracker Alliance



- US Map of Suspected Well Water Impacts - www.FracTracker.org/Usmap

Sierra Club's Water Sentinel program



- 4 counties with shale gas/fracking focus
- 2013 upcoming water sentinel programs = Cuyahoga & Portage counties



What can you do?

- Letters to the editor
- Educate your neighbors + friends
- Contact local officials (fire, health department, planning, engineering, local emergency planning commission)
- Contact state and congressional lawmakers



Friendly Advice for Landowners

- **Know your rights**

Contact an attorney, and don't sign or begin negotiations on a lease until you have had an attorney review the documents and to review your title.

- **Know your property**

Get baseline water quality and quantity testing completed (whether you sign a lease or not)

- **Know your driller**

Research the drilling company for violations, lawsuits, compliance history



State agency contacts

- Contact Ohio DNR, Ohio EPA
 - Rick Simmers,
Rick.Simmers@dnr.state.oh.us; 330-896-0616
 - Laurie Stevenson
laurie.stevenson@epa.state.oh.us; (614) 644-2344

How You Can Get Involved

Become a Member

Join a network of more than 3,000 individuals & 100 groups around the state

Take Action

Sign up for OEC's action alerts, call & write your lawmakers, get involved in your community

Get Social

Find us on Facebook, Twitter and other online communities

Donate

Help secure healthy air, land, and water for all Ohioans



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Ohio Environmental Council
1207 Grandview Avenue, Suite 201
Columbus, OH 43212
(614) 487-7506
www.theOEC.org



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Thank you!

Melanie Houston

Melanie@theoec.org

614-487-5849

Ohio Environmental Council