

# Encouraging UNGD Data Transparency with FracTracker.org

Samantha L. Malone, MPH, CPH and Brook Lenker, MA  
FracTracker Alliance

ISEE Conference, Symposium S-3-30  
Basel, Switzerland

August 22, 2013

POWERED BY

 **FRACTRACKER**

# The Problem: Data Transparency



Knowledge

Presentation

Information

Data

- ▶ “Publicly available data” should be in electronic format and shared online
- ▶ The lack thereof hinders regulatory trust and transparency
- ▶ Shale gas extraction is a controversial subject, so data transparency needed improvement
- ▶ Drove the development of FracTracker.org and FracTracker Alliance

Drilling is occurring close to residences, so public concern and safety need to be prioritized





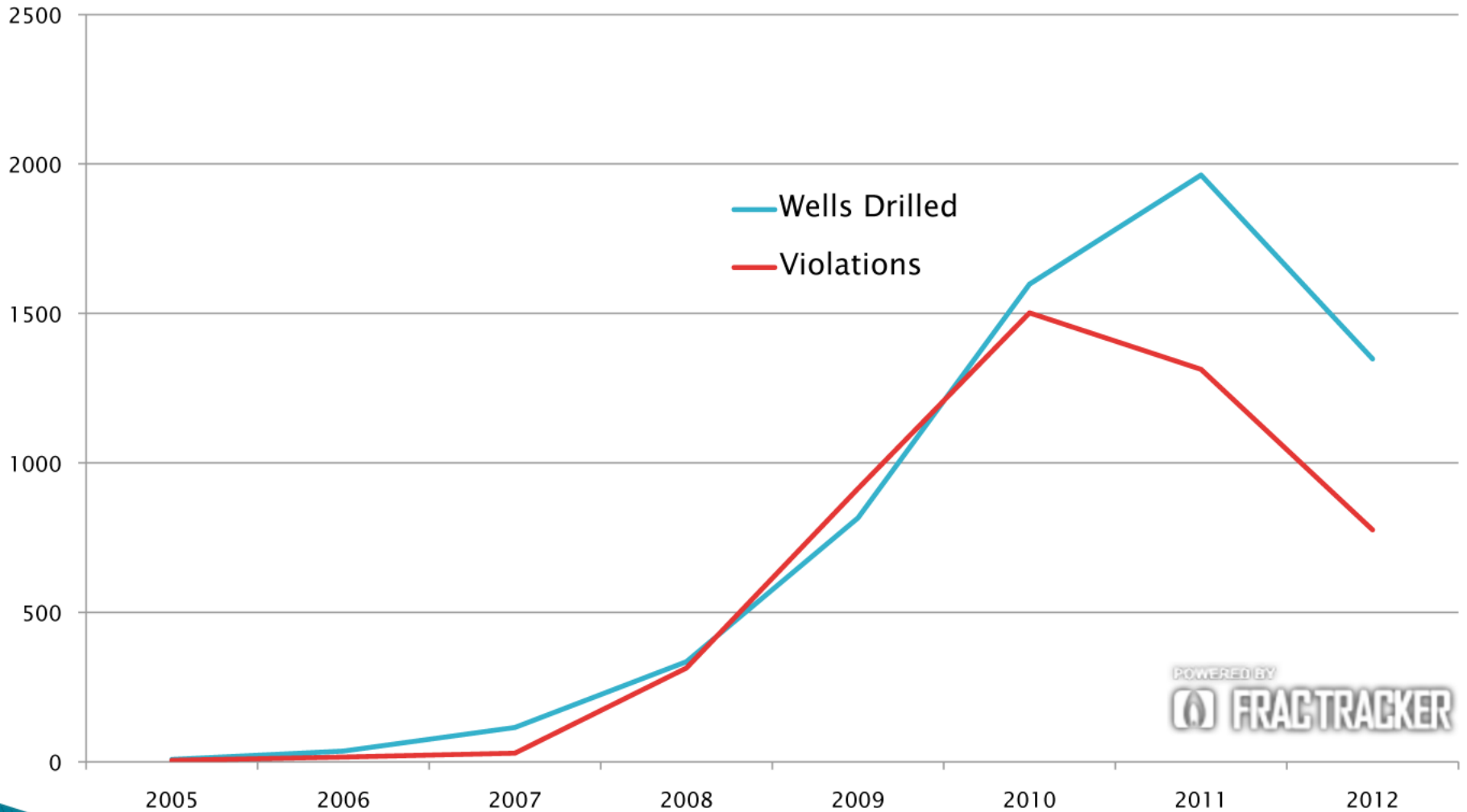
# ... and accidents happen



Fire on McDowell B well site near Wetzel County, WV. Burned for 9 days. Photo Credit: Wetzel Co. Action Group, Ed Wade, Jr. (Sept. 2010)

# Number of Unconventional Wells and Violations by Year in Pennsylvania, U.S.

PA is only U.S. state that provides free and comprehensive violations data to the public



“Environmental” violations peaked in 2011  
“Administrative” violations peaked in 2010  
Distinctions between categories not reliable

# Selected Chemicals in Frac Fluid

- ▶ 1% of injected fluids, still equates to a large quantity
  - Ex: a 4 million gallon fracturing operation would use 80–330 tons of chemicals (Hazen and Sawyer, 2009)
- ▶ Many known to be toxic to humans and wildlife. Several known to cause cancer.
  - Petroleum distillates such as kerosene and diesel fuel (contain benzene, ethylbenzene, toluene, xylene, naphthalene and other chemicals)
  - Polycyclic aromatic hydrocarbons
  - Methanol
  - Formaldehyde
  - Ethylene glycol
  - Glycol ethers
  - Hydrochloric acid
  - Sodium hydroxide

There is a database called FracFocus, where industry can voluntarily report about wells and frac fluid details, but information is only available one well at a time.

Is FracFocus enough?



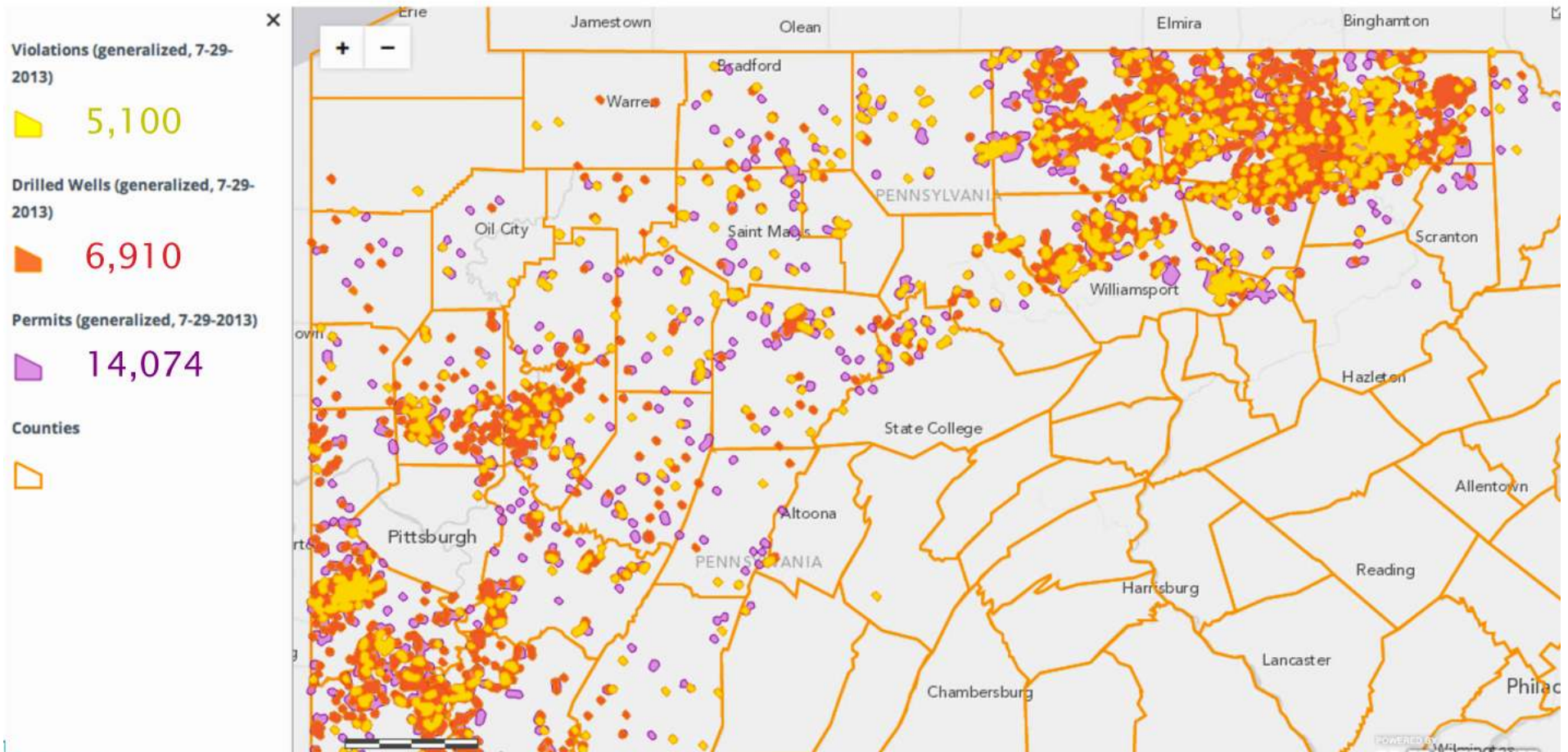
## What FracTracker Alliance does with data (all types):

- ▶ Collect
- ▶ Analyze
- ▶ Manipulate, where necessary
- ▶ Map or chart, and then
- ▶ Share it via [FracTracker.org](http://FracTracker.org)





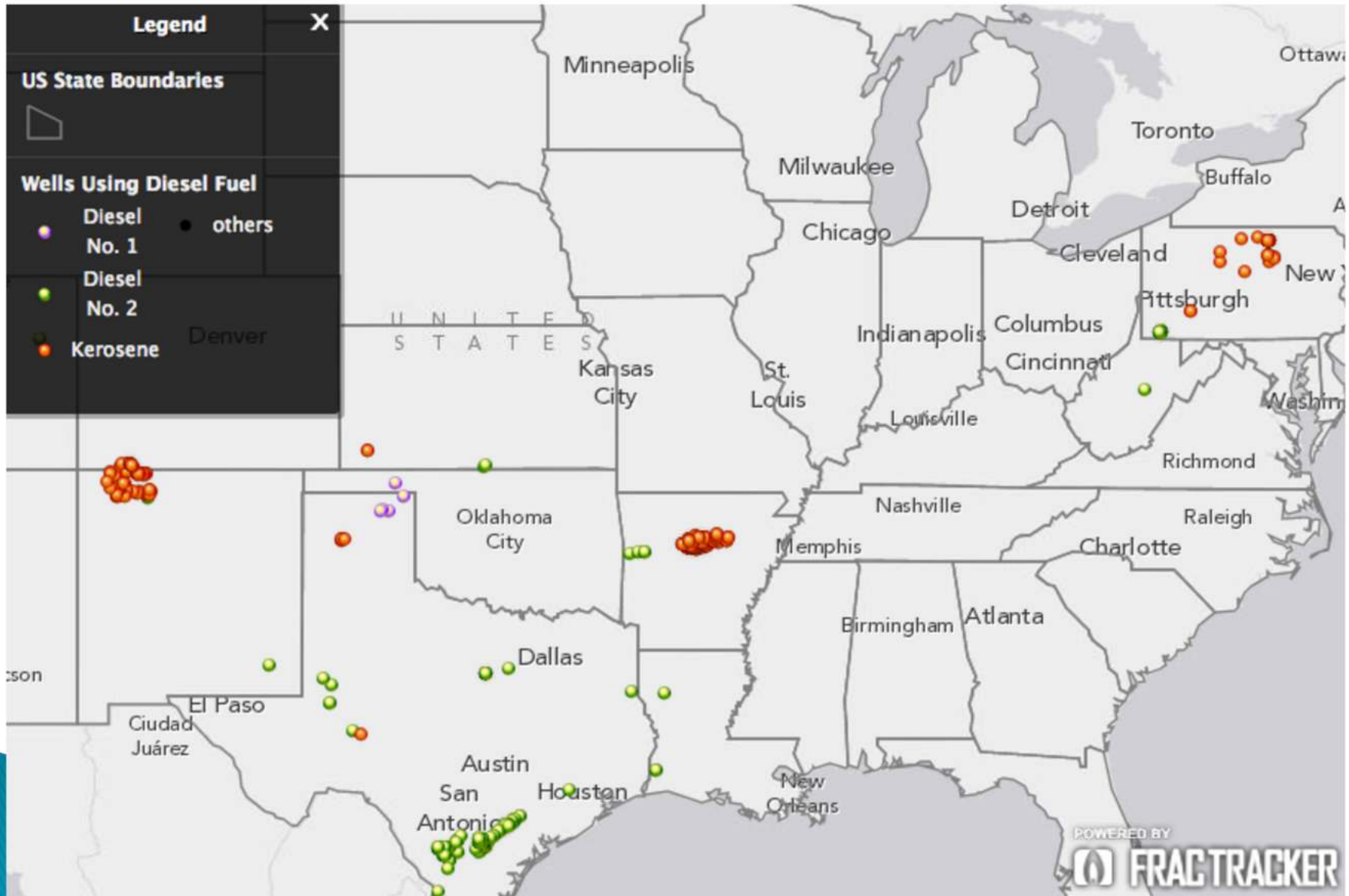
# Unconventional drilling activity in Pennsylvania, U.S. (2005 – July 2013)





# Industry reported: Wells using Diesel Fuel in Frac Fluid

Data on [FracFocus.org](http://FracFocus.org), Mapped on [FracTracker.org](http://FracTracker.org)



## Visual Data Collected from Citizens and Shared



Buckeye Creek spill, Sept. 2009  
Both photos courtesy of WV Host Farms Program  
([www.wvhostfarms.org](http://www.wvhostfarms.org))

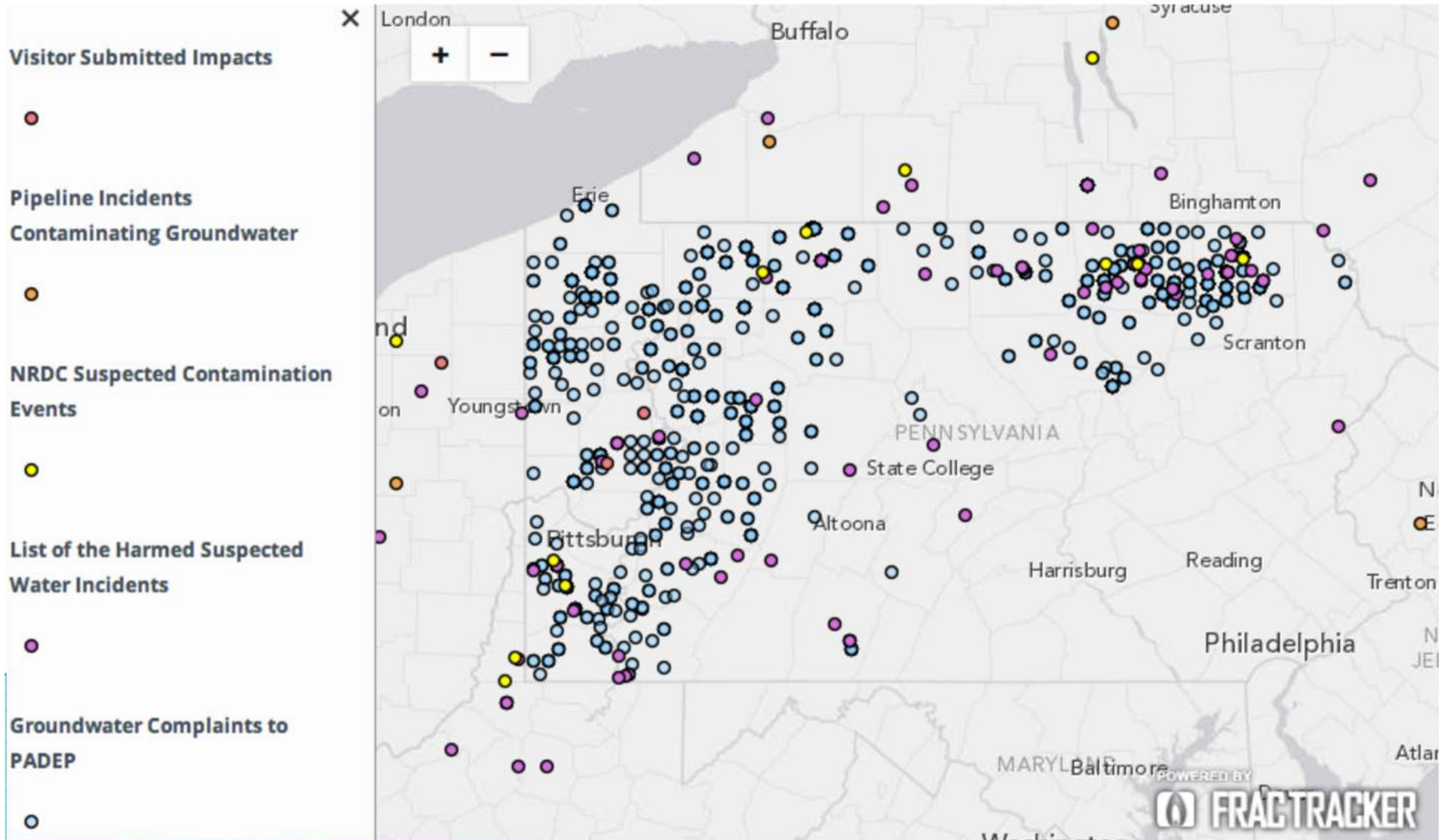


Drill site, Harrison County, WV. Landowner reported seeing oily substance bubbling up from ground and into stream. Driller later cited for putting a well pad on top of a wetland area.



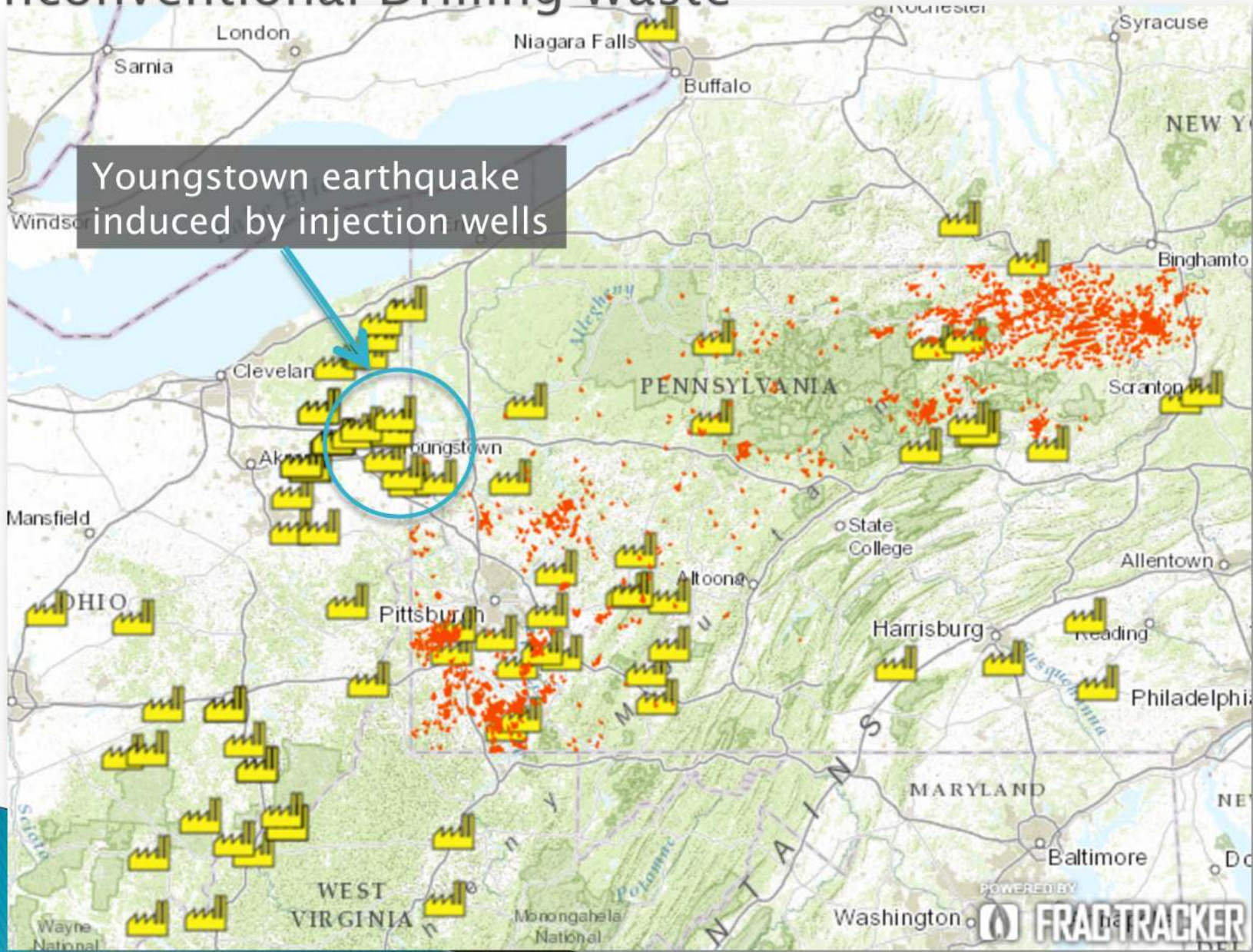
# US Map of Suspected Well Water Impacts

## Utilizing Citizen-Provided Data





# Regulatory Data: Destinations for PA's Unconventional Drilling Waste



# Questions?

**Samantha Malone, MPH, CPH**

Doctoral Candidate, Environmental and Occupational Health  
Department, Graduate School of Public Health,  
University of Pittsburgh

&

Manager of Science & Communications, FracTracker Alliance

(e): [malone@fractracker.org](mailto:malone@fractracker.org)

(ph): 412-802-0273

Maps courtesy of [FracTracker.org](http://FracTracker.org)