

HYDRAULIC FRACTURING ISSUES BY STATE

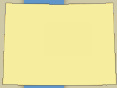
An overview of key fracking issues in 14 states

California



- A 2013 bill established regulations for fracking, but many sources have deemed the rules ineffective.
- Beverly Hills became the first city to ban fracking, and a few counties have passed resolutions calling for a state ban.
- Governor Brown has refused attempts to prohibit fracking statewide, despite advocates pushing for such a ban.

Colorado



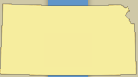
- Colorado leads the nation in protective methane regulations, but there have been limited efforts to regulate other pollutants such as benzene.
- Local control is currently limited, but the City of Erie has developed a memorandum of understanding (MOU) with the local oil and gas companies to establish guidelines while easing the permitting process.
- Setback distances are currently arbitrary, but new research and legislation is attempting to establish a specific number that protects communities and the environment.

Florida



- Areas where fracking would occur are connected to the Everglades watershed system and provide essential water for several cities, along with endangered wildlife.
- At least two cities have banned fracking, but have exceptions for conventional drilling.
- One unsuccessful 2015 bill would have banned fracking outright, while another would have set up a regulatory and permitting process along with requiring a scientific study on impacts.

Kansas



- An increase in saltwater disposal from fracking led to 125 earthquakes in 2014, up from none in 2012.
- It is unclear whether limitations will reduce earthquake frequency; the summer was quiet but the number of earthquakes increased significantly in the fall.
- New regulations limit saltwater brine disposal to 25,000 barrels per day. Stricter limits are in effect on dozens of injection wells in five zones where seismic activity has been the greatest, down to 8,000

Maryland



- Maryland successfully passed a bill placing a two-year moratorium based on concerns for public health and the safety of first responders.
- A working group will evaluate drilling safety and establish standards to regulate the practice.
- Although little fracking interest so far, the Marcellus shale formation crosses into western Maryland.

Montana



- The legislature adopted disclosure regulations in 2011, but broad exemptions exist for “trade secrets.”
- A bill introduced in 2015 would require developers to notify landowners 45 days before drilling, and require disclosure of fracking fluid concentrations. The bill was unsuccessful.

New York



- Governor Cuomo banned fracking in June 2015 based on public health and environmental concerns.
- The ban is not permanent, however, and could be rescinded by future Governors without a legislative ban.
- Fracking waste from Pennsylvania is being imported into the state for disposal. Several bills were introduced in 2015 to prohibit the acceptance and use of fracking waste, but none became law.

Continued...




North Carolina

- At least two counties have established moratoria on fracking, but a bill passed in October 2015 prevents local regulation of fracking.
- Permitting opened in March 2015, but no permits have been issued to date.
- There is uncertainty regarding the amount available shale, and there has only been wildcatter activity.



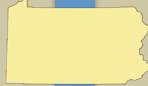
Ohio

- The state tax on oil and gas is less than a half percent, and lawmakers from both parties are attempting to raise the tax in order to lower other taxes such as income tax.
- Research has linked fracking and wastewater disposal to a drastic increase in earthquake frequency.
- Ohio has some of the weakest setback requirements, allowing gas wells to be 100 feet from a home.



Oklahoma

- There have been nearly as many earthquakes in the first seven months of 2015 as in 2014—where there were 585 seismic events. There were 40 quakes in a single week of July 2015.
- The Oklahoma Supreme Court ruled that earthquake injury lawsuits could proceed despite industry objections.
- A 2015 study from Stanford directly linked the spike in earthquakes to fracking wastewater disposal.



Pennsylvania

- Research has identified faulty well construction as a prime cause for drinking water contamination in the state.
- Drillers are held responsible for contamination if it occurs within 1,000 feet from the well in question and within 6 months after well completion.
- Governor Tom Wolf's 2015 budget calls for a 5 percent severance tax on gas production, similar to Ohio, and the Department of Environmental Protection proposed new regulations to promote safer drilling.



Texas

- In a high-profile case, the legislature passed a bill barring Denton and other cities from regulating fracking locally.
- Texas enacted disclosure laws in 2011, but the rules only affect newly constructed wells and offer exemptions for trade secrets and other categories such as “incidental chemicals used.”
- Texas is the largest producer of natural gas in the U.S.



Vermont

- Vermont became the first state to ban hydraulic fracturing, although the bill was mostly symbolic because no prospects are currently known in the state.
- Multiple other states have also introduced legislation aimed at banning drilling or placing a moratorium on the practice, including Arizona, Massachusetts and Oregon.



Wyoming

- In 2010, Wyoming became the first state to require chemical disclosure, but the trade secrets caveat allowed hundreds of chemicals to remain off the public record.
- A 2015 settlement established stricter standards for what constitutes a “trade secret,” which will increase public safety and improve the ability of landowners to test their land for contamination.
- Wyoming is a leader on addressing methane emissions by requiring leak detection and repair.

For more information visit www.ncelfracking.org