

North Central Ohio Land Conservancy

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A Primer for City Managers Concerning 'Fracking'. This hand-out is intended to help you identify key issues so that the elected officials you serve can ask the right questions. In the future your community may be asked to sign a lease agreeing to extract gas from the Utica shale or Marcellus shale formation below public land you administer. You may also be asked to expedite approval of a deep injection well used for the disposal of fracking waste, sometimes referred to as "flow-back water". There are questions that we believe you should ask in order that you can fulfill your duty to protect the long-term best interest of the public you serve.

1. Why doesn't the gas-drilling industry place cheap chemical markers in fracking fluid in order to detect it when it drifts from where it belongs? Why doesn't ODNR require it? (Ohio Department of Natural Resources (ODNR), is the agency regulating this industry in Ohio.) As an example, the explosives industry is required to put unique tracers in each batch such that the residue of an explosion can be analyzed to locate the point of sale and often the purchaser. This simple method of accountability promotes public safety. For another example, the addition of a safe chemical marker to natural gas lets people smell it when it leaks to places it does not belong. This promotes public safety inexpensively by ensuring that gas leaks are detected. Requiring markers in fracking fluid before its injection into the ground would vindicate safe, responsible operators and enable ODNR to quickly and reliably identify irresponsible operators. Why choose ignorance when others choose to be informed?

2. We, the public, do not know what is in fracking fluid, yet ODNR could require the industry to prove its content at each well. Here are examples of easy, inexpensive sampling methods that ODNR does not impose upon the deep-shale gas drilling companies.

- a. **The First Injection.** As millions of gallons of water are used for each frack, industry could be required to take random samples at the time of injection. Samples could be deposited in a sealed container and tested at ODNR labs. There is no such requirement even though it could show ODNR what the drillers are pumping into the ground at each well site. (It would also verify the chemical marker poured in the fracking fluid, if such was required.)
- b. **The Flow Back.** Fracking fluid is forced into shale formations at pressures up to 15,000 pounds per square inch. When the pressure is released, much of the fracking fluid flows back and pours out into a holding pond. ODNR could easily

require sealed, random testing of the flow-back water when the pressure is released. There is no such requirement in Ohio or Pennsylvania, therefore we do not know what is in the flow-back water that will be shipped to deep-injection wells for disposal in our area. Chemical markers would also help us find the source of escaping flow-back water. Off-gassing at the wellhead could also be measured for volume (using standard meters), and content using random sealed samples.

- c. Flow-back water from fracking operations can be held in open ponds that do not have adequate liner requirements and do not have leak detection systems. ODNR could easily require sealed liners with inexpensive leak-detection devices beneath them in order to better protect the aquifer the general public relies upon to supply us with water. A leaking pond percolates to the water table, so why not impose a time limit for water to sit in holding ponds?

3. We buy milk from the store without thought of bacterial infection because the Department of Agriculture tests the milk at the dairy farm and shuts down farmers who fail to meet rigid standards for sanitation. Dairy farmers accept regulations that protect their customers. The gas and oil industry has lawfully 'acquired' the complicity of their regulators through the political process, raising citizen concerns about ODNR's commitment to protecting the public. Local officials should postpone or discourage fracking leases and attempt to delay the injection of fracking waste in their community. So-called owner-friendly leases are an illusion, they won't protect your aquifer in the current regulatory environment. The so-called Halliburton Amendments of 2005 make this industry and its waste stream exempt from most federal environmental regulations that apply to the factories in your community. While some of these exemptions are warranted by years of testing, their breadth has caused public outrage.

4. **"Lagged in time and lagged in space."** Those counties that receive deep injection wells for disposal of fracking waste from Pennsylvania will accumulate a submerged reservoir of fracking waste. Will it drift to old gas wells drilled many decades ago? Many of these wells have been forgotten and were never sealed off in accordance with modern standards and technology. Will these so-called legacy wells, or other unknown vertical routes, provide an upward path for flow-back waste to migrate into our water supply? No one knows for sure, but we do know that ODNR has resisted easy ways to make the drillers accountable, thus we doubt ODNR's assurances that deep injection wells are safe, even though we lack the extensive knowledge of geology necessary to make an informed decision. If drinking water is polluted, the discovery will likely occur at a different time and space from the point of injection. This lag in time and space, and the lack of chemical markers and testing justifiably heightens citizen concerns.

5. **A Conservative capitalistic analysis.** Would a true capitalist jeopardize the health of the community he relies on to make a living? Our aquifer, which provides us with clean refreshing water, is a form of capital for all who choose to live here in the future. What will happen to the value of farms, houses, or factories if the water source we rely on has been ruined? Responsible capitalists who want to conserve the benefits of living in this area cannot fairly criticize local public officials who resist 'fracking' in the current regulatory environment. Yes, public officials seek to promote jobs, but aren't jobs protected by protecting our aquifers?

6. **Mohican as an Industrial Park.** Timbering and drilling for gas has been authorized in Ohio's biennium budget for all state parks; no exceptions! ODNR supported this

decision in legislative hearings last year. Is that good stewardship of our state's resources? What if other decisions about the fracking industry are equally short-sighted? Mohican State Park, as an example, is unique in the Northern half of Ohio and local tourists will have nowhere comparable to go if it is turned into an 'industrial park'.

7. **Earthquakes are not caused by fracking.** However, earthquakes are sometimes caused by deep injection wells if they lubricate an existing fault or are carelessly drilled into the so-called 'basement' bedrock.

8. **Compare ODNR's conduct with your own.** If the decision was yours, would you mandate commercial timbering and fracking in all our state parks in spite of the impact on fisherman, hunters, horsemen, birders, and other tourists? Would you oppose chemical markers or random samples? Those of us who think ODNR is wrong on these simple issues, naturally question their approval of deep injection wells.

9. **Preemption.** Local decision making has been preempted. ODNR, not local officials, approves placement of gas wells and deep injection wells on private land. There is a severe limit to what local officials can accomplish. Nonetheless, there is good reason for local officials to support responsible development, rather than rapid development.

10. **Delay now, profit more later.** Natural gas prices are at a ten-year low. If you delay fracking, prices are likely to go up and future technology is likely to improve the percentage of resource recovery. Someday regulations may be imposed that would hold frackers more accountable. If you attempt to delay signing a fracking lease and attempt to delay the siting of deep well injections systems in your community, we think your decision will be appreciated by the public years from now.

Sincerely,

Eric S. Miller for
North Central Ohio Land Conservancy, Inc.

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Where to go for more information:

Scientific American, Nov. 2011 issue – an article and editorial on fracking

Mohican Advocates, Inc. website <http://www.mohicanadvocates.org/> - on protection of state parks

Society of Petroleum Engineers, SPE152596 – Hydraulic Fracturing 101

Pro Environment: www.ogap.org; www.endocrinedisruption.org

Pro Drilling: www.iogcc.state.ok.us

Agency Capture?: www.epa.state.oh.us/dsw/pretreatment/marcellus_shale/index.aspx