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MASSACHUSETTS CHAPTER

Massachusetts Sierra Club  
10 Milk Street, Boston, MA 02108-4621  
(617)423-5775  
office@sierraclubmass.org • www.sierraclubmass.org

## **Regulate Gas Obtained by Fracking**

*Formal Title: An Act Related to Hydraulic Fracturing*

*Sponsor: Rep. Sean Garballey*

*House Contact: [David.Koffman@MAHouse.gov](mailto:David.Koffman@MAHouse.gov)*

*H3055*

This bill would require energy utilities that generate electricity from natural gas in Massachusetts to disclose the chemicals that their suppliers used during the natural-gas extraction process. It would also require them to certify that the process did not contaminate any drinking water. In Massachusetts, more than half of our electricity (52.9%) and 40% of our residential heating comes from natural gas extracted using hydraulic fracturing, described below. The gas is piped into Massachusetts from the Gulf coast, western New York, Ohio, Pennsylvania, and Canada as well as other foreign sources.

### **The process**

Hydraulic fracturing (fracking) is the process of creating fractures in underground shale rock formations that contain natural gas. Energy/drilling companies use it to extract gas in 90% of U.S. wells. The process usually involves drilling a vertical borehole and then, as deep as 20,000 feet below the surface, drilling horizontally. The drillers then force highly pressurized water containing sand and a cocktail of chemical additives into the rock to cause it to break up. The natural gas flows out of the rock and is pumped to the surface along with the chemical/wastewater solution, which may at this point be radioactive. The gas is retrieved and the wastewater, up to a million gallons per mining event, is stored in pools, released to the environment, or trucked to wastewater plants. The wastewater may also be recycled in another drilling event but will eventually be treated the same as the above wastewater, but with increasingly more concentrated contaminants every time it is reused.

### **The problems**

The level of radioactivity found in drinking water contaminated by fracking wastewater that is dumped directly or indirectly into rivers, is sometimes orders of magnitude higher than the maximum allowed by federal standards. Toxic chemicals that are used in this process seep into ground and surface waters and pollute the air. The Natural Resources Defense Council argued in 2007 that the toxic chemicals used in energy development directly affect human health: "Many people who live near gas operations experience symptoms that may be caused by the toxic substances found in gas or the chemicals used to produce them...[ranging] from eye and skin irritation to respiratory illness such as emphysema, thyroid disorders, tumors, cancer, and birth defects." Recent news reports disclosed that thousands of internal documents from the EPA, state regulators, and drillers proved that the fracking process creates dangers to the environment and health that are greater than previously understood. Methane gas is the major component of natural gas and it can easily seep into groundwater supplies. There have been numerous reports of methane gas building up to dangerous levels in underground pockets and either exploding on homeowner's properties or igniting from faucets. Industry shortcuts and negligence as well as the failure of our regulatory system to keep up with the changing technologies in this burgeoning industry have left us overwhelmed and unprepared to deal with the far too frequent reports of contamination.

### **A solution**

Fracking used to be subject to the requirements of the federal Safe Drinking Water Act but was exempted by Congress in 2005 at the request of several energy/drilling companies. This bill (HD 3497) seeks to close the loophole created by that exemption by using state law as legislators did in Colorado and Wyoming.