

# Greenlist Bulletin

From the Toxics Use Reduction Institute  
at the University of Massachusetts Lowell

*This Issue Features Articles on Hydraulic Fracturing*

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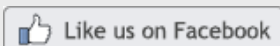
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## Editor's Note

Dear Greenlist Subscribers:

As new topics emerge that are relevant to the Commonwealth, we hope to keep you apprised of the most recent information. The articles below pertain to many of the policy, EHS, and technical issues around natural gas extraction using hydraulic fracturing.

Recent information from USGS regarding the Hartford basin shale deposits in Connecticut and Massachusetts has generated a great deal of interest in the potential for shale gas development, and in hydraulic fracturing as a possible means of extracting it. No scientific studies have yet been done, and the type of deposit is not optimum for shale gas development, but should it happen, this type of mining operation would be a covered sector under TURA.

Cordially,  
Mary

## Introduction to Hydraulic Fracturing

[Source: United States Geological Survey \(USGS\), March 5, 2013](#)

Also known as hydrofracking, fracking, or hydrofracturing, hydraulic fracturing is an oil and gas well development process that involves injecting water under high pressure into a bedrock formation via the well. It is used to increase oil and/or gas flow to a well from petroleum-bearing rock formations that is seeing increasing use across the country. Here's a look at how USGS science informs the discussion regarding the potential opportunities and impacts from hydraulic fracturing and related practices, such as horizontal drilling and deepwell fluid injection.

[Read more...](#)

## Assessment of Undiscovered Oil and Gas Resources of the East Coast Mesozoic Basins of the Piedmont, Blue Ridge Thrust Belt, Atlantic Coastal Plain, and New England Provinces, 2011

[Source: U.S. Department of the Interior, U.S. Geological Survey, June 2012](#)

During the early opening of the Atlantic Ocean in the Mesozoic Era, numerous extensional basins formed along the eastern margin of the North American continent from Florida northward to New England and parts of adjacent Canada. The basins extend generally from the offshore Atlantic continental margin westward beneath the Atlantic Coastal Plain to the Appalachian Mountains. . . . The provinces, which contain these extensional basins, extend across parts of Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, and Massachusetts.

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## Frequently Asked Questions About Shale Gas and Hydraulic Fracturing in Massachusetts

[Source: The Massachusetts Geological Survey, December 11, 2012](#)

### **1. Has there been any interest in exploring for shale gas in Massachusetts?**

To our knowledge, no companies have expressed any interest in exploring for or developing shale gas in Massachusetts. In addition, to our knowledge, no well driller has requested certification (310 CMR 46.00) from the Massachusetts Department of Environmental Protection (MADEP) to drill any well within Massachusetts other than water, monitoring, and geothermal wells. All well drillers are required to be certified by regulation with MADEP before they are allowed to drill any wells in Massachusetts.

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## FracFocus Chemical Disclosure Registry

[Source: Ground Water Protection Council and Interstate Oil & Gas Compact Commission, 2013](#)

In a single year, FracFocus has made a national impact from the Beltway to the Bakken. During this time, more than 200 energy-producing companies have registered over 15,000 well sites through FracFocus.

This success is the result of nationally recognized organizations working with the oil and natural gas industry to provide public transparency. Learn more and see highlights from the first year of FracFocus.

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## Hydraulic Fracturing Can Potentially Contaminate Drinking Water Sources

[Source: National Resources Defense Council, July 2012](#)

Communities across the country are concerned about the risks that oil and gas production using fracking poses to drinking water sources. Hydraulic fracturing, or fracking, is the practice of injecting water, chemicals, and proppant at high pressure into a gas or oil well. The high-pressure injection fractures or re-fractures the rock, stimulating oil and gas production. But scientists and environmentalists are increasingly concerned about groundwater and surface water contamination that may be associated directly or indirectly with fracking. NRDC opposes expanded fracking until effective safeguards are in place. To protect drinking water sources from contamination, NRDC urges the use of key management practices to minimize the risks associated with fracking activities. This includes (1) federal regulation of all hydraulic fracturing under the Safe Drinking Water Act, (2) regulation of toxic oil and gas waste under federal and state hazardous waste laws, and (3) stronger standards and enforcement under the federal Clean Water Act and state laws.

[Read more...](#)

[Source: \*New Solutions: A Journal of Environmental and Occupational Health Policy\*, Volume 23, Number 1, 2013](#)

Selected articles include:

- [Science and Politics of Shale Gas Extraction](#)
- [Investigating Links between Shale Gas Development and Health Impacts Through a Community Survey Project in Pennsylvania](#)
- [The Economic Impact of Shale Gas Development on State and Local Economies: Benefits, Costs, and Uncertainties](#)
- [Disclosure of Hydraulic Fracturing Fluid Chemical Additives: Analysis of Regulations](#)
- [Insights on Unconventional Natural Gas Development from Shale: An Interview with Anthony R. Ingraffea](#)

Access entire issue [here](#).

### Hydraulic Fracturing - Legislative and Regulatory Materials

[Source: Arnold & Porter, LLP, 2013](#)

Hydraulic fracturing (fracking), a process used by the oil and gas industry for more than 60 years, has attracted the national spotlight. By injecting fluids and other materials into existing wells, fracking extends oil and natural gas production and allows for recovery from otherwise impenetrable tight shale formations. However, recent concerns over air, groundwater and soil contamination have prompted EPA, state regulators and environmental groups to call for renewed scrutiny of the practice. Given the growing reliance on natural gas, any changes to the political, legal and regulatory landscape will have a significant impact on the industry and the nation. . . .

Recognizing that much of the activity surrounding fracking is occurring at the state level, Arnold & Porter is actively tracking emerging legal, legislative and regulatory developments. . . .

[Read more...](#)

Access Arnold & Porter's [Regulatory Chart](#) with links to regulations in various States.

### Western Mass. Viewed As Territory For Fracking

[Source: Boston.com, December 12, 2012](#)

Author: Beth Daley

The possibility that Western Massachusetts may hold limited deposits of shale gas is catapulting the contentious issue of hydraulic fracturing, commonly called fracking, into the state. . . .

While the state probably does not have expansive reserves, American Ground Water Trust executive director Andrew Stone said that small-scale gas development could begin in several years, and landowners need to be given "calm, objective facts."

[Read more...](#)

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