

Waste without Borders: Fracking's Dirty Dilemma

By [Kyle Rabin](#) | 08.20.2013 |



I have a love-hate relationship with hydraulic fracturing, but my affection for the drilling method has nothing to do with its [so-called benefits](#). Instead, it has everything to do with how the shale gas extraction process perfectly illustrates the need for new government policies and regulations, as well as industry practices, that embrace [clean \(renewable\) energy](#), [clean water](#) and the interconnections between the two.

As recent news coverage and [Gasland Part II](#) make abundantly clear, [fracking operations require a lot of water](#). The typical frack job needs [3 million to 5 million gallons of water](#) injected deep underground, along with sand and a concoction of chemicals, to fracture shale rock and extract the embedded natural gas. Withdrawing large amounts of water over a short period of time can stress local water supplies, especially in drought-prone regions in the West, like [Texas](#), where nearly 15 million people are living under some form of water rationing.

Assuming that the majority of the approximately 35,000 wells fractured each year across the United States are horizontal wells, the [US Environmental Protection Agency estimates](#) that the annual water requirement may range from 70 billion to 140 billion gallons (the energy-water nexus in High Definition!). According to the EPA, this is equivalent to the total amount of water used annually in one or two cities of 2.5 million people each.

“That’s only the start of fracking’s water problems,” says Post Carbon Institute Senior Fellow Richard Heinberg in his new book, [Snake Oil: How Fracking’s False Promise of Plenty Imperils Our Future](#).

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Some comes back to the surface immediately; some returns over the course of months and years. In total, each well brings up hundreds of thousands to millions of gallons of wastewater, which, as Heinberg says, “carries with it not only a secret cocktail of chemicals added so that it can accomplish its mission, but also highly corrosive salts, carcinogenic benzene, and radioactive elements like cesium and uranium, all leached from rock strata miles underground.” There are also high levels of heavy metals and other toxic chemicals, compounds and carcinogens.

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“What’s a fracker to do with all this toxic wastewater?” asks Heinberg.

Frackers in Pennsylvania send it to New York among a few other states (like [Ohio](#)). According to Ellen Weininger of Grassroots Environmental Education, [data](#) released by the Pennsylvania Department of Environmental Protection reveal that in the past two years alone, more than 300,000 tons of gas drilling waste including wastewater and drill cuttings have been accepted from fracking operations in Pennsylvania into New York landfills. Weininger notes that leachate from the landfills is then accepted at wastewater treatment plants, none of which is designed to process radioactive materials and other gas drilling waste contaminants.

Drillers in Pennsylvania were given [further incentive](#) to export their drilling waste to New York when state regulators, earlier this year, began a study of radioactive contamination in the waste. (Although contamination can vary from frack well to frack well, the expansive Marcellus formation is thought to be the most radioactive of all the nation’s shale plays.)

The ever increasing influx of drilling waste into New York did not go unnoticed. Back in May, State Senator Cecilia Tkaczyk declared that the state was “under assault” from imported shale gas drilling waste. At that time [she announced legislation](#) that would ban out-of-state fracking-related hazardous waste products (including wastewater) from being imported into, treated or disposed of in New York. [Federal](#) and state governments exempt these wastes – which pose risks to human health and ecosystems – from the tracking regulations which govern the handling, storage, treatment and disposal of other hazardous substances. (By the way, this exemption also applies to waste generated in-state from [vertical or conventional shale gas](#) drilling which has been permitted in NY for several decades.)

“The fact is we don’t know what’s in the waste coming into our state, we’re not sufficiently regulating the treatment of those wastes, and we cannot be certain that the treatment plants are adequately

protecting our lakes, rivers and streams,” says Senator Tkaczyk. The fact that landfills and sewage treatment facilities in New York are accepting this waste *before* the Cuomo Administration completes its review and decides whether or not to open the state to high volume horizontal fracking influenced Tkaczyk’s decision to introduce the legislation, which ultimately did not reach the floor for a vote. “It makes no sense that we would accept hazardous wastes from other states while we are working to determine the environmental impact fracking would have on New York,” says Senator Tkaczyk. It is worth noting that New York is the only state that is importing fracking waste from other states while under a [moratorium](#) banning high volume horizontal drilling inside of the state.

“With little action at the state legislature and concerned by the immediate threat to public health and environment posed by hazardous, radioactive gas drilling waste,” says Weininger, “[several New York counties have banned](#) the sale of fracking waste, its processing at all wastewater treatment plants and its application on all roads including de-icing and dust control purposes.” Nassau (where I live) and Suffolk Counties on Long Island are poised to follow the lead of other New York Counties and enact more comprehensive legislation prohibiting gas drilling waste.

Some of New York’s [neighboring states](#) are also concerned about the final destination for fracking waste and are considering bans on treatment or storage within their borders. They don’t want to become a dumping ground for waste generated in Pennsylvania or possibly battleground New York should Governor Cuomo lift the moratorium. (For those who missed it, California recently joined the growing list of fracking battleground states; find out more about the Golden State’s gas drilling exploits in this [recent post](#) by my fellow blogger Kristen Demaline.)

The US needs more than another resource extractive industry right now, and its citizens deserve better than yet another massive source of waste that gets passed off onto their neighbors. The nation needs a clean energy vision and plan of action. In order to have that, government and industry must stand up for clean energy and clean water and recognize the inextricable relationship between our water and energy systems.

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