NATURAL GAS "FRACKING" THREATENS NATIONAL WATER SUPPLY, HUMAN HEALTH[1]

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We are at a crossroads. With the effects of the Gulf of Mexico oil spill still with us more than three months after a blowout on the Deepwater Horizon well, the choice we face is becoming more and more apparent. We can continue to take desperate, risky, and unconventional measures to extract the remaining fossil fuels that lie a mile or more deep beneath U.S. soil, or we can say, "You know what? That's enough," and finally move towards a clean-energy economy. Hundreds of people argued over that choice Wednesday night in West Trenton, NJ, as they voiced their complaints and submitted public comments at a meeting of the Delaware River Basin Commission (DRBC), where the issue of natural gas drilling in the watershed was the main agenda. The DRBC announced it will allow two test wells to move forward, although the moratorium on hydraulic fracturing for natural gas, also known as fracking, is still in place. (Take note that the Deepwater Horizon was also an "exploratory well.")

More meetings on that matter are scheduled, including ones in northeastern Pennsylvania, where there's been a rash of reports regarding human health problems and contaminated wells surrounding booming natural gas drilling activity. These mirror some of the problems seen in areas previously fracked in Colorado, Wyoming, and Texas. With the threat of natural gas drilling in the Delaware River (which boasts some of the cleanest water in the country—water that supplies more than 16 million people in New York City, Philadelphia, and parts of New Jersey), the nonprofit American Rivers has named the Delaware River the most threatened river in the country this year.

THE DETAILS: The meeting took place just as a new report issued by consumer watchdog group, Food & Water Watch, warned that the rapid expansion of natural gas exploration could be America's next energy disaster. "We've seen what unregulated industries can do in the Gulf with the Deepwater Horizon disaster. Right now, we're making those same steps with natural gas, where the industry is moving forward with very little regulation," explains Jim Walsh, Eastern regional director of Food & Water Watch, a group that's calling for a two-year moratorium on natural gas drilling until the U.S. Environmental Protection Agency (EPA) finishes its two-year study to ensure that unconventional natural gas extraction doesn't harm people or their drinking water. "We don't know the full impacts of hydrofracking, and what effects it's going to have on our groundwater and drinking water resources."

At the meeting, it was possible to find hundreds of people either for or against Food & Water Watch's recommendations. Here's the main gist of what both sides want.

Pro-moratorium camp: They want no drilling until agencies can come up with an environmental impact study and figure out how dangerous—or safe—this procedure really is. The EPA launched a two-year study that aims to figure out how natural gas fracking affects water. These people are practicing the precautionary principle, a.k.a. "We don't want to be guinea pigs."

[1] Rodale News, July 16, 2010

Pro-drillers: They want to get paid. If the drilling moves forward, property owners can start collecting—sometimes tens of thousands of dollars promised to them by the natural gas companies they've leased their land to. Or, in other cases, simply wait for someone to come knocking on their door with an offer and a check.

Why the controversy? Fracking for natural gas involves blasting millions of gallons of water deep into the Earth at high pressure to smash apart rock, which releases natural gas that's been held in the rock for millions of years. A Cornell researcher who specializes in carbon-footprint analysis has found that fracking for natural gas is about as energy-intensive as coal mining. There's nothing clean about that. And as we've seen in numerous well blowouts and fires just in the last two months (including one in a Pennsylvania state forest that spewed toxic chemicals into the air for 16 hours), it's not as safe as the industry would have you believe. Natural gas drilling is also exempt from regulation under the Clean Water Act and many other laws designed to protect citizens from industrial pollution.

Here are seven inherent problems associated with natural gas fracking:

(1) **Wrecked water.** Fracking involves using millions of gallons of water that's mixed with hundreds of different toxic chemicals known to act or suspected of acting as endocrine disruptors. These chemicals are linked to thyroid disease, diabetes, sexual development problems, and certain cancers.

(2) **Toxic flowback.** The toxic cocktail is shot underground. Some of it stays there, where it could leach into drinking water aquifers. And some comes back up mixed with deep earth, containing naturally occurring compounds that are dangerous to human health, such as arsenic, mercury, and radioactive materials.

(3) **Assaulted air.** Methane and volatile organic compounds are released from natural gas drilling sites 24/7.

(4) **Soiled soil.** The lined surface ponds that hold toxic fracking fluid have been known to leak. Since many of these drilling pads sit on farmland, it's easy to see how this could be a problem for the entire domestic food supply.

(5) **Counterproductive carbon practices.** Many recent natural gas drilling projects are being operated on state and federal lands where forests have been leveled to provide access. Remember, trees store carbon and keep it out of the atmosphere where it hastens global climate change.

(6) **Nonstop noise.** If someone in your neighborhood signs a lease, get used to bright lights, big rigs, and the noise of compressors all day and all night. Not to mention nonstop traffic of heavy machinery in and out of your community.

(7) **A wallop on your wallet.** We all could wind up paying for pollution cleanup and infrastructure fixes through higher taxes. Not to mention, reports have surfaced that many banks refuse to give loans to property owners who've leased.

WHAT IT MEANS: You might be saying, "I don't live anywhere near these places. What's this got to do with me?" Here's the deal. Major shale plays (that's what they call huge formations of shale) are located all over the country. You may not be sitting on one, but once you understand

how connected all of our water is, it's easy to see this is a national issue, particularly if it's going to be touted as the replacement for coal and oil.

Fracking is already occurring in 34 states—with little federal regulation in the last few years; natural gas companies have been having a field day operating in states with lax laws (New York, for instance, is being more cautious than Pennsylvania and West Virginia and is currently under a drilling moratorium). But if it's as safe as industry says it is, *what is the rush?* "That gas has been under us for 30 million years; it'll still be there if we wait two years," actor Mark Ruffalo, who lives along the Delaware River in New York, told Rodale.com at the meeting. "Property owners here who expect to get a lot of money from their leases, the gas is still going to be under their property, they're still going to get leases. There's no reason why we shouldn't just wait and see if this nascent technology is even safe."

Then there's the property rights issue. Those adamant about drilling believe the technology is safe enough, even though it's been shown to contaminate neighbors' wells in other instances.
"I don't think it's my river and my water...we have this concept that we own water and that we own the property," says Bernie Handler, member of the Damascus Citizens for Sustainability in Pennsylvania. "I don't think a price can be put on something that's a necessity for not just human life, but the entire eco-structure, whether it be trees or snails. It's not ours. It's something we're using right now. We have the privilege of using right now. We have to honor it back. It's precious."

Here's how to find better alternatives to natural gas drilling, and how to protect yourself from this industry that's spreading through the country like wildfire.

- **Demand FRAC Act support.** Tell your federal legislators to support the FRAC Act (S 1215 and HR 2766), which would eliminate the natural gas industry's exemption from the Safe Water Drinking Act and force them to disclose what chemicals they are using in the fracking process (one company has voluntarily released its chemical list, but the majority have not.)

  If you want the government to continue to provide money beyond 2010 for renewable energy projects, tell them you also support extending federal grant 1603, which helps fund these kinds of projects.

- **Know their names.** Natural gas companies have a tendency to just show up on your doorstep with a lease and large monetary offer, putting landowners in a vulnerable position. If you know what you're dealing with right off the bat (and the inherent danger, noise, pollution, and degradation of community roads and bridges that come with natural gas drilling projects), you may be in the position to make a more logical decision. At least you can't say nobody warned you.

  Food & Water Watch identifies the top 20 producers of natural gas as XTO Energy (Cross Timbers Oil), Anadarko, Chesapeake Energy, BP, Devon Energy, Encana, ConocoPhillips, Chevron, ExxonMobil, Royal Dutch Shell, Williams Energy, EOG Resources, Southwestern Energy Co., Occidental, Apache, Petrohawk Energy Corporation, El Paso Energy, Newfield Exploration, Ultra Petroleum, and Questar Corp.

- **Protect yourself.** If gas companies are starting to lease in your area, the number one thing you should do is form or join a community group and link that group to an environmental and/or public health nonprofit experienced in dealing with these issues and navigating these

types of regulations. If you need ideas, the Damascus Citizens for Sustainability is a model to follow.

- **Know when to test your water.** If fracking is moving into your neighborhood, it's unfortunate, but the burden of contamination proof lies entirely on the shoulders of the homeowner. Water testing can be expensive, but testing for specific fracking compounds before the gas industry moves in could help you identify fracking fluid contamination. Just don't test too early. Handler says your water test results may not hold up in court if they are more than six months old. So if you live over or near a shale play, pay attention to what the gas companies are doing, and start testing if drilling seems imminent. Visit The Endocrine Disruption Exchange, led by world-renowned researcher Theo Colburn, PhD, to learn more about the chemicals specific to fracking.

- **Help local farmers see the light.** Among property owners at the DRBC meeting urging natural gas drilling were many farmers who said they need to lease their lands to natural gas companies in order to keep it. Steer such neighbors toward the United States Department of Agriculture's (USDA's) Rural Energy For America Program, which provides more information on renewable energy low-interest loans and grants for farmers. From there, farmers can get more information by connecting with an energy coordinator contact.

  Many solar companies work with farmers to help them navigate the grant program, and to help them hook up with investors who can post the up-front cost of a solar farm installation, explains John Scorsone, president of Solare America, a solar company headquartered in Malvern, Pennsylvania. He is currently working with a New Jersey farm that's projected to make millions from its solar investment. "I'd argue that solar is a much more lucrative investment for farmers," says Scorsone. "They get peanuts for what the [gas] wells are actually worth, as compared to going solar."

  His company is working on a partnership with a family that owns a 166-acre farm in South Jersey and matching them with investors who will put up the money for installation, then both the family and the investors will reap the power sold to neighbors and back into the grid. On top of that, the government provides large incentives.

  Farmer or not, anyone can get more information about incentives to buy into renewable clean energy from the Database of State Incentives for Renewables & Efficiency.