

A Legal Scenario: How a Small Town Could Achieve an Injunction  
against Fracking through Anticipatory Nuisance Law

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**Introduction: What Happens in the Vacuum of Environmental Law Exemptions...**

The Illinois House of Representatives has recently introduced a bill, HB2615 that if passed could become a powerful precedent for the regulation of high volume horizontal hydraulic fracturing nationwide. The proposed law would prohibit this natural gas extraction method known commonly as “fracking” within the state of Illinois without a permit. Furthermore it outlines strict regulations for which the industry would need to meet in order to receive a permit for fracking in the state. These include but are not limited to: setbacks from bodies of water, nature preserves, population centers such as schools and nursing homes; the required public disclosure of all chemicals used in the process; the right for citizens to express their opinions about proposed permits at public hearings and to appeal permits that have been granted; the banning of diesel in the fracking fluid (a practice found reprehensible by the National Environmental Protection Agency [EPA] because diesel contains carcinogenic hydrocarbons (Safe Drinking Water Act [SDWA] § 1421(d)(1))--rules against which will soon be promulgated the EPA (EPA Office of Water 2012); places restrictions on the venting and flaring of natural gas containing methane as well as other ozone producing chemicals; includes specific provisions to protect the state’s water under the Illinois Clean Water Act; and requires bonding and insurance to for natural gas companies to ensure financial accountability (Alexander, 2013).

These regulations would be revolutionary because as of yet, few state regulations exist—and none so comprehensive as those outlined by HB2615. According to an analysis conducted by the Natural Resources Defense Council (NRDC), only 14 of the 29 state that engage in fracking require the industry to disclose the chemicals used in the fracking fluid, and the majority of these still allow the industry to keep a portion of their chemicals undisclosed due to claims of trade secrecy. Only seven states require the disclosure of the concentrations of the chemicals used and only two states require that notice to

landowners be made before fracking occurs on their property (Mall 2012).

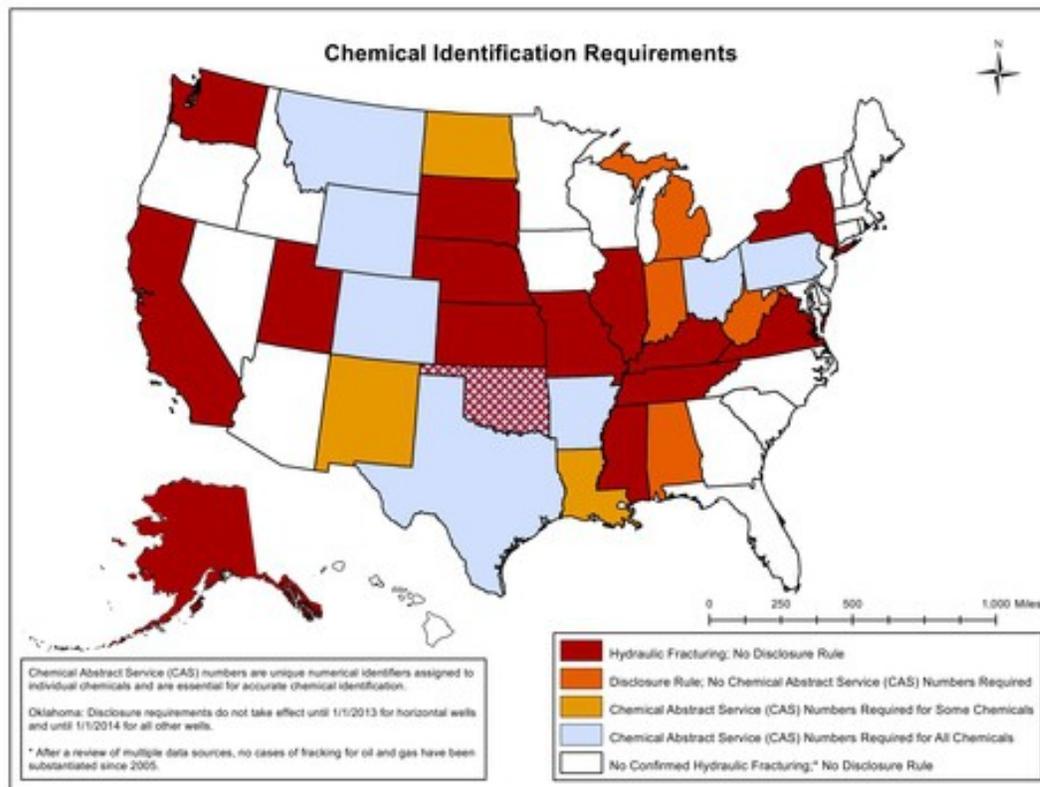


Figure Fracking chemical disclosure laws by state - NRDC 2012

Furthermore due to the amendments attached to the 2005 Energy Appropriations Bill which exempt the natural gas industry from regulations under the SDWA, The Clean Water Act (CWA), the Toxic Release Inventory under the Emergency Planning and Community Right to Know Act, Resource Conservation and Recovery Act, Clean Air Act (CAA), the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), existing operations are occurring largely unregulated (Kosnik 2007).

As stated on the EPA's website, the primary mechanism and chief authority of the EPA to protect drinking water is the SDWA, however the Energy Appropriations bill "provided exclusions to Underground Injection Control" essentially exempting the natural gas industry from regulation under SDWA when it comes to the "underground injection of natural gas for purposes of storage; and the

underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities" (EPA Office of Water 2012).

According to a study by Oil and Gas Accountability Project by the nonprofit organization Earthworks, federal environmental regulations have been usurped by the Energy Appropriations Bill. Sweeping exemptions are enjoyed by the oil and gas industries which have essentially gutted the government's ability to protect the public from the health effects, environmental detriment and other intolerable consequences caused by the operation of the fossil fuel industries. An example of this is the Stormwater Runoff exemption for oil, gas and mining industries. Under the CWA the EPA is responsible for regulating the discharges of pollution into America's waterways including pollution control programs for industry wastewater. The 2005 Energy Act redefined sediment collected from oil, gas and mining sites so that it was no longer considered a pollutant, clearly and explicitly exempting any pollution resulting from all stages of extraction (EPA Office of Water 2012.).

The study goes on to describe similar exemptions for oil and gas under all of the aforementioned statutes, concluding that without reforms the public is left vulnerable (Kosnik 2007).

HB2615 could offer a veritable level of protection for the people of Illinois and potential precedent that could initiate a nationwide reevaluation of the regulatory environment within the states. However should the bill fail to make it to the governor's desk, what recourse is available to a community vulnerable to the interests of a natural gas company?

Consider this scenario: The small town of Eldorado in the Saline County of southern, IL, a tiny rural farming community of just under 5,000 people has piqued the interest of a natural gas drilling company, Shakespeare Oil Company Inc. due to its proximity to the New Albany Formation (City-Data 2012). The company has sent representatives to the town offering land owners with mineral rights a signing bonus of \$350 per an acre and royalty rates of nearly 18 % (Bertrand 2012). However the town is also located near a major aquifer. In some places the water is within 400 feet of the land surface. Since

this is rural Illinois many of the residents rely on well water for themselves, to irrigate their crops and to feed livestock. The town librarian, Mark Buchner is well-read and out-spoken and he has organized town meetings, and spoken out against fracking. A large group of residents (all home owners) including Mr. Buchner have come to a consensus that they do not want to risk their water. However just as they are planning to say “no thank you” to the representatives, two thirds of the group get letters in the mail informing them that they don't own the mineral rights to their land, that the town does. And the mayor, who incidentally has an old high school friend who works for Shakespeare, has agreed to a deal. The money the town stands to make will be enough to build a minor league baseball field. This is something the mayor has always dreamed of constructing. The odds are certainly stacked against the residents so they reach out to the Illinois chapter of the NRDC, and a few days later an environmental lawyer arrives from Springfield and informs them not to worry, she has a plan.

#### **A Common Law Solution?**

Although this scenario is fictional, the situation faced by the hypothetical residents is one that many Americans are currently experiencing; whether they too are considering the possible ramifications of natural gas extraction or are have experienced ill effects due to already occurring fracking operations and are seeking remedies through the legal system. According to the work of the investigative journalism group ProPublica, over the past couple of decades 30 trillion gallons of toxic fracking fluid has been injected in the ground in the U.S. Over 150,000 natural gas wells are currently in operation. Reviews of government records of more than a 220,000 well inspections show that structural failures are not a rarity, as the industry would like the public to believe, but are quite common. From 2007 to 2010 one violation was issued for every six wells examined. This accounted to more than 17,000 violations (Lustgarten, 2012).

The future situation faced by Illinoisans should fracking proceed unregulated is best described in the Chemical and Biological Risk Assessment for Natural Gas Extraction in New York prepared by Ronald E. Bishop of the Chemistry & Biochemistry Department State University of New York:

*“...Cumulative chemical and biological impacts from the gas industry in New York may be predicted for projects of any scope by combining incident statistics from Part 1 with related health and environmental impacts from Part 2. For example, from a development of 10,000 gas wells (a plausible estimate according to Anthony Ingraffea), the sediment run-off into nearby waterways would amount to at least 80,000 tons per year. Such a development would reasonably be expected to generate about 1,200 citations for serious regulatory violations and at least 200 incidents of groundwater contamination in the short term. Over a century, about 1,600 more leaking gas wells should be anticipated. If this scale of development takes place in a 2-county area, then significant spikes in emergency room visits for respiratory complaints and other aspects of “down-winder’s syndrome” in those counties should be anticipated as well. Changes in human chronic disease profiles and impacts on domestic, aquatic and forest ecosystems would be more insidious and difficult to measure – but not necessarily less significant (Bishop, 2013).*

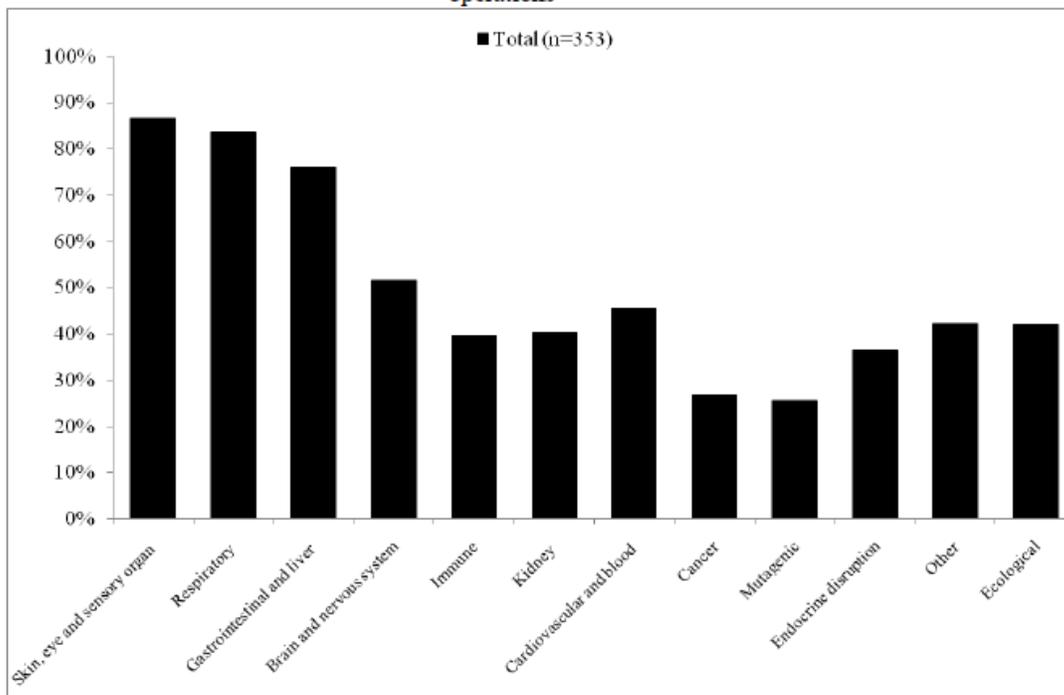
As demonstrated by Lees in the *Vermont Journal of Environmental Law* in “Anticipated Harm, Precautionary Regulation and Hydraulic Fracturing” and by Williams in “The Anticipatory Nuisance Doctrine: One Common Law Theory for Use in Environmental Justice Case” published in the *William & Mary Environmental Law and Policy Review* common law has the potential to not only offer timely relief to those already suffering, but also under the auspices of the Precautionary Principle provide communities with pre-emptive injunctions that under anticipatory nuisance law can either prevent the fracking from occurring or through court orders ensure that precautionary measures are taken to better protect the community as fracking commences.

Lees says the problem with most legal mechanisms is the obstacle of scientific uncertainty or vagueness. It is evident in most environmental tort law connected to fracking. Charges are frequently dismissed due the fact the plaintiffs could not prove causation between the injuries they have suffered and the actions of the natural gas companies they sought justice from. As Plater describes in *Environmental Law and Policy: Nature, Law and Society*, “Given the complexity of the science and the political and economic pressures strenuously contesting the general scientific consensus, how can fundamental causation be convincingly proved...” (Plater et al. 2010, p168). In *Strudley v. Antero Resources Corporation*, (Denver Dist. Ct. May 9, 2012) the defendants claimed “health injuries from exposure to air and water contaminated by hazardous gases, chemicals and industrial wastes.” The court required prima face in the form of expert witnesses and data to establish their claims. The plaintiffs submitted medical records, independent water sample reports and the affidavit of their family doctor. However these failed satisfy the prima facie elements that demonstrated exposure and causation. The defendants demanded the plaintiffs identify the exact substances that caused their illnesses and to prove through expert testimony that these substances do indeed cause the illnesses they suffered and that the level of exposure was sufficient for them to contract said illnesses. They also insisted on reports proving that the plaintiff’s property had been contaminated. Despite having this provided this through independent sources, the defendants—and the court in general—relied heavily on water testing performed by the Colorado Oil and Gas Conservation Commission—hardly an objective party (No. 2011 CV 2218 Denver Co. Dist. Court May 9, 2012).

Numerous studies have identified serious health and environmental risks posed by fracking. The Endocrine Disruption Exchange (TEDX), for example, was able to identify and qualify the health risks of 353 of the known chemicals used and emitted as a part of the normal operations of fracking using the Chemical Abstract Service (CAS) numbers—substances identified as hazardous under CERCLA and EPCRA. Of these 75% had proven effects on the skin, eyes, and other sensory organs, and the respiratory and

gastrointestinal system. Between 40-50% could affect brain/nervous system, immune and cardiovascular systems, and the kidneys; 37% were endocrine disruptors and 25% carcinogenic. Furthermore, over 40% of the chemicals have been found to have adverse effects on aquatic organisms and other wildlife (Colborn, Kwiatkowski, Schultz, and Bachran, 2011).

**Figure 2. Profile of possible health effects of chemicals with CAS numbers used in natural gas operations**



st natural gas operations is equally detrimental as water pollution and the effects are more immediate and far-reaching. One of the provisions in HB2615 is the prohibition of venting, this is because toxic volatile compounds (VOCs), including Benzene and other hydrocarbons, and fugitive natural gas (methane), can escape and mix with nitrogen oxides (NOx) from the exhaust of diesel-fueled, mobile, and stationary equipment to produce ground-level ozone. Smog, similar to what is experienced in urban areas is the result. Plumes can travel out to as far as 200 miles beyond the source (Colborn et al. 2011; McKenzie, Witter, Newman and Adgate, 2012). The health damage from ozone is well-documented by the EPA. Ozone exposure can cause respiratory distress such as coughing, shortness of breath and burning in the

chest. Repeated exposure can cause asthma and severe long-term effects including death (EPA Office of Air Quality Planning & Standards, 2012).

City-like smog has been measured at 140 parts per a billion (ppb) in Wyoming in rural residential areas surrounding natural gas drill sites. This is nearly twice the national limit set by the CAA for ozone which is 75 ppb. Respiratory health effects occur at only 50 ppb in children and the elderly (Colborn et al. 2011).

The EPA is currently conducting a follow-up to its 2004 study on the “Potential Impacts of Hydraulic Fracturing on Drinking Water Resources.” The study hopes to answer the following questions:

- 1) *“Water acquisition: What are the possible impacts of large volume water withdrawals from ground and surface waters on drinking water resources?”*
- 2) *Chemical mixing: What are the possible impacts of hydraulic fracturing fluid surface spills on or near well pads on drinking water resources?*
- 3) *Well injection: What are the possible impacts of the injection and fracturing process on drinking water resources?*
- 4) *Flowback and produced water: What are the possible impacts of flowback and produced water (collectively referred to as “hydraulic fracturing wastewater”) surface spills on or near well pads on drinking water resources?*
- 5) *Wastewater treatment and waste disposal: What are the possible impacts of inadequate treatment of hydraulic fracturing wastewater on drinking water resources?”(Wagner and Gibbons, 2013)*

Hopefully the result of this study will be a reevaluation of the exemptions from environmental regulation the natural gas and oil industries now enjoy, but the report isn’t due to be released until 2014 at the earliest. What are communities like Eldorado to do in the meantime?

Unfortunately high-powered, horizontal hydraulic fracking is a fairly new practice and despite the 1,000 plus complaints collected by the EPA (Lees, 2012) anecdotal evidence compiled by the NRDC, ProPublica and other organizations and the numerous aforementioned studies, prima face is sometimes hard to come by.

TEDX was able to qualify only 353 of the nearly 1000 chemicals used in fracking due to proprietary “trade secret” restrictions on the formulas. Furthermore there is no industry standard for the fracking fluid, it differs from company to company and site to site. These chemicals are often mixed by people who do not have expertise in the chemical reactions or cumulative effects of small amounts accumulating over time (Colborn et al. 2011). The geological ramifications of causing “miniature earthquakes” as the industry describes the explosive process of the fracking procedure are currently being examined by scientists, but conclusions may not be forthcoming (Ellsworth, Hickman and Rubinstein, 2011). But is the lack of conclusive proof the fracking is harmful reason enough to allow it to proceed unregulated? The NRDC argues in their study on the health effects of fracking, that the industry has yet to conclusively prove that the process and materials and resultant emissions from fracking are safe for human health and the environment (Lees, 2012).

Fracking could be described as a textbook example of when to apply the Precautionary Principle. The Wingspread Conference in Racine Wisconsin in 1998 sought to define the Principle:

*"While we realize that human activities may involve hazards, people must proceed more carefully than has been the case in recent history. Corporations, government entities, organizations, communities, scientists and other individuals must adopt a precautionary approach to all human endeavors. Therefore it is necessary to implement the Precautionary Principle: Where an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully*

*established scientifically. In this context the proponent of an activity, rather than the public bears the burden of proof. (Ashford et al. 2008)"*

Lees quoted Talbot Page an economist who in 1978 said, "a false negative could cost lives, while a false positive, such as banning a truly harmless chemical, would have only economic consequences, and probably minor ones at that."

Although various formulations of the Precautionary Principle exist—some of which merely acknowledge the idea that regulation should not be precluded by the absence of scientific proof and others that say that Best Available Technology (BAT) requirements should be imposed unless proponents of potentially risky activities can prove BAT isn't needed; or some that go as far as saying potentially risky activities should be prohibited until they can be proven safe. Lees argues that all of the formulations offer guidelines for determining when preemptive action might be preferable to the possible consequences of no action. (Lees 2012).

Can the Precautionary Principle inform an anticipatory nuisance case? Considering the challenges brought to bear when trying a nuisance tort that has already occurred or that continues to occur, it may seem unlikely. But despite the setbacks mentioned previously concerning proof of causation, successful suits in negligence, nuisance and trespass are making headway providing much needed relief individuals and groups who are experiencing ill effects of fracking. One older example is *Williams v. Amoco* where the defendant, Amoco Production Company, was required to pay damages of \$656,006.40 after the plaintiffs' irrigation well was found to be so thoroughly inundated by methane that when one of the plaintiffs dropped his cigarette, the water caught fire (241 Kan. 102 (1987)). Or more recently *Berish, et al. v. Southwestern Energy Production Company*, the court did not dismiss the Strict Liability Claim that the plaintiffs' drinking water was contaminated by fracking activities and that their future health was at risk due to their consumption of the contaminated water. The court did dismiss their claim for emotional distress however. In another example the industry settled and the charges

were summarily dismissed; in *Fiorentino v. Cabot Oil & Gas Corp* in which 19 families claimed (II) negligence; (III) private nuisance; (IV) strict liability; (V) breach of contract; (VI) fraudulent misrepresentation; (VII) medical monitoring trust funds; and (VIII) gross negligence when the combustible gas we released into the plaintiffs' wells causing (among other damages) three significant explosions over the course of 10 days (Arnold & Porter 2012) the parties settled privately. These are just a few examples of civil tort actions included in the document produced by Arnold and Porter LLP, a law firm that specializes in hydraulic fracturing cases.

In all of the above mentioned cases—as is typical of tort law---the cows were already let loose from the proverbial barn. The best the court could do was offer monetary compensation for the damages already done to the plaintiffs. The wells will most likely remain contaminated and hopefully the settlement money is sufficient to pay any medical bills accrued due to the health effects suffered by the plaintiffs and their families. What if this all could have been avoided to begin with? That is where anticipatory nuisance law comes in. According to Williams the Doctrine of Anticipatory Nuisance is to be invoked when there is a “threat of sufficient seriousness and imminence to justify coercive relief.” When considering whether a case could fall within the Doctrine, first you must consider whether the potential harm qualifies as a nuisance: namely will the proposed activity interrupt the plaintiffs' use and enjoyment of their property? Is the potential damage significant? Would it be irreparable once it occurred? Will it provide a continuous disturbance? For example the Supreme Court of Oklahoma provided an injunction against the building of a landfill when the plaintiff proved that the “difficulty, complexity and costliness of remedying ground water contamination was well documented” and likely to occur, and that, “once seriously contaminated, groundwater is often rendered unusable and cleaning it up is often unsuccessful” (Williams, 1995 pp. 241)

Williams suggest that a potential case under the Doctrine must meet all of the following criteria:

- 1) *Prevention of irreparable harms*

- 2) *A nuisance per se is an act, instrument, or structure which is a nuisance at all times and under any circumstances, regardless of location or surroundings.*
- 3) *Likelihood of Harm*
- 4) *Severity of Harm*

Can the fictional residents of Eldorado prove standing for a private anticipatory nuisance case? The plaintiffs claim that should the defendant be allowed to frack within a close proximity to their properties irreparable harms could occur. In the case of *Village of Wilsonville v. SCA Services, Inc.* the Illinois Supreme Court ruled that it was highly probable substantial injury would be inflicted on the plaintiffs if chemical waste disposal site was not prevented from being built on top of an abandoned coal mine. The plaintiffs presented evidence that substances planned to be deposited at the site were toxic, and exposure to which could result in pulmonary diseases, cancer, brain damage and birth defects.

*"The court thought it "sufficiently clear" that it was highly probable that the site would constitute a nuisance and that the highly toxic chemical wastes at the site would escape and contaminate the air, water, and ground around the site: "A court does not have to wait for it to happen before it can enjoin such a result... Under these circumstances, if a court can prevent any damage from occurring, it should do so" (Williams 1995, p248)*

Any number of the chemicals used in the process of fracking, should the plaintiffs be exposed to them, have the potential to cause serious health effects such those described in the TEDX study. And if leaks and well violations are nearly as common as described by the investigative work of ProPublica, unless serious preventative measures were taken the likeliness of a well violation for the potential well in Eldorado would be very high.

That is one of the major benefits of anticipatory tort law,, even if a prohibitive injunction is denied the court can demand precautionary actions as a condition of allowing the activity to proceed. In the *Salter v. B. WS. Corp*, the Supreme Court of Louisiana ruled that without adequate precautions the

installation of a chemical waste facility would contaminate a neighboring well. The court mandated that an impermeable lining be installed along the trenches where the waste would be stored.

The plaintiffs in *Buchner et al. v. Shakespeare Oil Inc.* would need to cite the aforementioned successful tort cases as precedents including: *Williams v. Amoco*, *Berish, et al. v. Southwestern Energy Production Company* and *Fiorentino v. Cabot Oil & Gas Corp.* They would need to prove that the aquifer is of utmost value to the town and should it be compromised the damage would be irreparable. They would be wise to bring in an expert witness such as the author of the TEDX study Dr. Theo Colbourn who could make comparisons between damage done to the Colorado River watershed and potential damage to the watershed of Saline County. Another expert to consider bringing in would Tom Myers of the NRDC who authored the study "Potential Contaminant Pathways from Hydraulically Fractured Shale to Aquifers," who could speak about how likely contamination would be to the Saline County Aquifer. As in all nuisance cases the burden of proof would be on the plaintiffs, and they would have to carefully build their case.

### **Conclusion**

Given that this case would be decided in the Illinois Supreme Court and that *Village of Wilsonville v. SCA Services, Inc* provides such a powerful precedent, I believe that the residents of Eldorado have a good chance of getting an injunction against fracking in their community through an Anticipatory Nuisance suite.

HB2615 is still in its infancy as far as bills are concerned. The House of Representatives has yet to vote on the bill, never mind the long journey it has yet to travel to be approved by both the Senate and the governor. Who knows if it will arrive intact at the governor's desk, or if the strong regulatory language will be watered down to appease the natural gas industry. We can only hope that all goes well.

However in the absence of this powerful law and in the vacuum caused by the 2005 Energy

Appropriation's exemptions to federal environmental laws, it is good to know that everyday citizens can receive relief and possible protections through Common Tort Law.

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Also see:

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Clean Water Act 33 U.S.C. §1251 et seq. (1972)

Clean Air Act 42 U.S.C. §7401 et seq. (1970)

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