



ADVANCING PUBLIC TRUST SOLUTIONS
TO SAVE THE GREAT LAKES

Horizontal Fracturing for Oil and Gas in Michigan: Legal Strategies and Tools for Communities and Citizens

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James M. Olson and Elizabeth Kirkwood

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ABOUT FOR LOVE OF WATER (“FLOW”)

For Love of Water (“FLOW”) is a 501(c)(3) non-profit organization whose mission is to recognize the Great Lakes as a commons held in public trust for the benefit of current and future generations and to raise public awareness on how public trust principles can counter potential and actual harms to the systemic threats of the Great Lakes. Based in Traverse City, Michigan, FLOW’s Public Trust Policy Center is conducting legal and policy research on relevant issues that continue to emerge across the Great Lakes. This work is grounded in legal research and policy and educating the public and decision-makers at all levels about the value and potential applications of public trust principles to current individual and systemic threats to our water and other commons. More information about FLOW and our staff, board, directors, programs, and funders can be found at www.flowforwater.org

ABOUT THE AUTHORS

This report was prepared by James M. Olson, Chair, FLOW Public Trust Policy Center, and Elizabeth Rosan Kirkwood, Director of Law and Policy, FLOW Public Trust Policy Center.

James Olson is the founder, Chair, and President of FLOW, and also is a senior principal of Olson, Bzdok & Howard, P.C. in Traverse City, Michigan. Jim currently oversees the direction of the organization, and also draws on his legal and policy expertise to guide FLOW’s Public Trust Policy Center. In addition to publishing critical analyses on current and emerging issues, including water, commons, public trust, fracking and systemic threats and solutions for the 21st century, Jim also speaks on behalf of FLOW through a robust schedule of presentations, lectures, and panel discussions. Jim has represented clients, written books and articles, and lectured widely on environmental, land use, water, and public trust law for more than 40 years. He is a graduate of Michigan State College of Law (Detroit College of Law) and has an L.L.M. Degree in public lands, natural resources, and environmental law from the University of Michigan Law School.

Elizabeth Rosan Kirkwood is the Director of FLOW’s Public Trust Policy Center. She is responsible for managing and directing the Policy Center’s program and publications. Prior to working for FLOW, Liz worked for USAID in Thailand as an environmental attorney to implement a regional environmental governance, water, and sanitation program in Southeast Asia. She also worked as an environmental litigator at Farella, Braun & Martel in San Francisco where she represented clients on natural resource and energy related matters. She graduated from Williams College with a degree in Environmental Studies and History, and received her J.D. and Environmental Certificate from Lewis & Clark Law School.

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EXECUTIVE SUMMARY

Grave systemic threats to the overall health of the Great Lakes ecosystem emanate from over-extraction of resources, consumptive use of water, climate change, pollution, nutrient run-off, wetland loss, invasive species, mining, and oil and gas exploration (e.g., hydraulic fracturing) among others. In response to this urgent need for holistic solutions, FLOW (“For Love of Water”) has been working since 2008 to advance the role of the *public trust doctrine* in addressing these systemic threats facing ecosystems like the Great Lakes. The public trust doctrine serves as an important supplement to traditional legal sources of authority, and provides a renewed and inspired approach for governments to embrace their stewardship roles as trustees over water resources and ecosystems.

The most recent threat has centered on the controversial extraction process of certain types of oil and natural gas formations in the Great Lakes Basin and elsewhere in North America. Since 2010, Michigan’s state land lease auctions for oil and gas exploration and development have rallied together citizens, property owners, and communities who are increasingly frustrated by the lack of federal and state regulatory oversight, as well as lack of state agency action to fully assess cumulative impacts to water, air, and land, and to address these threats to our natural resources. Based on local, state, and national meetings and presentations over the past two years, FLOW recognized this growing and urgent need to develop legal strategies and policies for local governments to safeguard their communities against the unprecedented, huge, and cumulative impacts of hydraulic fracturing or “fracking.” This paper and additional papers planned for the future, thus, are intended to fill the vacuum and empower citizens and local governments with existing legal strategies and tools, including those that feature the public trust.

Citizens and communities located in areas of oil and natural gas-rich deposits, such as Michigan’s Utica/Collingwood and A-1 Carbonate formations, have good reason to be concerned about the risks fracking poses to state waters and natural resources.

First and foremost, the natural gas and oil industry is exempt from key federal environmental laws, including the Safe Drinking Water Act and the Clean Water Act.

Second, under the existing legal structure, states are primarily responsible for regulating fracking activities, and thus in turn, for protecting the air, water, and land resources. However, a closer look at Michigan laws reveals that the fracking industry is largely exempt from key water statutes like Michigan’s codification of the Great Lakes Compact,¹ which was designed to protect this state’s most treasured resource. In addition, Michigan, like other states, has also suffered from “amnesia” of its basic authority to apply existing laws and legal principles to address risks associated with fracking. Michigan, for example, does not conduct cumulative baseline water or resource and environmental studies on use, handling, chemical composition, “flowback” and “produced water” and disposal before the agencies issue state leases and permits for oil and gas exploration. Similarly, Michigan’s Department of Natural Resources does not

¹ Natural Resources and Environmental Protection Act (“NREPA”), Great Lakes Preservation, MCL 324.32701 *et seq.* This statute expressly exempts the oil and gas industry from complying with the requirements of large quantity water withdrawals, including obtaining a water withdrawal permit. MCL 324.32727.

conduct generic studies to understand the impacts and risks of fracking before it auctions and sells off oil and gas lease rights to develop these formations under state-owned lands, including parks, recreation areas, and wildlife and game areas.²

And lastly, digging deeper, it is clear that the oil and gas industry has even secured exemptions at the local level. Under Michigan's Great Lakes Compact legislation, local units of government are expressly prohibited from enacting or enforcing an ordinance that regulates a large quantity withdrawal.³ Under Michigan's Zoning Enabling Act, local units of government are also expressly prohibited from regulating or controlling the "drilling, completion, or operation of oil or gas wells or other wells drilled for oil or gas exploration purposes."⁴

Thus, if the federal government has deferred regulation of the oil and gas industry to the states, and the states have exempted the industry, and the local governments are prohibited from regulating the actual wells, who is regulating this industry? And what can citizens and local governments do?

This paper examines existing legal strategies that counties and townships can take to address the tremendous potential impacts of fracking to their communities given the *laissez-faire* approach of both the federal and state governments. In particular, it discusses the following laws and potential zoning and police power ordinances for townships to consider in regulating activities associated with unconventional deep shale oil and gas fracturing in Michigan:

- (a) The Michigan Zoning Enabling Act of 2006: Municipal Zoning of Structures, Facilities, and Processes Related to Oil and Gas
- (b) The Michigan Township Ordinance Act: A Police Power Ordinance to Regulate Activities and Operations and to Secure Public Health, Safety, Welfare, and the Environment;
- (c) Common Law Public Nuisance and the Michigan Environmental Protection Act;
- (d) Fracking Ban Ordinances; and
- (e) Fracking Moratorium Ordinances.

This paper focuses on local ordinances and actions and will become part of FLOW's more comprehensive white paper on legal strategies for communities and townships to consider in regulating aspects of hydraulic fracturing to be published in late winter/early spring 2013.

² See Kirkwood, L., Comments to Michigan Natural Resources Commission and Department of Natural Resources, FLOW Public Trust Policy Center, (September 11, 2012).

³ MCL 324.32726.

⁴ MCL 125.3205(2).

SECTION 1: HISTORY OF HYDRAULIC FRACTURING OR “FRACKING” IN MICHIGAN

Michigan is no newcomer to natural gas exploration; Michigan’s experience, however, is limited to vertical or conventional hydraulic fracturing technology during its first natural gas boom in the late 1980s and through the 1990s. Hydraulic fracturing or “fracking” is a technology that requires injecting a cocktail of water and chemicals under high pressure into wells in order to fracture shallow to deep shale formations and release natural gas. Located in the northern lower peninsula of Michigan, the Antrim shale deposit was profitable because of its shallow depth (ranging between 600 and 2,000 feet below the surface) coupled with this emerging extraction technology. Natural gas producers used on average 50,000 gallons of water per well to extract these isolated natural gas pockets or reservoirs, and drilled over 12,000 wells in the Antrim Shale formation. Even in 2010, this shale formation boasted the nation’s 13th largest source of natural gas.

Spanning across Michigan’s lower peninsula, the Collingwood/Utica deep natural gas shale and A-1 Carbonate oil and gas formations are notably different than the Antrim formation. For one, these geologic formations are some 5,000 to 10,000 feet deep (one to two miles), and require horizontal drilling and fracking to capture the gas trapped across the geological strata as opposed to vertical and slant drilling to tap isolated “pools” or “reservoirs” of oil or gas. These deeper formations require on average 5 million gallons of water and chemical/sand mixtures, or 100 times more than used in a vertical or typical shallow Antrim well that may require fracking.

The first deep well drilled in this formation in 2010 by a subsidiary of the Encana Corporation, Canada’s largest natural gas producer, pumped 5.5 million gallons of water to produce an average of 2.5 million cubic feet of natural gas a day for 30 days. This active well caught the attention of natural gas producers and spurred a huge “land grab” in 2010. Despite these clear and important differences between the Antrim and Collingwood and other deeper tight-rock formations, the Michigan Department of Natural Resources (“DNR”) and Department of Environmental Quality (“DEQ”) have not responded with any new regulations, procedures, or guidelines. DNR relies on pre-horizontal fracking oil and gas development rules and procedures reviewed and put in place more than 10 years ago. DEQ’s Supervisor of Wells issued an order in 2011, requiring companies to file Material Safety and Data Sheets (“MSDS”) during drilling to disclose those chemicals it was using that required disclosure under federal law; however, this initial effort does not substantively address the impacts of statewide natural gas or oil exploration and operations on the state’s water, air, other natural resources or the public’s use and trust in those resources and state lands.

Just like the Marcellus Shale deposit located primarily in Pennsylvania, New York, Ohio and West Virginia, the Collingwood/Utica shale gas formation in Michigan offers potentially significant economic opportunities for the State; in the spring of 2010 alone, the State received \$178 million for its state leased land, nearly as much as the state had earned in the past 82 years of lease sales combined. This 2010 spring sale, however, was an anomaly; revenues in terms of price per acre have dropped from \$1,500 per acre to an average of \$35 per acre. In the fall of 2010, however, the state sold off 450,000 acres of leases on state land for an average of only \$22

per acre.⁵ And the most recent sale on October 24, 2012 returned only about \$16 per acre. All of this activity confirms that depending on economics, energy, renewable energy, and limitations on consumption of water resources and climate change, Michigan's Collingwood/Utica and other deep rock formations may be “one of the nation's most promising new oil and gas plays.”⁶

SECTION 2: RISKS ASSOCIATED WITH UNCONVENTIONAL HYDRAULIC FRACTURING

The nationwide controversy stirring over fracking – a natural gas extraction process that is less than two decades old – is complex. Because it is clear that the U.S.’s current and future energy needs are tremendous, shifting away from imported fossil fuels makes good geopolitical sense. What natural gas offers to this energy debate is interesting because relative to coal it is reducing our overall greenhouse gas emissions; however, as compared to other renewable energy options like wind, natural gas remains a fossil fuel with grave climate change implications. In contrast to most industries, the natural gas industry is exempt from key federal laws, such as the Safe Water Drinking Act and the Clean Water Act, which leaves the states in charge of protecting the air, water, and land resources. Daily media reports on this subject across the country either praise the promises of new jobs and greater energy independence or point to both potential threats and actual harms to local water resources and call for either a moratorium or a complete ban on fracking. Polemics aside, the real issue we confront is this: “we don't know enough about these threats to make wise decisions [since] monitoring and regulatory oversight are inconsistent from state to state, and weak and inadequate.”⁷ Given this situation, there is an urgent and pressing need for better regulatory oversight coupled with mandatory public disclosure in the natural gas and oil industry across this nation.

A review of the literature on fracking and its associated risks reveals several common themes or concerns: (1) massive water withdrawals; (2) groundwater contamination associated with well drilling and production; (3) surface spills and leaks; (4) wastewater management; (5) land use impacts; (6) truck traffic and its impacts on water quality and burden on public infrastructure; and (7) lack of public disclosure. The list below outlines the differences between conventional

⁵ It is recognized that this may have been due to manipulations regarding the bidding process, but this in and of itself should be reviewed before any more lease sales are approved. For more information, see the following Reuter’s articles describing the Justice Department’s current antitrust investigations involving Encana and Chesapeake Energy. Driver, Anna and Joshua Schneyer. “Legal Woes May Spoil Chesapeake’s Michigan Sale,” Reuters (Aug. 10, 2012) <http://www.reuters.com/article/2012/08/11/us-chesapeake-michigan-idUSBRE87914420120811>; Grow, Brian and Joshua Schneyer. “Exclusive: Encana tipped off Chesapeake to land plans in Michigan – Emails” Reuters (Jul. 11, 2012) <http://www.reuters.com/article/2012/07/11/us-chesapeake-encana-land-idUSBRE86A0G620120711>; Grow, Brian and Joshua Schneyer. “Michigan lawmakers call for action in Chesapeake-Encana probe.” Reuters (Jul. 24, 2012) <http://www.reuters.com/article/2012/07/24/us-chesapeake-michigan-idUSBRE86N0JO20120724>

⁶ Grow, Brian and Scott Hagggett. “Encana clears itself of collusion in Michigan.” Reuters (Sep. 5, 2012). <http://www.reuters.com/article/2012/09/05/us-encana-chesapeake-idUSBRE8841JE20120905>

⁷ Cooley, Heather and Kristina Donnelly. “Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction.” Pacific Institute. (June 2012). http://www.pacinst.org/reports/fracking/full_report.pdf

and unconventional fracking and explains why this technology of unconventional horizontal drilling presents greater threats to the air, water, and land resources.

- Depth of Natural Gas or Oil: Horizontal fracking seeks to capture oil and gas from shale rock formations 1 to 2 miles below the land's surface. Traditional vertical wells capture gas from pools in much shallower reservoirs. In other words, horizontal fracking does not drain oil and gas from underground pools or reservoirs, but incrementally explodes the tight rock, such as shale in Michigan's Utica/Collingwood gas play.
- Committed Natural Resources: The differences in magnitude and the irreversible commitment of air, water, wildlife, and natural resources to the public trust have not been adequately considered at the state level. Without federal oversight and minimal state regulations but for the wells themselves, Michigan is not examining the individual or cumulative impacts on its water resources.
- Water Use: The scale and magnitude is much greater with respect to water use and disposal. Horizontal fracking, for example, requires 5 to 8 million gallons of water in a chemical mixture or soup that are diverted as a consumptive use, become contaminated wastewater, must be disposed of as wastewater, and ultimately removed from the water cycle. All of these operations may extend over the lifetime of the well (20-30 years) because the wells are fracked once every several years to improve the mobility of the natural gas. By contrast, traditional vertical wells use only 20,000 to 50,000 gallons of water chemical mixture. In sum, horizontal fracking consumes 100 times the amount of water per well than is used in traditional vertical drilling.
- Chemical Input and Lack of Disclosure: Over 750 chemicals and compounds are used in fracking as proppants, surfactants, and other purposes. At least 29 of these chemicals are either known or possible carcinogens or are regulated by the federal government because of the risks they pose to human health. In the absence of federal legislative action requiring chemical disclosure, states must do more. The industry's position that disclosure will jeopardize business obscures the fact that this is a debate about public safety, corporate accountability, and the need to mitigate the environmental and health risks of fracking.
- Wastewater Handling and Disposal: The "flowback" and "produced" water that comes from fracking the wells is polluted wastewater that presents an enormous handling and disposal challenge. Current disposal management options include recycling for additional hydraulic fracturing, treatment and discharge to surface waters, underground injection, storage in impoundments and tanks, and land application (road spreading), all of which present serious risks to human health.
- Faulty Assumption about this New Technology: There is a faulty assumption that simply because hydraulic fracturing has been around for some 60 years that it must be acceptable in any form, scale, magnitude, or location.

- Land Use: 5 acres or more is required for equipment, pipes, trucks, supplies, mixing tanks for water and chemicals, high-capacity pumps, waste handling or storage tanks, flaring, treating, and disposal. Traditional vertical wells involve 1 or 2 acres, smaller roads, fewer trucks and vehicles, and no major storage, handling, pumps or other major equipment.
- Truck Traffic: Horizontal drilling requires up to 100 truck trips for hauling water per day per well in a given area, thus requiring wider and better roads and presenting significant traffic and nuisance concerns/risks for local and neighboring communities. According to a report from Environment America, \$40 million were spent on Texas road repairs related to Barnett Shale fracking activities.⁸
- Potential for Contamination/Spills: The potential for spills and releases of methane and well water contamination is far greater with unconventional fracking. Some contamination occurs due to faulty casings or mishandling.⁹ Given that ground and surface waters are inextricably connected as a single hydrologic system, the natural oil and gas industry has a duty to implement best available technologies and monitoring systems to protect these connected waters from contamination. The town of Dimock, Pennsylvania spent \$11 million to replace its contaminated groundwater supply.¹⁰ It only costs 7% more in construction costs to build more stringent infrastructure standards and perform baseline studies.¹¹
- Nuisances: Noise, odors, and chemicals released into the air and environment are industrial in scope and incompatible with designated uses like state parks, game and recreation areas, and other special management units or areas.
- Cumulative Impacts Not Considered: Cumulative environmental impacts and alternatives are not addressed at the time of state land leasing, only afterwards at the time of permitting for the actual wells. Associated health costs are often overlooked; for example, \$9.8 million in health costs were attributed to the development of the Fayetteville Shale region in Arkansas.¹²
- No Development Plans: There is no current statewide, regional, or local area-wide hydrocarbon development plan for unconventional fracking in Michigan.

⁸ <http://www.environmentamerica.org/reports/ame/costs-fracking>

⁹ See generally <http://www.circleofblue.org/waternews/2009/science-tech/climate/pennsylvania-residents-sue-gas-driller-for-contamination-health-concerns/>

<http://www.propublica.org/article/dep-issues-citation-to-pennsylvania-driller-as-a-third-spill-occurs-923>

¹⁰ <http://www.environmentamerica.org/reports/ame/costs-fracking>

¹¹ Robnett, Gynnie. *Hydraulic Fracturing: Disclosure and Transparency*. OMB Watch (Presentation 2011).

¹² <http://www.environmentamerica.org/reports/ame/costs-fracking>

SECTION 3: LEGAL STRATEGIES FOR LOCAL GOVERNMENTS TO PROTECT THEIR COMMUNITIES FROM FRACKING: SOURCES OF STATE ZONING LAW AND POLICE POWER AUTHORITY

The two principle statutes delegating local government legal authority to address oil and gas development like hydraulic fracturing and related processes include: (1) the state Zoning Enabling Act of 2006, and (2) the Township Ordinance Act of 1945. Both Acts provide townships and counties legal authority to adopt either zoning ordinances that govern land use or police power ordinances that govern health, safety, and pollution issues associated with unconventional hydrocarbon development (e.g., massive water withdrawals of 5-8 million gallons per well, transportation, handling, and disposal of wastewater as it becomes contaminated through the injection process).

The following section examines specific and existing legal zoning and police power authority that townships and counties can use to regulate certain aspects of hydraulic fracturing for oil and gas development. By adopting carefully crafted zoning or police power ordinances, townships can protect Michigan's air, water, resources, and property and the health, safety, and welfare of residents and communities from the unprecedented impacts and harmful risks of fracking and related oil and gas drilling processes. These risks include chemical exposure, air emissions, releases of contaminants, water withdrawals, wastewater, high truck traffic and transportation issues, land impact, odors, noise, and handling and disposal of hazardous or contaminated liquids or muds.

A. THE MICHIGAN ZONING ENABLING ACT OF 2006: MUNICIPAL ZONING OF STRUCTURES, FACILITIES, AND PROCESSES RELATED TO OIL AND GAS

The Michigan Zoning Enabling Act ("MZEA") of 2006 consolidated several zoning enabling acts into a single unified Act and regulates "all things zoning:" including how to adopt a zoning ordinance, the creation and powers of a zoning board of appeals, the role of a planning commission and township board in enacting and enforcing zoning regulations, and the process and standards to issue a special use permit ("SUP") or to grant a land use variance. For example, a local unit of government may

provide by zoning ordinance for the regulation of land development and the establishment of districts...which regulate the use of land and structures to meet the needs of the state's citizens for food, fiber, energy, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land, to ensure that use of the land is situated in appropriate locations and relations...to facilitate adequate and efficient provision for transportation services, sewage disposal, water, energy, education, recreation, and other public service and facility requirements, and to promote public health, safety, and welfare.¹³

This Act expressly prohibits county or township regulation or control of the "drilling, completion, or operation of oil or gas wells, or other wells drilled for oil and gas exploration

¹³ MCL 125.3201.

purposes.”¹⁴ Counties and townships lack jurisdiction over issuance of permits for the location, drilling, completion, operation, or abandonment of those wells.¹⁵ Certain facilities, however, like processing plants and pipelines, may be subject to township or county zoning approval.¹⁶ In sum, this Act preempts regulation by counties and townships on oil and gas operations only as it relates to the zoning of the location and related operations of wells themselves. In other words, as described below, other than the zoning of wells, there is no preemption of local regulation.¹⁷

Notably, the Zoning Enabling Act’s prohibition to regulate oil and gas wells or operations, however, does not preclude regulation by cities and villages.¹⁸ In fact, as noted by the Michigan Supreme Court, “[t]here is no limitation in the city or village zoning act.”¹⁹

While it is clear that townships and counties cannot prohibit or permit oil and gas exploration and extraction, townships and counties do have some authority and ability to regulate related facilities, processes, and activities, such as natural gas pipelines, flow lines, gathering lines, treatment or production facilities, or compressors, pursuant to the *Addison Township v. Gout* case²⁰ decided by the Michigan Supreme Court. In the *Addison Township* case, the Michigan Supreme Court examined whether a local township could regulate and prohibit a natural gas processing plant from constructing a new gas pipeline to import gas from outside the township. Applying the Township Rural Zoning Act²¹ (now the Zoning Enabling Act), the Supreme Court held that the township had authority to regulate gas pipelines because it was “consistent with the needs of its citizenry regarding energy and other natural resources generally and without limitation.”²² Pipeline regulations are needed to address community safety concerns and fall squarely within a township’s authority. Recognizing the Zoning Act’s broad authority for local government units to regulate land use, the Court opined that “[o]nly in very *rare* instances will a permit issued for one purpose obviate local zoning laws.”²³

In addition, Michigan’s Supreme Court rejected the argument that the legislature granted the Supervisor of Wells [DNR Director] “absolute regulatory power over all phases of the industry.”²⁴ Rather, the Supervisor’s exclusive regulatory authority was limited to gas and oil wells, not pipelines and, presumably, other related facilities, land uses and activities. What this

¹⁴ MCL 125.3205(2).

¹⁵ See, e.g., *Dart Energy Corp v. Iosco Twp*, 206 Mich App 311; 520 NW2d 652 (1994) (oil and gas well converted to brine well).

¹⁶ See *Addison Twp v. Gout*, 435 Mich 809; 460 NW2d 215 (1990) and discussion below.

¹⁷ *Id.* However, there is one more wrinkle to this issue, which is that the Natural Resources and Environmental Protection Act (“NREPA”) expressly prohibits a local unit of government from enacting or enforcing an ordinance that regulates a large quantity withdrawal. See MCL 324.32716. However, a local unit of government could arguably regulate a low capacity well withdrawing less than 100,000 gallons per day.

¹⁸ MCL 125.3205.

¹⁹ *Addison Twp v. Gout*, 435 Mich at 814.

²⁰ *Id.*

²¹ This Act has been consolidated and codified into the Michigan Zoning Enabling Act of 2006 (MCL 125.3101 *et. seq.*) and the Planning Enabling Act of 2008 (MCL 125.3801 *et. seq.*).

²² *Id.*

²³ *Id.* (emphasis added).

²⁴ *Id.*

case illustrates is the legislative intent and Court's validation of local government authority to regulate the oil and gas industry and ensure safety and protection of natural resources.

Special Use Permits

Special Use Permits ("SUPs") are authorized to allow certain types of uses with special circumstances within a range of land use districts within the boundaries of a township or county. The purpose is to allow narrower specific uses by permits based on a complete application and evidence that demonstrate how the proposed specific use will meet standards carefully designed to protect as opposed to create a risk of unacceptable harm to the health, safety, and general welfare of the community. In addition, an SUP permit application must show that the proposed use will protect adjacent or neighboring land uses and property values, comply with the overall master plan or comprehensive plan of a township or county, and prevent or minimize degradation of the air, water, natural resources, or private and public uses protected in a land use area or district. In this manner, the township or county board or planning commission, depending on which body is charged with administering the special use proceeding, controls: (1) what information is required before a special use is considered, (2) whether a special use is permitted, (3) whether it meets the standards in the ordinance, and (4) what strict conditions should or may be imposed to assure compliance, enforcement, and restoration if something goes wrong and results in harm or potential future harm.

Special uses can include practically anything unless expressly prohibited or contrary to law. Oil and gas development and related facilities or activities may be prohibited unless allowed by special use permits, except as noted above drilling, completion, production and operation of oil and gas wells, including brine wells²⁵ that have been converted from oil and gas wells. Thus, townships or counties may regulate related land uses and activities of oil and gas operations occupying or using land within the township or county, such as: flow lines, gathering lines, water and chemical mixing stations or facilities, truck transfer and hauling facilities, access roads or drives, pipelines, sweetening facilities, water sources, uses, transfers and diversions, treatment and production facilities, waste treatment, reuse, or disposal transfer, hauling, and discharge facilities, wetland impacts, air emission equipment and facilities, (e.g., flares, scrubbers), and other related facilities and processes connected to oil and gas development through vertical or horizontal hydraulic fracturing in various rock formations.

For an example of a draft zoning ordinance regulating ancillary hydraulic fracking activities, see Appendix A.

²⁵ Part 615, MCL 324.61525(1) sets forth the administrative requirements regarding the use and operation of injection wells. In addition to the state's permit requirements, injection wells also may require permits from U.S. EPA under the Underground Injection Control Program of the Safe Drinking Water Act, 42 USC 300f *et seq.*, 40 C.F.R. Parts 124, 144 and 146-148.

B. THE MICHIGAN TOWNSHIP ORDINANCE ACT: A POLICE POWER ORDINANCE TO REGULATE ACTIVITIES AND OPERATIONS AND SECURE PUBLIC HEALTH, SAFETY, WELFARE, AND THE ENVIRONMENT

The police power to regulate health, safety, and general welfare provides state governments the authority to regulate the use of public and private property. This authority is essential to protect neighboring uses, property values, natural resources, water, the environment, transportation, and other vital public services.

While it is clear that county or township governments do not have authority to directly regulate or control oil or gas wells pursuant to MCL 125.3205, local governments do have authority to regulate related or ancillary facilities, processes, or activities, such as hours of operation, noise levels, dust control measures, water and chemical transfers, mixing, handling, and disposal of wastewater and other materials, traffic, transportation, and other risks or impacts related to hydraulic fracturing of oil and gas development operations. Local governments retain this source of authority under the police powers to regulate health, safety, and welfare. Unlike the Zoning Enabling Act, there is no express prohibition under the Township Ordinance Act, MCL 41.181, against regulating oil and gas development.

The Township Ordinance Act authorizes a township to adopt police power ordinances, which are distinct from zoning ordinances, because they can only regulate harms and activities, rather than land uses. This Act authorizes townships to adopt ordinances that regulate health, safety, and welfare of citizens and property (e.g., fire protection, traffic, parking, vehicular and pedestrian safety, business licensing, public nudity, etc.). The Supreme Court of Michigan recognized the broad nature and scope of this authority, upholding a Bloomfield township ordinance that regulated docking and launching of boats.²⁶ The Court concluded that the objective to lessen congestion along the lake frontage was a reasonable use of the police power under the Township Ordinance Act.²⁷ Thus, compared to the Zoning Enabling Act, the Township Ordinance Act may provide broader authority and simpler procedures to adopt an ordinance regulating specific harms or impacts from oil and gas hydraulic fracturing operations and activities. So long as the proposed ordinance has strict standards – even when regulating future activities with potential hazards – and so long as the ordinance is not arbitrarily applied, this type of township ordinance is likely to withstand legal judicial challenges.

Thus, if a township adopts its own police power ordinance independent of zoning laws to protect the air, water, and public health, safety, and welfare from the risks of hydraulic fracking, it could argue that the narrow exemption for oil and gas wells granted by the Zoning Enabling Act does not affect a township's authority to adopt an ordinance that reasonably relates to the transport, disposal, and transfer, diversion, use, or handling of “produced” water and chemical mixing for fracking.

²⁶ *Square Lake Hills Condominium Association v. Bloomfield Township*, 471 N.W.2d 321, 328 (Mich. 1991). According to the Supreme Court of Michigan, judicial involvement requires the Court to “determine whether a township ordinance is within the range of conferred discretionary powers and then determine if it is reasonable.” *Id.* at 324.

²⁷ *Id.* at 328.

For an example of a draft township police power ordinance regulating ancillary hydraulic fracking activities, see Appendix B.

C. COMMON LAW PUBLIC NUISANCE & THE MICHIGAN ENVIRONMENTAL PROTECTION ACT

Public Nuisance

Michigan citizens also have the right to bring a legal action to abate a public nuisance.²⁸ Examples of environmental related activities that would constitute a public nuisance include a fire hazard, air or water pollution, or endangerment to life. In a recent case, *Dep't of Environmental Quality v. Waterous Co.*, 279 Mich App 346; 760 NW2d 856 (2008), the Court of Appeals held that a common law public nuisance existed when Waterous' previous owner dumped pollutants for multiple years into the Boardman River. The resulting water pollution was a public nuisance because "[i]t is difficult to imagine a right more common to the public than the right to a safe and healthy environment."

Michigan Environmental Protection Act ("MEPA")

Article 4 § 52 of Michigan's 1963 Constitution served to elevate conservation and protection of the state's natural resources:

The conservation and development of the natural resources of the state are hereby declared to be of paramount public concern in the interest of the health, safety and general welfare of the people. The legislature shall provide for the protection of the air, water and other natural resources of the state from pollution, impairment and destruction.

In response to this constitutional directive, Michigan's legislature enacted this hallmark legislation known as the Michigan Environmental Protection Act of 1970 ("MEPA"), MCL 324.1701 *et seq.*²⁹ Section 1701(1) of MEPA provides:

The Attorney General or any person may maintain an action in the circuit court having jurisdiction where the alleged violation occurred or is likely to occur for declaratory and equitable relief against any person for the protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction.

²⁸ *Detroit Realty Co. v. Barnett*, 156 Mich 385; 120 NW 804 (1909).

²⁹ *Ray v. Mason Co Drain Comm'r*, 393 Mich 294, 304; 224 NW2d 883 (1975); W. Rodgers, Environmental Law §2.16 at 184 (1977) (all persons must consider the MEPA in their conduct). The MEPA is "a legislative recognition of the ancient powers of a court to hear nuisance cases, balance equities, and fashion suitable remedies," including a remedy to prevent anticipated harm. *Opal Lake Ass'n v Michaywe Ltd Partnership*, 47 Mich App 354, 364 n3; 209 NW2d 478 (1973) (dicta). Thus, while rooted in the common law of nuisance, the MEPA extends its reach with its ability to address unforeseen changes in technology and "may permit the judicial adoption of standards more precise, and perhaps more exacting, than those previously required under the generalized language of the common law of nuisance." *Wayne Cty Dep't of Health v. Olsonite Corp*, 79 Mich App 668, 693-694; 263 NW2d 778 (1977). Moreover, to the extent there is a conflict, the MEPA supersedes the common law of nuisance. *Id.*

The Michigan Supreme Court has recognized the comprehensive and significant nature of this environmental statute. In *Eyde v Michigan*, 393 Mich 453, 454 (1975), the Court observed: “The MEPA is significant legislation, which gives the private citizen a sizeable share of the initiative for environmental law enforcement. The Act creates an independent cause of action, granting standing to private individuals to maintain actions in the circuit court for declaratory and other equitable relief against anyone for the protection of Michigan’s environment.”³⁰

Accordingly, MEPA empowers each citizen of this State to act as a private attorney general “for the protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction.”³¹ As such, MEPA is not just a mere procedural cause of action, but it is a substantive source of environmental protection.³²

At the heart of this statute is MEPA’s mandatory duty on all individuals and organizations both in the public and private sectors to prevent and minimize environmental degradation that is caused or is likely to be caused by their activities. MEPA expressly prohibits pollution, impairment, or destruction of the environment unless it can be shown that “there is no feasible and prudent alternative” and that defendant’s conduct “is consistent with the promotion of public health, safety and welfare in light of the state’s paramount concern for the protection of its natural resources.”³³

In keeping with the broad scope and protection of the statute, Section 1706 of the Act complements and supplements any other existing administrative or regulatory procedures established by law.³⁴ Thus, the MEPA standard of “likely pollution, impairment or destruction” and the requirement of “feasible and prudent alternatives” applies to both state and local township or municipal governments as a supplement to existing agency licensing, permits, or other local proceedings. Accordingly, MEPA imposes a substantive duty to prevent environmental degradation on local and state governments.

Case law makes clear that MEPA applies to oil and gas orders, permits, and proposed projects. For example, in *West Michigan Environmental Action Council v Natural Resources Comm’n*,

³⁰ *Id.* at 454.

³¹ MCL 324.1701(1).

³² *State Hwy Comm’n v Vanderkloot*, 392 Mich 159, 182; 220 NW2d 416 (1974); Haynes, Jeffrey. Michigan Environmental Protection Act, Michigan Environmental Law Deskbook, 2nd ed. (State Bar of Michigan, 2012).

³³ See *Ray*, 393 Mich at 304; *Vanderkloot*, 392 Mich at 187-88.

³⁴ While MEPA expressly states that it is a supplement to existing administrative and regulatory laws, Michigan courts have also interpreted the MEPA to be read *in pari materia* with all parts of Michigan’s primary natural resource statute, NREPA. This means that even though MEPA was enacted at a different time than other parts of Michigan’s primary natural resource statute, the courts will interpret the statute together as though it is one law. See *State Hwy Comm’n v Vanderkloot*, 392 Mich 159, 182; 220 NW2d 416 (1974) (holding that the legislature is not required “to make specific inclusion of environmental protection provisions in every piece of relevant legislation,” including the highway condemnation act); *Genesco, Inc v Michigan Dep’t of Environmental Quality*, 250 Mich App 45, 53; 645 NW2d 319 (2002) (same analysis); *West Michigan Environmental Action Council v Natural Resources Comm’n*, 405 Mich 741, 275 NW2d 538 (1979).

405 Mich 741, 275 NW2d 538 (1979), the Supreme Court of Michigan denied DNR's decision to grant a permit for ten exploratory wells based on likely adverse impacts to pollute, impair, and destroy wildlife and the largest herd of elk east of the Mississippi. MEPA also applies to agency actions approving, licensing, or permitting conduct that is likely to harm or impair, pollute or destroy the "air, water, natural resources, or public trust" in those resources.³⁵ MEPA is applicable at some stages in the local zoning process because "zoning, as it authorizes land use, can ultimately affect natural resources."³⁶ Agency actions, however, that approve conduct that is "likely to pollute, impair or destroy" is prohibited by MEPA, unless there exists no feasible and prudent alternative.³⁷ Moreover, under this statute, the state agencies have an affirmative duty to consider and determine the likely effects of conduct approved or authorized by them, as well as the alternatives to such conduct.³⁸ In sum, relevant state natural resources agencies and local units of government must ensure that they protect natural resources from pollution, impairment, or destruction pursuant to MEPA.

MEPA offers four potential strategies for citizens and townships to consider in challenging hydraulic fracturing activities that are likely to pollute, impair, or destroy local natural resources.

- (1) Citizen Intervention In Permit or Other Government Proceedings: By asserting authority under Section 1705(1) and 1705(2) of MEPA, citizens can intervene by letter in existing local zoning or ordinance permit proceedings and demand that the local government body statutorily consider and determine the likely effects of the proposed activities and uses, and the feasible and prudent alternatives to such conduct (e.g., the direct and cumulative impacts associated with unconventional horizontal fracking and related oil and gas development).
- (2) Citizen Action to Require Local Government Body to Consider Likely Environmental Effects and Alternatives in Any Project or Proceedings: Affected landowners or citizens can submit letters outlining threats to air, water, natural resources, use and enjoyment, and property in permit proceedings for proposed oil and gas development related to horizontal or unconventional fracking. Under *Vanderkloot* and *Committee for Sensible Land Use* cases,³⁹ a local government has a common law duty to consider and determine likely effects, including cumulative effects of, and alternatives to proposed conduct that is the subject matter of a request for a permit. Failure to require information and consider likely effects and alternatives of proposed conduct can constitute a basis to nullify or void any local government approval or issuance of the permit.

³⁵ *Anglers of the AuSable v MDEQ*, 283 Mich App 115; 485 Mich 1067, 488 Mich 69 (opinion vacated on rehearing) (the decisions upheld the trial and appellate court holdings that MEPA applies to state department, commission, and other proceedings); *State Highway Comm'n*, 392 Mich at 187-88.

³⁶ *Comm for Sensible Land Use v. Garfield Twp*, 124 Mich App 559, 564-565; 335 NW2d 216 (1983) (MEPA required for the issuance of building permits).

³⁷ *Ray*, 393 Mich at 304.

³⁸ *State Hwy Comm'n*, 392 Mich at 187-88; *Ray*, 393 Mich 294; 224 NW2d 883 (1975).

³⁹ *State Hwy Comm'n v Vanderkloot*, 392 Mich 159, 182; 220 NW2d 416 (1974); *Comm for Sensible Land Use v. Garfield Twp*, 124 Mich App 559, 564-565; 335 NW2d 216 (1983).

- (3) Amend Existing Zoning Ordinances and Incorporate MEPA Standards: As a first step, citizens and townships should review existing county and township ordinances to determine whether there are existing uses (e.g., pipelines, water, and chemical mixing facilities etc.) already regulated and require protection of air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction. If not, however, townships could amend existing zoning ordinances to include the protections of MEPA's standards of "likely pollution, impairment or destruction" and the requirement of "feasible and prudent alternatives."
- (4) Enact Environmental Impact and Alternatives Review Ordinance: Townships could enact a new police power ordinance that imposes a requirement that owners or operators of oil and gas drilling and production companies file an application with supporting documentation demonstrating that their conduct subject to local regulation is not likely, impair or degrade the air, water, natural resources of the state or the public trust in those resources. The ordinance would require the township to determine whether or not there are such likely effects and if so, whether there exists feasible and prudent alternative locations, means, technology, or other measures that would accomplish the same goal without such likely impacts/effects.

D. FRACKING BAN ORDINANCES

Establishing an all-outright ban of fracking may be problematic in the context of local zoning ordinances. Section 125.3207 of the Zoning Enabling Act expressly prohibits a zoning ordinance or decision from

having the effect of totally prohibiting the establishment of a land use within a local unit of government in the presence of a demonstrated need for that land use within either that local unit of government or the surrounding area within the state, unless a location within the local unit of government does not exist where the use may be appropriately located or the use is unlawful.

This zoning limitation, however, has not stopped some communities like Pittsburgh, Pennsylvania from implementing fracking ban ordinances. In 2010, Pittsburgh adopted a first-in-the-nation ordinance banning corporations from extracting unconventional horizontal natural gas within the city based on human health and environmental concerns. More recently, there are some discussions in the works for Pittsburgh to eliminate its ban and adopt strict zoning regulations for gas extraction. In addition, some 39 municipalities in New York State have implemented bans, and 103 have issued moratoria.⁴⁰

Just this past week, the New York State Supreme Court invalidated the first local ordinance banning activities associated with gas drilling and exploration within the State.⁴¹ The City of Binghamton argued that its ban ordinance was an exercise of its police powers, and therefore, was not subject to zoning requirements, such as review by the Planning Board. The Court

⁴⁰ Lytle, Phillips. "State Supreme Court Overrules Local Fracking Ordinance." JDSupra (Nov. 6, 2012) <http://www.jdsupra.com/legalnews/state-supreme-court-overrules-local-frac-12311/>

⁴¹ *Id.*

rejected the City's argument, stating that the two-year sunset period had transformed the law into a moratorium. As such, a municipality must satisfy certain elements for a moratorium to be properly enacted, including conducting investigative studies and providing a justification of a "dire need" or "crisis condition," which the City could not satisfy because the State of New York has not granted any fracking permits. The Court, however, did concur with the decisions in the *Dryden* and *Middlefield* cases, which upheld two separate New York local ordinances regulating the use of lands for gas exploration, storage, and extraction within their townships.

One strategy to avoid some of the pitfalls associated with an outright banning of fracking is to limit the prohibition or banning of unconventional hydraulic fracking to certain tight rock formations (e.g., Utica/Collingwood, A-1-Carbonate), rather than all substrata formations that may produce gas or oil. By tailoring the ordinance to a specific geological formation or a specific geographical area, the township may avoid the argument that there has been an outright prohibition of oil and gas development per se and categorical "takings" claims from the oil and gas industry.⁴²

In sum, townships and counties must be strategic in tailoring their zoning regulations to address specific land use impacts related to the handling, transport, and disposal of fracking wastewater and other connected activities. This targeted approach will satisfy the intent and purpose of developing land use regulations: to regulate the use of land and structures, to meet the needs of the state's citizens, and to promote public health, safety, and welfare. On a final note, if your community decides to adopt this approach, it is imperative to consult with an experience attorney or law firm to carefully draft the ban ordinance and avoid the case-specific and nuanced judicial challenges discussed above.

E. FRACKING MORATORIUM ORDINANCES

Some townships and communities have successfully created fracking moratorium ordinances that delay oil and gas exploration for a finite period of time so that the local government can study potential impacts.⁴³ Since 2010, New York State has enacted a statewide moratorium on unconventional hydraulic fracturing in order to study the impacts. Thus far, the State has received more than 80,000 comments on its initial environmental review, including public criticism that this study did not adequately consider public health impacts.

⁴² *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992) (holding that the state's coastal setback regulation constituted a "categorical takings" requiring just compensation under the Fifth Amendment because it deprived the beachfront property owner all economic beneficial use of his property). This should be contrasted with cases holding that there is no "takings" where some development or extraction of minerals is allowed as a whole even though some development or restriction on extraction is imposed. *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987); see also *K & K Construction v Department of Natural Resources*, 456 Mich 570, 582, 575 NW2d 531 (1998) (rejecting a categorical takings case on the basis that where "a property owner treats a series of properties as one income-producing unit, the value lost to the claimant is not simply the loss of the segregated parcel affected by the government action").

⁴³ The recent City of Binghamton, New York case discussed above demonstrates that a municipality should restrict the moratorium to less than two years, and must engage in actual investigative studies on the impacts of fracking.

Here in Michigan, a number of townships have already passed resolutions against hydraulic fracking. Food & Water Watch showcases these established resolutions as examples for other communities to consider when drafting their own (see below). The Township of West Bloomfield, however, just adopted a one-year moratorium resolution effective from September 1, 2012 to August 31, 2013 to fully explore the potential irreparable harm to the natural resources and environment within the township. The letter to the Board of Trustees justified the moratorium as an opportunity “to fully investigate, draft and adopt regulations to protect the natural resources of the Township and the health, safety and welfare of its citizens while still maintaining the spirit of the Michigan Zoning Enabling Act’s encouragement of resource exploration.”

For a closer look at the Township of West Bloomfield’s moratorium resolution, see Appendix C and Food & Water Watch’s local actions against fracking website, which features resolutions from California, Colorado, Indigenous, Maryland, Michigan, New Mexico, New York, Ohio, Pennsylvania, Texas, West Virginia, Wyoming, Vermont, and Virginia.

<http://www.foodandwaterwatch.org/water/fracking/fracking-action-center/local-action-documents/>

CONCLUSION

In sum, despite the lack of federal regulatory oversight, minimal state authority over the oil and gas industry in states like Michigan, and some statutory prohibitions against local regulation, townships and counties still do maintain some legal authority to regulate ancillary oil and gas activities with significant impacts on the local landscape. Townships and counties, for example, can enact and enforce carefully tailored local zoning ordinances to govern land use or local police power ordinances to protect health, safety, and welfare. Local ordinances may potentially regulate the following types of activities associated with unconventional hydraulic fracking: natural gas pipelines, flow lines, gathering lines, treatment or production facilities, or compressors, water and chemical mixing stations, emission releases, high truck traffic and transportation issues, land impact, odors, noise, and handling, reuse, and disposal of wastewaters, and hazardous solids or liquids.

In addition to these local sources of authority, townships and counties can apply MEPA to amend and incorporate MEPA standards into their existing zoning ordinances or police power ordinances. MEPA thus triggers the procedural and substantive requirement that any proposed project, such as a required local permit, license or other proceeding, is not likely to harm, impair, pollute, or destroy the “air, water, natural resources, or public trust” in those resources. In addition, citizens can apply MEPA to intervene in permit and other local government proceedings both by statute and common law authority.

As a more immediate and potentially final strategy to address the unprecedented impacts of fracking, some townships and counties successfully have imposed moratoria ordinances and/or ban ordinances in their communities. Fracking moratoria ordinances delay oil and gas exploration for a finite period of time (e.g., 6-12 months) so that the local government can study potential impacts. By contrast, fracking ban ordinances are more prone to judicial scrutiny and invalidation because they totally prohibit a land use within the township, which fundamentally

violates basic zoning principles. However, such challenges have not stopped some 39 communities in New York State from enacting fracking ban ordinances.

On a final note, communities interested in these types of legal strategies and tools should consult qualified counsel for assistance in drafting narrowly tailored ordinances. FLOW's Public Trust Policy Center has developed this material for educational and general purposes only, and will develop a more comprehensive white paper on legal strategies for communities and townships to consider in regulating aspects of hydraulic fracturing to be published in late winter/early spring 2013.