

MARYLAND

Now Is the Time to Ban Fracking



About Food & Water Watch

Food & Water Watch works to ensure the food, water and fish we consume is safe, accessible and sustainable. So we can all enjoy and trust in what we eat and drink, we help people take charge of where their food comes from, keep clean, affordable, public tap water flowing freely to our homes, protect the environmental quality of oceans, force government to do its job protecting citizens, and educate about the importance of keeping shared resources under public control.

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Executive Summary

Maryland has an opportunity to ban fracking now. We already know enough about the impacts of drilling and fracking for natural gas to know that we don't want it in our state.

Opening up Maryland to fracking won't bring energy security to the region, won't solve our economic problems and won't provide clean energy. The oil and gas industry's talking points that claim otherwise are nothing but the result of a highly orchestrated and well-financed public relations campaign, one aimed at prolonging America's destructive dependence on fossil fuels. Marylanders need to see through the oil and gas industry's spin.

If we do not stand up for Maryland now, the oil and gas industry will drill and frack for as much natural gas as it can profitably extract from the shale and other rock formations that lie beneath our state, from Garrett County to the Eastern Shore. This will industrialize rural communities for the worse, bringing air pollution, water pollution, noise pollution, light pollution, marred landscapes and caravans of trucks full of toxic waste.

The industry's plans to export large amounts of natural gas overseas, including from a terminal proposed for Cove Point on the Chesapeake Bay, would only intensify these negative impacts. Exports would spur more drilling and fracking more quickly, resulting in an even more destructive economic bust once the gas is gone and industry moves on. The economic benefits of the boom would be felt outside of Maryland, where the industry is based, but we would be left to pay the economic and environmental costs of the industry's legacy of pollution. We already know this.

We know that drilling and fracking hundreds of new shale gas wells in Maryland each year would mean hundreds of millions of gallons of toxic waste, and there are no good disposal options. The shale gas industry would bring harmful local air pollution, among other public health and safety problems, to our communities. And communities across Maryland would face serious short- and long-term risks to their drinking water resources.

These risks would stem from increased demand for fresh-water for fracking fluid and from leaks and spills of toxic wastes, either at well sites or on the road as the waste is trucked away for disposal. Also, hydrocarbon gases, undisclosed industrial chemicals and other contaminants can seep into aquifers via aging wells, natural faults and the fractures from fracking. Finally, we know that extracting, transporting and burning natural gas would contribute significantly to the state's greenhouse gas emissions, and thus to the rise in sea level and increase in extreme weather that already threaten our state's economy.

Allowing shale gas development in Maryland will bring all of these problems. And despite their claims, the oil and gas industry's so-called best practices, even if perfectly regulated and enforced by a new and costly regulatory regime in Maryland, will not solve these problems. But of course, regulation and enforcement won't be perfect. At the federal level, the oil and gas industry enjoys sweeping exemptions from every major environmental law. Marylanders can expect the oil and gas industry and its promoters to work tirelessly to weaken regulations and to defund state-level enforcement of any regulations they fail to thwart.

Background on the Fracking Debate in Maryland

Fracking is short for fracturing. After drilling down to a targeted rock formation, and then drilling sideways through the targeted layer of rock, operators inject millions of gallons of water mixed with sand and chemicals underground, at extreme pressure, to fracture the rock.¹ The fractures, which are held open by the injected sand once the extreme pressure is released, provide pathways for more natural gas to flow into the well; otherwise, natural gas near the drilled well would remain tightly held in the rock.²

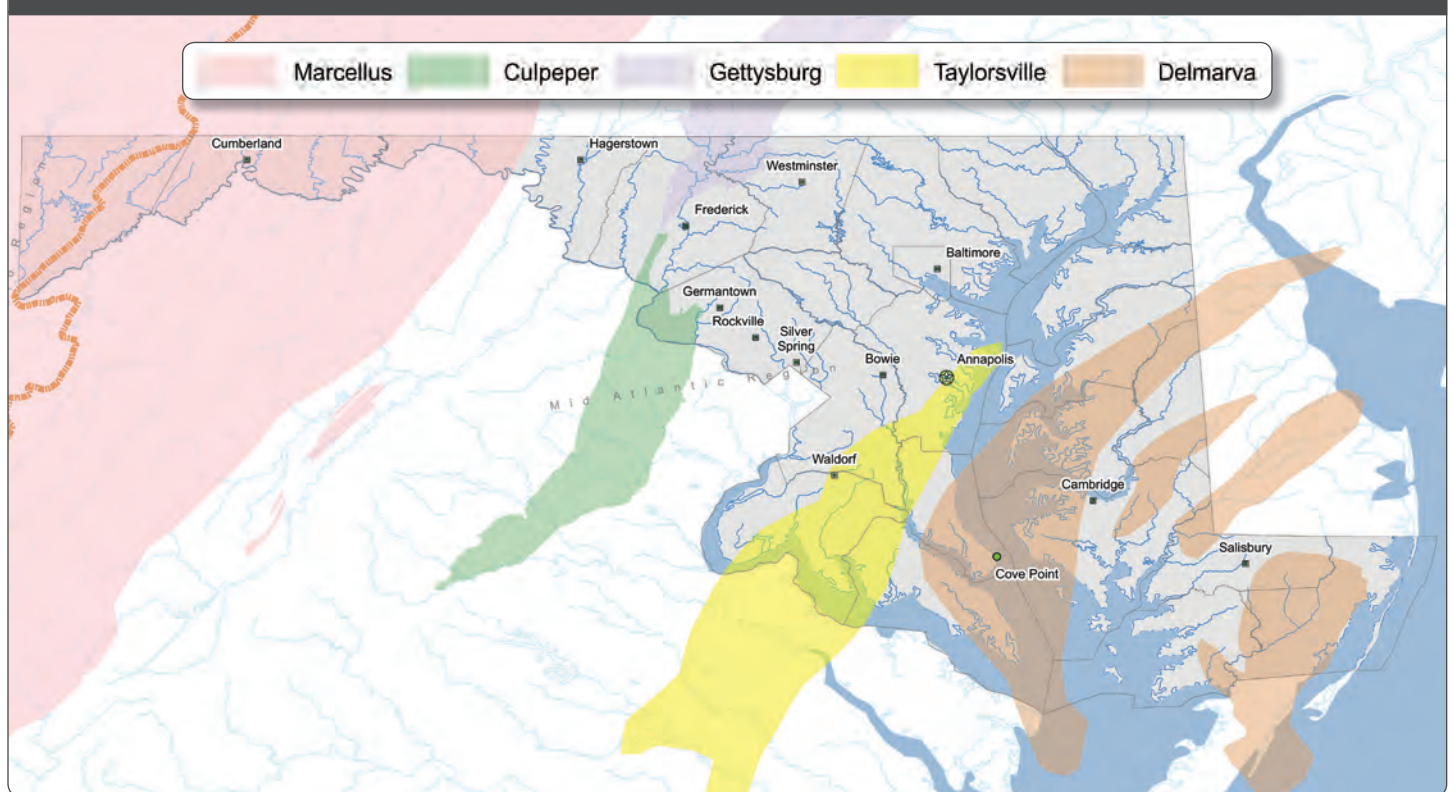
The oil and gas industry is engaged in a slick public relations campaign to promote fracking as good for the economy, good for energy security and energy independence and, in the case of natural gas, even good for the environment.³ This is nothing but spin.

Consistently, the industry grossly exaggerates the economic benefits of drilling and fracking. It pays for economic models that are based on proprietary and hidden assumptions and that neglect or dismiss the

long-term economic and environmental costs to local communities.⁴ The public relations trick is to take some projected benefit and to then use it as a cudgel to counter public concern about the environmental and public health impacts of the industry.⁵ The Maryland Petroleum Council has gotten in on the act, commissioning a study that relies on discredited reports to make rosy projections of economic benefits to our state.⁶ The report then threatens, “Maryland is even more likely to miss the opportunity if it creates an exceedingly regulated and expensive environment.”⁷ Marylanders need to avoid this race to the bottom.

As for claims that fracking is good for U.S. energy security, it is true that modern drilling and fracking have contributed to significant increases in the U.S. Energy Information Administration’s (EIA’s) estimate of natural gas resources in the past decade.⁸ A popular claim is that, as a result, the United States has enough natural gas to last 100 years.⁹ However, Food & Water Watch took a close look at this claim and found that it assumes that the industry gets its wish of completely unrestricted access throughout Alaska, throughout the lower 48 states and all along the U.S. coastline, including off of Maryland.¹⁰

Fig. 1: Maryland Gas Basins



Keep it underground: Marylanders can expect the oil and gas industry to try to drill and frack rock formations beneath much of the state. If allowed, this would place at risk the state’s vital drinking water resources, from Deep Creek Lake in the Ohio River basin to the headwaters of the Potomac River and the aquifers of the Eastern Shore.

The claim also sweeps under the rug important warning signs about the “treadmill” of drilling and fracking for shale gas. Because production declines rapidly for each new well, and because the first wells are typically the most productive ones, more and more wells need to be drilled and fracked each year just to maintain production.¹¹ Nonetheless, even if the oil and gas industry gets its wish of completely unrestricted access to drill and frack, and even if estimates of potential shale gas production are accurate, Food & Water Watch calculated that the industry’s plans to increase demand for U.S. natural gas easily cut the claim of 100 years in half.¹² A project aimed at exporting natural gas from a Cove Point terminal in Calvert County, Md., is among the plans to increase demand.¹³

The EIA estimates that based on current technology (as opposed to economics), industry can extract about 646 billion cubic feet of natural gas in the portion of the Marcellus Shale that lies beneath Maryland (depicted in pink in Figure 1, page 3).¹⁴ Roughly half of the Taylorsville Basin (depicted in yellow) lies beneath Maryland, so based on a recent U.S. Geological Survey (USGS) estimate of the amount of gas that can technically be extracted, this basin could amount to another 500 billion cubic feet of gas.¹⁵

For perspective, Maryland consumed 194 billion cubic feet in 2011,¹⁶ so these estimated resources would cover only about six years of the state’s demand. The Culpeper, Gettysburg and Delmarva gas basins have not yet been assessed,¹⁷ but these would likely add just a few more years of supply. This all assumes, of course, that the industry wins completely unrestricted access to drill and frack. It also neglects Dominion Resources’ plans to export up to 365 billion cubic feet each year from its Cove Point facility, almost double the total annual consumption of Maryland.¹⁸

Clearly, the push to open up Maryland to fracking isn’t about the state’s energy security. It is about the oil and gas industry’s desire to control any new gas reserves it might one day want to tap.

Claims of environmental benefits from using natural gas must also be seen in the context of industry’s profit motives. Although natural gas does burn more cleanly than oil and coal, this is a low bar, and promoters of natural gas either ignore or dismiss the many negative impacts of drilling and fracking. The oil and gas industry is partly able to do this by blocking access to data and other information that would be needed to evaluate

fully the environmental and public health impacts of its operations.¹⁹

For example, in cases in which drilling and fracking have contaminated water or otherwise endangered the public, court records with technical information on the cases are typically sealed from the public record as part of any settlement agreement.²⁰ Also, owing to an exemption in the U.S. Safe Drinking Water Act, fracking companies do not have to disclose the chemicals that they are pumping underground, and even when states do require disclosure, there’s usually an exemption for any chemicals considered trade secrets.²¹ And, in one recent case, industry’s control of the data may explain why an *Associated Press* investigation into reports of contaminated water was not pursued.²²

The U.S. Environmental Protection Agency (EPA) is relying heavily on industry’s voluntary cooperation to obtain data to conduct its ongoing study of the potential impacts of fracking on drinking water resources, rather than requiring that well data be shared. According to the *Associated Press* investigation, this reliance on industry



may have kept the EPA from getting to the bottom of a dispute between Range Resources and a landowner with a water well that was contaminated with methane.²³

As for global climate change, promoters of natural gas have tried to sell increased dependence on natural gas as a “bridge” for transitioning to a low-carbon future powered by renewable energy.²⁴ This is based in part on the fact that burning natural gas produces considerably less carbon dioxide than burning coal or oil, but it neglects the impact of methane emissions, a far more potent greenhouse gas.²⁵ Climate pollution from extracting and transporting natural gas is significant, negating the benefits of lower carbon dioxide emissions from burning natural gas instead of coal for electricity.²⁶ Moreover, the current hype over natural gas, particularly artificially low U.S. natural gas prices, threatens to keep Maryland and the rest of the country from aggressively deploying proven wind and solar power and energy efficiency technologies.²⁷

The Negative Impacts That Fracking Would Bring to Maryland

Beyond pumping more greenhouse gas pollution into the air, widespread drilling and fracking in Maryland would negatively impact the environment, public health and economy of the state.

Fragmented forests, marred landscapes and the legacy of pollution

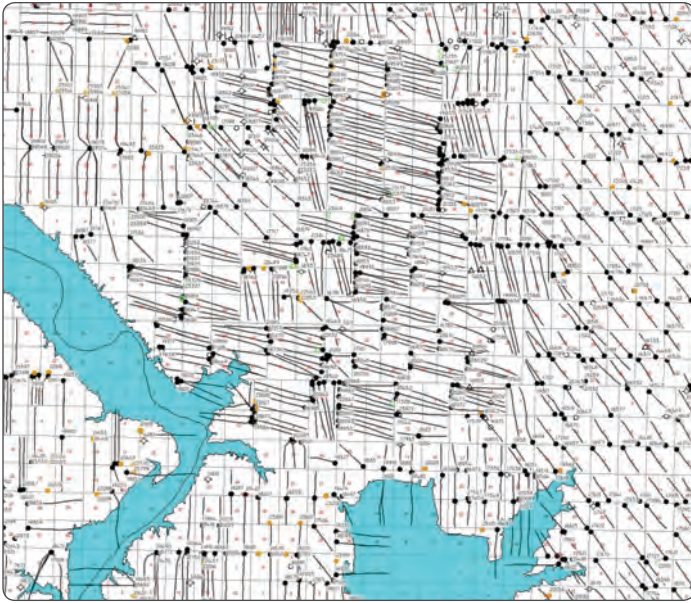
The amount of natural gas that can be produced from a single fracked well varies significantly within a shale gas play, and the rate of production declines rapidly soon after a well is fracked.³⁰ Operators drill and frack the sweet spots of the play first, leaving the less productive and thus less profitable portions for later. This means that the industry has to increase the rate of drilling and fracking just to sustain a constant level of shale gas production.



Natural Gas: A Bridge to Devastating Climate Change

The International Energy Agency has estimated that a scenario of increased global dependence on natural gas would increase the global average temperature by 3.5 degrees Celsius (about 6.3 degrees Fahrenheit) by 2035.²⁸ Now, Maryland’s entire economy would be crippled by such extreme climate change. According to the Maryland Commission on Climate Change, this large of an increase in global average temperature would mean that our state would suffer:

- “the loss of virtually all coastal wetlands”;
- “inundation of more than 100 square miles of presently dry land and loss of the homes of thousands of Marylanders”;
- summer-long heat waves “creating life-threatening conditions in Maryland’s urban environments”;
- “more extreme rainfall events, but also longer lasting summer droughts”;
- “declines in agricultural productivity” due to “severe heat stress and the summer droughts”; and
- “the loss of maple-beech-birch forests of Western Maryland” and “the withdrawal of northern bird species such as the Baltimore oriole from Maryland.”²⁹



Maryland's future?

Shale gas development would turn Maryland into a pincushion of fracked horizontal wells. Above, fracked wells in North Dakota tunnel beneath Lake Sakakawea on the Upper Missouri River.³¹ Each dashed square is one square mile.

SOURCE: North Dakota Department of Minerals Management



Allowing the oil and gas industry to ride out this fracking treadmill in Maryland would turn the state into a pincushion of fracked gas wells. According to the Maryland Department of the Environment, one “industry representative” has suggested that over 2,200 new shale gas wells could be drilled in Garrett and Allegany counties alone.³² Over years and decades, these wells would age, degrade and be abandoned, creating pathways through which injected chemicals and natural contaminants can seep into underground sources of drinking water.³³ The result would be a legacy of risk shouldered by generations of Marylanders.

Constructing new access roads, drilling pads, pipelines and compressor stations for widespread drilling and fracking in Maryland would fragment forests, disturb natural landscapes and take agricultural lands out of production.³⁴ Such industrialization of rural landscapes would likely haunt the state. About one third of the total land area of Maryland is used for agriculture, making up part of the foodshed of the Washington, D.C.–Baltimore corridor.³⁵

The forests and rivers of Maryland provide habitat for the fish and wildlife sought by recreational fishermen and hunters, and spending by these outdoorsmen adds nearly a billion dollars to the state’s economy.³⁶ There is a push to increase such recreational tourism in the future,³⁷ but the industrial impacts from drilling and fracking would likely have the opposite effect. Also, the forests and pastures of rural Maryland are relied on by almost everyone in the state to slowly and naturally filter rainwater on a large scale. This filtering helps to ensure that high-quality water flows in the Potomac River and Chesapeake basins and recharges the aquifers beneath the state.

Already, expected population growth in Maryland poses a serious threat to the state’s water security, due in part to the changes in how land is used that are likely to accompany this growth — such as when forests or farmland is turned into sprawling housing developments and strip malls.³⁸ Climate change likewise threatens to disrupt the provision of clean, affordable drinking water, particularly with expected changes in rainfall patterns, increasingly severe storms, intensified heat waves that increase evaporation and thus reduce aquifer recharge, and saltwater intrusion into freshwater aquifers due to rising seas.³⁹ Pollution from stormwater runoff at drilling and fracking sites and from the inevitable accidents, leaks, and spills of drilling and fracking wastes will only compound these threats.

Drilling waste

About three to five acres of land needs to be cleared to prepare a “drill pad,”⁴⁰ after which heavy machinery is put in place and the drilling stage begins. The State of New York has estimated that drilling a typical shale gas well generates about 5,859 cubic feet of rock cuttings — enough to cover an acre of land more than 1.5 inches deep.⁴¹ These cuttings, about the size of coarse grains of sand, must be disposed of, and they are coated with used drilling fluids that can contain contaminants such as benzene, cadmium, arsenic, mercury and radium-226.⁴²

Dumping this toxic waste in Maryland landfills could expose workers to harmful levels of some of these environmental toxins.⁴³ Radium-226 contamination would persist for more than a thousand years after the landfill closed, ruining the soil of the surrounding land for generations.⁴⁴

Dumping truckloads of drilling cuttings could also lead to operational problems at Maryland landfills. The landfill linings could be degraded, resulting in leaks of radioactive material and other harmful contaminants,⁴⁵ and layers of drilling cutting wastes could plug up the flow of landfill fluids, causing spills out the sides of the landfill.⁴⁶

Water use

Once a well is drilled, millions of gallons of water and tens of thousands of gallons of chemicals are injected into the well.⁴⁷ A recent study of water use in Texas reported that as much as 13 million gallons of water was being used to frack some new wells.⁴⁸ Now, for perspective, the average Maryland resident consumes about 100 gallons a day.⁴⁹ Taking just 5 million gallons of water as a typical amount used to frack a new shale gas well, this is enough water to sustain nearly 140 Maryland residents for an entire year.

Residents and businesses of the Eastern Shore and southern Maryland rely heavily on freshwater from underground aquifers, and in fact even without oil and gas development, these aquifers are in decline — water is being pumped out at a rate faster than rains are recharging the aquifers.⁵⁰ Allowing drilling and fracking in this part of our state would increase demand for this water, not to mention put it at risk of contamination.

Because of the need to know about the balance of supply and future demand for water resources in central and western Maryland, the USGS, in partnership with the state of Maryland, is engaged in a study of how

groundwater resources in this area of the state change with drought or with periods of heavy rains, and in turn how local changes in groundwater levels impact stream flows in the region.⁵¹ The study is complicated because of the many fractures of the bedrock where groundwater resides.⁵² Of course, if the oil and gas industry gets its way, shale gas wells may soon intersect many of these fractures,⁵³ putting at risk pockets of shallow groundwater and the streams to which this groundwater connects.

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Wastewater

Fracking wastewater is a varying mix of fracking fluid and any naturally occurring “formation” water that would have otherwise remained trapped deep underground, well below freshwater aquifers.⁵⁴ In the Marcellus shale, only about 25 percent of the fracking fluid actually returns to the surface after fracking.⁵⁵ This wastewater can contain extreme levels of naturally occurring but harmful contaminants, including arsenic, lead, hexavalent chromium, barium, strontium, benzene, polycyclic aromatic hydrocarbons, toluene, xylene, corrosive salts and radioactive material, such as radium-226.⁵⁶ And in fact, the acids sometimes used in fracking fluids can actually increase the amount of toxic metals released from the rock and brought to the surface in wastewater.⁵⁷

Again, these are just the natural occurring contaminants. It is well known that many of the chemicals that are used to make fracking fluid, and that return to the surface in fracking wastewater, are far from safe. Naphthalene, benzene and acrylamide are just a few of the known or suspected carcinogens identified as components of

many fracking fluids.⁵⁸ Other environmental toxins used in some fracking fluids, such as toluene, ethylbenzene and xylenes, can result in nervous system, kidney and/or liver problems.⁵⁹ Finally, because the oil and gas industry succeeded in getting fracking exempted from the Safe Drinking Water Act (except when diesel is used in the fracking fluid), operators do not always have to report the chemicals that they are injecting underground.⁶⁰ As a consequence, the full extent of the public health threat from fracking waste remains unknown.⁶¹

Simply put, allowing fracking in Maryland will create large volumes of toxic waste, with no good disposal options. There will also be accidents, leaks and spills.

An investigation by *ProPublica* in 2008 identified more than 1,000 cases of water contamination near drilling sites, according to local and state government documents from just Colorado, New Mexico, Alabama, Ohio and Pennsylvania.⁶² Most of the cases involved surface leaks and spills. *The Denver Post* reported there were over 1,000 spills in Colorado alone from August 2009 to September 2011.⁶³ And in North Dakota in 2011, the oil and gas industry reported another 1,000 spills.⁶⁴

Since conventional treatment facilities are not equipped to treat radioactive material and other contaminants known to be in some fracking wastewater, such contaminants can simply flow through conventional treatment



MUDDY CREEK FALLS / PHOTO © CC-BY FRANK KOVALCHEK, FLICKR.COM

facilities and get discharged into public rivers and streams.⁶⁵ Rounds of wastewater recycling reduce the volumes of wastewater to be disposed of, but each round simply concentrates the toxins into solid waste that requires safe disposal.⁶⁶

Under the Safe Drinking Water Act, the EPA established an Underground Injection Control (UIC) program for permitting the disposal of toxic wastes by injecting them underground into designated wells.⁶⁷ As the alternative to actual treatment, these injection wells are important for the industry as a means of disposing of drilling and fracking waste.⁶⁸ However, disposing of fracking wastewater by injecting it deep underground has caused a spate of small earthquakes.⁶⁹ And, more troubling, a recent investigation by *ProPublica* has exposed the short-sightedness of waste disposal through deep well injection, highlighted how the federal rules under which the UIC program operates are outdated, and noted that the EPA has granted “exemptions” so as to allow these injections in some aquifers.⁷⁰

The disposal of toxic drilling and fracking waste is a problem that Maryland simply does not need, and a problem that Maryland can avoid.

Groundwater contamination

Drilling and fracking can not only indirectly contaminate groundwater through leaks and spills of wastes at a well site, or during transportation, but they also put groundwater at risk directly.

After being injected into a well, much of the fracking fluid stays underground indefinitely, where it mixes with and displaces any naturally contaminated water already present in the targeted rock formation. There is a network of different pathways through which the resulting mix of contaminants — including fracking fluid chemicals; any salts, metals and radioactive material dissolved in the formation water; and methane or other hydrocarbon gases — can flow into and contaminate groundwater.

These different pathways include the well that is being developed (if problems occur during cementing of the well), any nearby older and abandoned wells that may likewise have failed cement, the new fractures created during fracking, and existing natural fractures and faults.⁷¹ Indeed, such natural fractures and faults actually characterize the geology of central and western Maryland.⁷²

In the face of concerns about water contamination, the oil and gas industry tries to narrowly define risk and focuses only on the specific process of fracking itself, ignoring or dismissing contamination during the drilling stage and the risks of contamination that persist long after drilling and fracking are complete.⁷³ But despite industry claims to the contrary, groundwater contamination associated directly with drilling and fracking operations has occurred (see box below.)

In essence, those living in regions with widespread shale gas development – and more broadly in regions with widespread disposal of toxic wastes via deep well injections – are the subjects of a large, uncontrolled scientific experiment on the fate and transport of the chemicals injected.

Less understood is the long-term risk of contamination. Recent mathematical modeling demonstrates that groundwater could be contaminated years after the actual injection of fracking fluids.⁷⁹ As part of its ongoing study of the impacts of fracking on drinking water resources, the EPA is building much more elaborate models for simulating how contaminants could possibly migrate into aquifers after drilling and fracking.⁸⁰

However, the EPA's study will not address the question of how likely it is that shale gas development in a certain region will lead, over a given time frame, to the contamination of underground water resources.⁸¹ This is likely because not enough is known about the specific network of contamination pathways in each specific region where drilling and fracking occur, so it is difficult if not impossible to validate reasonably realistic mathematical models of the many scenarios in which contamination is conceivable.

In essence, those living in regions with widespread shale gas development – and more broadly in regions with widespread disposal of toxic wastes via deep well injections – are the subjects of a large, uncontrolled scientific experiment on the fate and transport of the chemicals injected. As Stefan Finsterle, a federal scientist, told *ProPublica*, "There is no certainty at all in any of this.... You have changed the system with pressure and temperature and fracturing, so you don't know how it will behave."⁸²

Maryland does not need to subject its residents and environment to this experiment.

Drilling and Fracking Have Contaminated Groundwater Resources

- A 1987 EPA report found that gel used in fracking fluid had contaminated a water well in West Virginia, and that scientific assessment of other cases of potential contamination was hindered by court settlements that sealed the information.⁷⁴
- A study published in the *Proceedings of the National Academy of Sciences* found that average methane concentrations in shallow drinking water wells in active gas areas were 17 times higher than those in non-active areas, possibly due to leaky well casings.⁷⁵
- In Dimock, Pennsylvania, hazardous substances, some of which are not naturally occurring in the environment, were used during drilling and were subsequently detected in private drinking water wells.⁷⁶
- In December 2011, the EPA released a draft report on contaminated groundwater near drilling and fracking operations in Pavillion, Wyoming, concluding that "the data indicates likely impact to ground water that can be explained by hydraulic fracturing."⁷⁷
- In Alberta, Canada, in September 2011, operators fracking a well injected over 30,000 gallons of a propane-gel-based fracking fluid mistakenly into the groundwater protection zone.⁷⁸

Air Pollution

Drilling and fracking are also contributing to serious local and regional air pollution problems across the country. And, of course, the public health costs of local air pollution are never considered in industry estimates of the economic benefits of allowing oil and gas development.

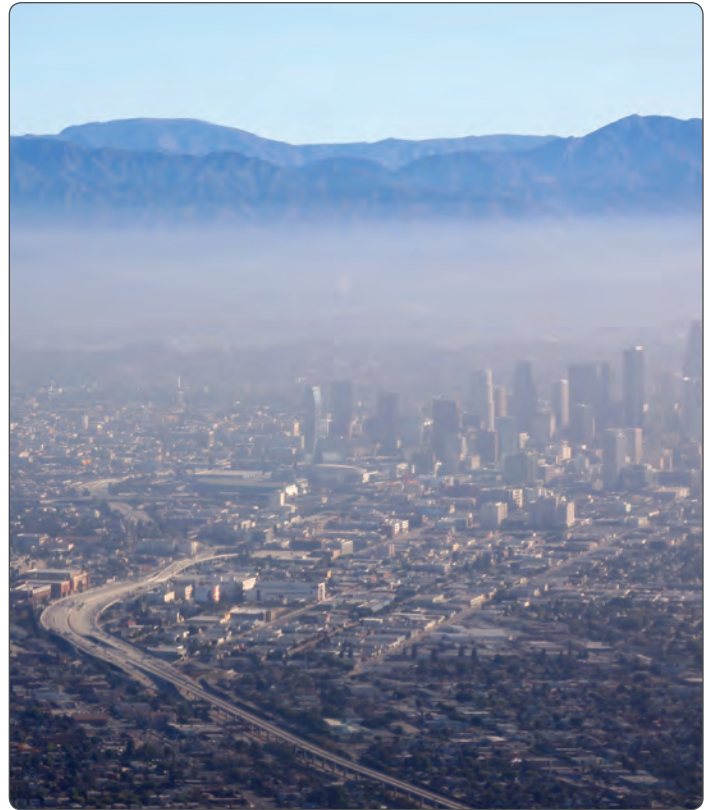
Some air pollutants implicated in cancer and other serious health problems are labeled hazardous air pollutants and are regulated under the U.S. Clean Air Act, and at least 24 of these hazardous air pollutants, including hydrogen fluoride, lead and methanol, are known to have been in hundreds of products used in fracking.⁸³

The extreme pressure used to inject fracking fluid results in a “multiphase” flow of sand, liquids and gases.⁸⁴ After fracking, when some of this multiphase fluid flows back to the surface, the gases in it are vented directly into the air or are inefficiently burned, while the liquids of the fracking fluid pour into holding pits or tanks.⁸⁵ Natural gas also leaks out into the atmosphere as it is processed and brought to market, through leaky pipelines or through leaky valves or seals in other infrastructure and equipment.⁸⁶

Natural gas is predominantly made up of methane, a greenhouse gas that is at least 25 times more efficient than carbon dioxide at trapping heat, when measured over a 100-year time frame, and it is 70 to 100 times more potent than carbon dioxide when measured over a 20-year time frame.⁸⁷ So one of the cumulative impacts of widespread drilling and fracking for natural gas is climate pollution in the form of methane, not just in the form of carbon dioxide when natural gas is burned.

Volatile organic compounds — including benzene and toluene, which are extremely harmful to human health — also pollute the air during fracking.⁸⁸ These compounds can mix with emissions from heavy-duty truck traffic, large generators and compressor stations to form ground-level ozone, which can further combine with particulate matter to form smog.⁸⁹ Exposure to smog has been linked to various cancers, cardiovascular disease, diabetes and premature deaths in adults, and to asthma, premature birth and cognitive deficits in children.⁹⁰

While it is difficult to draw direct causal links between air pollution from drilling and fracking operations, on the one hand, and individual cases of illness on the other, evidence is mounting.⁹¹ The difficulty in drawing causal links, and knowing the full impact on air quality, stems in part from the lack of disclosure about the fracking



fluid chemicals the industry is using.⁹² One recent study found that people living within a half-mile of fracking operations face significantly higher risk of cancer and other health problems because of air pollution, compared to people who live farther away from well sites, due primarily to the risk of exposure to benzene.⁹³

One recent study found that people living within a half-mile of fracking operations face significantly higher risk of cancer and other health problems because of air pollution, compared to people who live farther away from well sites, due primarily to the risk of exposure to benzene.

Drilling and fracking for natural gas is also creating regional air pollution problems. For example, in Wyoming, ozone from gas drilling operations, combined with weather effects, led to ground-level ozone levels on several days in 2011 that were higher than the highest recorded level in Los Angeles in all of 2010.⁹⁴

Hidden costs

Communities all across Maryland can expect to feel the negative environmental impacts outlined above if policymakers in Annapolis open up the state to drilling and fracking. The potential public costs would be far-reaching and incalculable. As would be expected, the oil and gas industry and its promoters have created the illusion that drilling and fracking have net economic benefits by ignoring or dismissing these costs.

The hidden costs to Maryland's communities would include damaged roads from heavy truck traffic, increased demand on emergency and other social services, public health problems from local air and water pollution, losses in property value and job losses in other sectors of the economy, such as tourism and agriculture. And the entire state would share much of the burden of these costs.



New York has estimated that each typical shale gas well requires about 3,950 trips of heavy trucks.⁹⁵ Along with damaging public roads and being a general public nuisance, such traffic increases the risk of traffic accidents that place demand on emergency services.⁹⁶ Other industrial accidents and the large number of transient, uninsured workers moving to the area likewise increase demand on emergency services and community healthcare centers, leaving the public to foot the bill of providing these services.⁹⁷

Towering, well-lit and noisy drilling rigs operate 24 hours a day, marring the tranquil and scenic landscapes that attract tourists and generate local tourism income.⁹⁸ And the threat of air and water pollution from widespread drilling and fracking can further ruin a local community's tourism brand, in part because this threat does not go away once the drilling and fracking end.⁹⁹

Drilling and fracking are simply not compatible with farming. Spills of toxic drilling and fracking wastes can ruin agricultural land, and with each new well pad, access road or toxic waste pit, productive agricultural lands can be lost. Air and water pollution from drilling and fracking activities have harmed livestock and pets and posed serious health problems for people living near drilling and fracking operations.¹⁰⁰ And in Colorado, the oil and gas industry has even outbid farmers for water during drought conditions.¹⁰¹

Spills of toxic drilling and fracking wastes can ruin agricultural land, and with each new well pad, access road or toxic waste pit, productive agricultural lands can be lost.

Taken together, the impacts of drilling and fracking operations have led to declines in the value of nearby properties, and thus in property tax revenues.¹⁰² Some banks are even declaring defaults on mortgages or not offering them for properties with gas leases, making them difficult to sell since any buyer would have to pay entirely in cash.¹⁰³ And Nationwide Mutual has clari-

fied that its insurance plans do not cover damages due to fracking-related activities because it lacks “a comfort level with the unique risks associated with the fracking process.”¹⁰⁴

In the end, when rural communities become known for their industrial pollution — their water pollution, air pollution and noise pollution — this can destroy the agricultural and tourism economies on which these communities depend.¹⁰⁵ In this sense, the economic benefits of a boom can be more than offset by the inevitable bust.

Take Action

Maryland can avoid this economically and environmentally destructive path with a ban on fracking.

The United States is already experiencing the early impacts of global climate change, including severe storm events, changes in the timing of seasons and episodes of extremely hot weather.¹⁰⁶ The costs of such impacts will only grow the more we delay action, and the more we continue to pump carbon pollution into the air.¹⁰⁷ Opening up the state to fracking is absolutely the wrong course of action.

The alternative is for Maryland to become a national leader in addressing these threats. The state has abundant renewable energy resources that are going untapped, as well as enormous opportunities to improve energy efficiency and energy conservation.¹⁰⁸ Building and maintaining local, resilient energy systems that are characterized by energy efficiency and that rely on distributed

renewable power generation — instead of on centralized, wasteful and polluting fossil fuel power — will create and sustain solid jobs throughout the state.¹⁰⁹ Such energy systems will also spare Maryland communities from the inevitable economic drag that future oil and natural gas price increases will cause as global demand grows and global supply is consumed.

Food & Water Watch urges Maryland to:

- Ban fracking in the state;
- Enact aggressive policies to reduce energy demand, including large investments in public transportation and community planning and in the deployment of energy efficiency solutions;
- Establish ambitious programs for deploying and incentivizing existing renewable energy technologies, such as wind and solar power, to increase clean energy supply;
- Modernize the electric grid with smart grid solutions, catering to distributed renewable power generation and promoting conservation; and
- Make sweeping investments in research and development to help Maryland’s cleantech industry overcome barriers to the next generation of clean energy solutions.

Drilling and fracking has no place in Maryland’s future. Our water resources, from Deep Creek to the Chesapeake, are simply too vital to the state’s economy to allow it.



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Endnotes

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