Oil & Gas Pollution's Impacts on North Dakota Families

Dakota Resource Council

Overview

Right now, there are over 13,000 active oil and gas wells, compressor stations, and processing plants in the state of North Dakota (Oil and Gas Threat Map, 2016). Each day, oil and gas activities across the state spring leaks that spew toxic pollution into the air, **like an invisible oil spill**. The smog that pollution causes to form is endangering the health of communities across North Dakota, including those on the Fort Berthold Reservation.

Unfortunately, North Dakota lacks meaningful standards for detecting and repairing leaks, which reduce pollution from oil and gas activities and keep children and families healthy. North Dakotans rely on the protections provided by the federal New Source Performance Standards (NSPS), finalized by the Environmental Protection Agency (EPA) last year and similar standards finalized by the Bureau of Land Management (BLM) that apply on federal and tribal lands to safeguard against methane and other toxic pollution in the air our children breathe. The EPA's pollution standards apply to 2,218 new and modified oil and gas wells across the state of North Dakota; in order to reduce toxic emissions and comply with the EPA's standards, "new and modified" facilities are required to install pollution control equipment when they are first built or when an older facility is modified as well as regularly inspect and fix leaky equipment (EPA,2016). The BLM's rule applies similar requirements to find and fix leaking oil and gas infrastructure to wells on federal and tribal lands across western North Dakota.

EPA Administrator Scott Pruitt has attempted to suspend these common sense leak detection and repair requirements **at the behest of the oil and gas lobby**. In June, the EPA proposed a two year delay of the New Source Performance Standards. Meanwhile, Interior Secretary Ryan Zinke is also moving to indefinitely delay compliance with the BLM's rule. If these safeguards are suspended, or even worse repealed, families and children in North Dakota will undoubtedly face an ever-growing public health crisis from unchecked pollution in their communities and neighborhoods.

A side-by-side visual comparison of the Arrowhead 10-3 Well Site which is in Williams County, North Dakota. On the left is an image of a release of methane and other hydrocarbons, which to the naked eye, is invisible. On the right is an image of the same release using FLIR technology, which captures and depicts the emissions as they are released into the atmosphere.*

Statement from FLIR camera operator on pg. 6, additional side-by-sides in the Appendices on pgs. 7 & 8

*A certified camera operator used an infrared camera to observe hydrocarbon emissions that are invisible to the naked eye. An IR camera cannot distinguish between different hydrocarbons and observed emissions are likely a mixture of methane, VOCs, and hazardous air pollutants. Later in the document we refer to emissions as methane but acknowledge it is a mixture of hydrocarbons.

EPA's Oil & Gas Pollution Standards

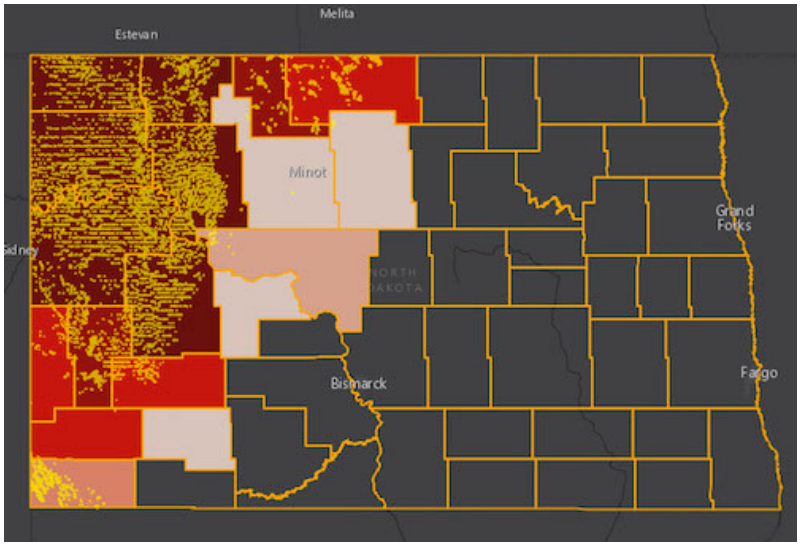
The EPA's Oil & Gas Pollution Standards (officially called the "New Source Performance Standards") curb methane emissions, smog-forming VOCs, and other toxic air pollutants, such as benzene, in new, reconstructed, and modified oil and gas sources (EPA, 2016). The EPA rule is a vital safeguard for American families, especially children, from toxic air pollution. Air pollution knows no borders.

BLM's Methane Waste Rule

The BLM's Methane and Waste Prevention Rule is designed to curb natural gas waste and pollution on American public and tribal lands using a similar set of standards as those finalized in the EPA rule. However, unlike EPA's new source rule, the BLM rule applies to both new and existing wells within the BLM's jurisdiction such as those on the Fort Berthold Reservation in western North Dakota.

Public Health Threat

Ozone, more commonly known as smog, is formed by harmful air pollution from oil and gas activities and is an immediate threat to our communities' health. There are 23 million Americans who suffer from asthma, including an estimated 6.1 million children (EPA,2016). Every year, increased ozone smog resulting from oil and gas pollution during the warm summer months causes 750,000 asthma attacks in children, more than 500,000 days of school missed, nearly 2,000 asthma-related emergency room visits, over 600 respiratory-related hospital admissions, and over 1.5 million days with restricted activity (ND Oil and Gas Threat Map, 2016). Even healthy people who do not already suffer from asthma can be affected by ozone smog including suffering from reduced lung function, coughing, wheezing, and inflammation (EPA,2016).



The North Dakota oil and gas threat map depicts how asthma attacks in children are concentrated in the Northwest portion of the state, in the Bakken Shale.

On the Ground In North Dakota

A team recently went out in North Dakota to document the impacts of methane pollution on communities across the state. Equipped with a Forward Looking Infrared (FLIR) camera, special technology created to visualize the release of methane and other harmful air pollution from oil and gas facilities that is normally invisible to the naked eye.

Much of the data gathered by the team is concerning. There are over 1,400 people living within a half mile of new wells, around 375 of whom are children under the age of eighteen. In Williston, ND (Williams County) **the team filmed** a well spewing methane and other hydrocarbons into the air across the street from the Upper Missouri Ministries summer camp and campground. In the same town, they also **witnessed methane leaking** near family homes.

Lisa Deville is a resident of Mandaree, North Dakota and an enrolled member of the Mandan, Hidatsa, and Arikara Nation. She is concerned about how oil and gas production is disproportionately impacting Native American lands, having seen its devastating effect on Fort Berthold Reservation. where she lives. On the Fort Berthold Reservation alone, there are 1,500 oil and gas wells, many of which are flaring constantly and "you can see gas flares in every direction you look. They sound like the roaring of a jet engine, and they can light up the night sky as bright as day."

"Over the past ten years, I've watched oil and gas turn our reservation into an industrial zone…it's totally changed our way of life"

Because no outside agency or organization had done so, Lisa and her husband conducted a door-to-door survey in Mandaree about residents' air quality and emissions concerns. They contacted 15 percent of the Mandaree population and found that a vast majority of residents are troubled by local air quality. Almost 80 percent of residents consider air quality extremely important and 73 percent think that flaring from oil and gas production is problematic.

Gas flares and emissions hit close to home for Lisa. “As Native Americans, this is the only land we have left. Our creation stories come from the earth — and we’re not supposed to be doing what we’re doing to the earth...we have a human right to clean air, clean land and clean water.” Moving forward, she hopes that the government introduces stronger inspection, rules, and regulations and then holds the oil and gas industry accountable for their enforcement.

North Dakota does not have state level safeguards to curb methane pollution from oil and gas activities, which is why federal standards like the EPA and BLM rules are vital to protecting public health and keeping families and children healthy. For example, if the EPA rule is suspended, or even worse overturned, 11,000 North Dakotans, including vulnerable children, who live in counties in the threat radius will continue to be at risk for serious health impacts including respiratory issues, cancer risk, and even death (ND Oil and Gas Threat Map, 2016)

Tom Abe lives in New Town, North Dakota and, like Lisa, lives on Fort Berthold Reservation. Tom lives in the epicenter of the Bakken shale formation, which is an area where wells drilled have a 98 percent chance of being successful. Tom has learned firsthand how decreased air quality is impacting his community, noting, “I have heard many complaints by people about things like upper respiratory issues and asthma problems increasing.” On top of air quality, he is also concerned about how carbon and methane emissions from oil and gas well leaks and flares affect the local climate. Raw methane gas is a huge concern, because it “is considered over 80 times worse for the climate than carbon, so methane venting and leaks are a real problem.”

“Most [people in this area] left because of the negative impacts of the oil industry on their land and their way of life. They represent people who our communities can least afford to lose – the people who drive ambulances, teach in our schools, worked in our stores and businesses, our next-door neighbors.”

Marilynn Hudson, resident of Parshall, North Dakota, has witnessed major changes in the Fort Berthold Reservation since the oil and gas development began there eight years ago. The Mandaree area of Fort Berthold was historically an agricultural region, with grazing lands for cattle and ranchers. But, as Marilynn notes, "that's all gone today. So, there has been a tremendous change. The farmers and ranchers are just about gone, too...Their land now has been taken over by huge oil leases." She has also witnessed many people leaving the community for more opportunity in cities across the West.

Why We Need EPA and BLM's Oil & Gas Pollution Standards

It's clear that North Dakotans and Americans alike need EPA's and BLM's rules to protect them from methane and other harmful air pollution resulting from oil and gas activities. Residents of the Fort Berthold Reservation and across North Dakota are already paying the price for oil and gas leaking and venting, and they will continue to do so if we get rid of our vital pollution safeguards. Oil and gas industry pollution is dangerous; we know if the federal pollution standards are suspended or repealed, millions across the country will face the same unfair health challenges already impacting Native Americans in the region.

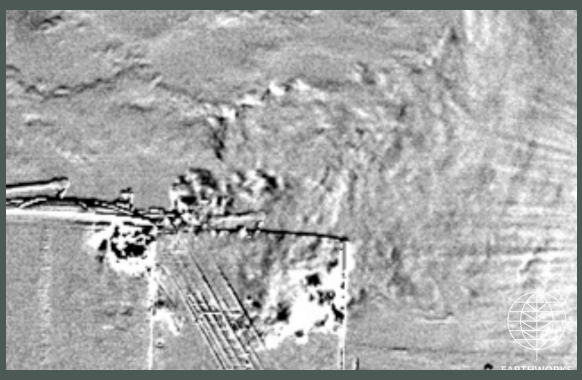
If you are interested in learning more, Pete Dronkers of Earthworks, Certified Optical Gas Imaging Thermographer & Southwest Circuit Rider, who captured the FLIR footage featured in this report describes his specific observations on the emissions seen in these videos ***in a statement here.***

Appendices

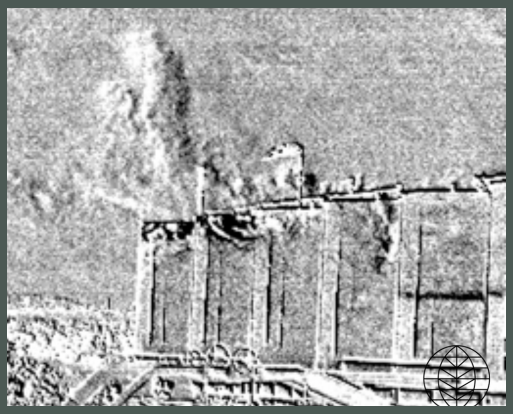
The following are side-by-side visual comparisons of wells under NSPS rule jurisdiction. On the left are images of methane releases, which to the naked eye, are invisible. On the right are images of the same methane releases using Forward-Looking Infrared (FLIR) technology, which captures and depicts the methane gas as it is released into the atmosphere.

HRC Operating 13H Well Site in Fort Berthold, Dunn County, North Dakota

Fort Berthold 1H Well Site in Fort Berthold, Dunn County, North Dakota



Fort Berthold 8-12H Well in Fort Berthold, Dunn County, North Dakota



Citations

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