

Country Living **DIRTY AIR**

OIL & GAS POLLUTION IN RURAL AMERICA

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OIL & GAS POLLUTION IN RURAL AMERICA

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REPORT AVAILABLE AT:

http://catf.us/resources/publications/files/Country_Living_Dirty_Air.pdf

<https://earthworks.org/publications/country-living-dirty-air.pdf>

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The Clean Air Task Force works to help safeguard against the worst impacts of climate change by catalyzing the rapid global development and deployment of low carbon energy and other climate-protecting technologies through research and analysis, public advocacy leadership, and partnership with the private sector.

CLEAN AIR TASK FORCE

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EARTHWORKS

Earthworks is dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.

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OIL AND GAS POLLUTION IN RURAL AMERICA

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Introduction

OIL & GAS POLLUTION IN RURAL AMERICA

Thanks to the shale boom, oil and gas development has expanded rapidly in many regions of the United States. The oil and gas industry has industrialized areas that were, and still largely are, rural and agricultural communities. In the process, industry has polluted these communities—rural except for oil and gas—with methane and associated toxics heretofore associated with urban areas. This report highlights the health impacts experienced by several of these rural communities as a result of the increased air pollution from oil and gas operations.

The oil and gas industry dumps more than 8 million tons of methane and toxic pollutants like benzene into our air each year. Methane is a greenhouse gas 86 times more potent than carbon dioxide at driving climate change,¹ and the oil and gas industry is the largest industrial source of methane pollution in the nation.² But methane is just one harmful air pollutant from the oil and gas industry—others include benzene, a carcinogen, and other toxic volatile organic compounds (VOCs).

The nation-wide health impacts from the natural gas supply chain (natural gas facilities as well as oil production facilities with associated gas) were quantified in two reports published by

Clean Air Task Force (CATF). The 2016 *Gasping for Breath* report found that air pollution from the natural gas industry contributes to the ozone smog that blankets much of the U.S. in the warmer months.³ Oil and gas production produces volatile organic compounds (VOCs) and nitrogen oxides (NOx), which combine in the atmosphere to form ozone smog.

These air pollutants from this industry alone are associated with 750,000 summertime asthma attacks in children and 500,000 missed school days.⁴ Oil and gas air pollution contributes to asthma and other respiratory conditions across the contiguous 48 states, but the severity of the impact, in terms of per capita

number of asthma attacks, is greatest in many areas close to oil and gas development, like those highlighted in this report.

As demonstrated in the CATF's *Fossil Fumes* report, many of the air pollutants from the oil and gas industry are linked to increased risk of cancer and respiratory disorders.⁵ The counties highlighted in this report have a significantly increased cancer risk due to air pollution from oil and gas operations.

The Oil and Gas Threat Map interactively maps the total pop-



ulation (12.6 million Americans and children attending school (2.9 million) – within ½ mile of active oil and gas facilities.⁶

Air pollution is emitted from dozens of types of equipment and processes throughout the oil and gas system, such as wells, completion equipment, storage tanks, compressors, and valves. Many proven, low-cost technologies and practices are available to reduce these toxic contaminants, while also reducing emissions of methane, the main constituent of natural gas. Thus, policies that reduce pollution from the oil and gas industry can help protect the health of local communities while addressing global climate change.

CATF and Earthworks have called for the Environmental Protection Agency (EPA) to issue safeguards for current and future operations that would cut methane emissions from the oil and gas industry by half. These methane standards would also significantly cut toxic and ozone-causing air pollution, which would have important benefits for air quality and public health in and downwind of oil and gas producing areas, including rural areas examined in this report. In addition, these standards are needed to ensure compliance with the Clean Air Act. For example in the Uintah Basin in Utah, oil and gas air pollution has been the biggest anthropogenic contributor to the region's wintertime ozone problems.⁷

In June 2016, the EPA finalized important methane standards covering new and modified oil and gas facilities, and the Bureau of Land Management (BLM) finalized standards

The oil and gas industry dumps more than 8 million tons of methane and toxic pollutants each year.

covering both new and existing oil and gas facilities on federal and tribal lands. These safeguards would reduce the risk from the air toxics and ozone smog-forming pollutants from this industry.

finalized during the Obama administration and pushing for additional protections against pollution from the oil and gas industry will improve the health of many communities. This is true



Storage tanks at a Primexx facility in west Texas in the Permian Basin. The vertical pipe on top of the rightmost tank vents methane and toxic volatile organic compounds. Go to page 15 to see an infrared view of the vented pollution.

However, the Trump Administration is seeking to eliminate these rules. Without these federal rules, the vast majority of the oil and gas industry will lack the safeguards needed to control air pollution. The 8 million metric tons of methane emitted by existing facilities in 2016 is equivalent in near-term warming potential to the greenhouse gas emissions from 200+ coal-fired power plants.

To reduce the risk from air toxics and smog-forming pollution from this industry, protections already in place must be retained and expanded to cover emissions from all oil and gas facilities. Defending the safeguards

both for urban and suburban areas where oil and gas has made existing pollution worse, and for rural areas where oil and gas is the difference between clean and dirty air.

To most effectively tell the story of how oil and gas pollution is impacting citizens in rural communities where that infrastructure is found, we went out into the field in five different states to hear first-hand from local residents. The case studies below represent the impacts on people in communities across the country that have been negatively affected by oil and gas development over the past several years.

Case Study #1

KARNES COUNTY, TEXAS



George is a long-time resident of Karnes County, Texas, part of the Eagle Ford Shale, and one of the top oil producing counties in the state.⁸ His home is one of the many in the community that sits next to an oil and gas facility. George is a retiree, a veteran, and is dedicated to his community by helping out at the local school as a substitute teacher. George's family also lives in Karnes. Among his concerns are how the pollution from the oil and gas industry will not only affect him but also his family. "We just don't know what we're breathing, what it can cause, and how much of it is in the air we breathe."

Before the oil and gas boom in the Eagle Ford Shale starting in 2011, George enjoyed the serene and quaint feel of his home and property in Karnes. The number of wells in Karnes has grown by over 11 times in just the past five years.⁹ "I spent years cultivating a peaceful place to retire, where my grandkids could play outside and enjoy the wandering deer, but after the boom, everything changed. I

no longer feel safe, the flare behind my home is loud and I often notice odors. I looked forward to the economic boost this industry would bring to me and my community but I never imagined the impacts would be so harmful to my health, the air, and the environment overall."

Studies in Karnes show the presence of volatile organic compounds (VOCs), such as benzene, which can cause respiratory issues, dizziness, sore throats, and headaches.¹⁰ VOCs also have indirect health impacts when they form chemical reactions with nitrogen oxides in sunlight and creates ozone smog. George has often noticed smog in Karnes stating, "I first noticed

OZONE

"We're not a big city, I thought that [smog] only happened in urban areas, not in places like Karnes."

— George, Karnes County, Texas resident



Karnes County resident in his backyard adjacent to an oil and gas facility.

the haze or smog in San Antonio, but in the last couple years I've noticed it here in Karnes. We're not a big city, I thought that only happened in urban areas, not in places like Karnes."

In the years since the boom in the Eagle Ford Shale, George has experienced sinus issues, headaches, and fatigue. In an air and health report on Karnes, other community members identified similar health issues and noticed they first appeared after the oil and gas boom in Karnes.¹¹ "Before all this [oil and gas development], I never used to feel like I do now—I feel tired for no reason. Sometimes I feel like my chest is heavy and it's hard to breathe. Now I deal with sinus issues everyday, I can't tell you what causes it, but I know I didn't have any of these issues before they started drilling around here." George was diagnosed with asthma before the oil and gas boom in 2011, but he reports that it was under control for a while and then got much worse

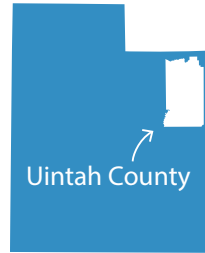
when drilling increased in Karnes. "I rarely used my inhaler, now I'm on medicine and carry my inhaler with me everywhere I go. I notice that when the flare behind my house is really high, I have to use my humidifier to help me breathe better."

George has spent the last two years submitting complaints to the Texas Commission on Environmental Quality (TCEQ). He is part of a local community group that is asking the state for better protection from pollution by having them install another air quality monitor in the area. Currently, air quality monitors are installed in areas according to population density. George and the rest of the community group argue that the state must also monitor areas with high oil and gas well density, in order to get a better sense of how oil and gas production affects local air quality. ■



Photos: Left images show normal view of Karnes County oil and gas facilities. Right images are infrared views of the same facilities, showing normally invisible pollution.

Case Study #2



UINTAH COUNTY, UTAH

Ever since fracking arrived in Utah's Uintah Basin, communities have reported worsening air conditions and alarming trends in their public health. Because some residents who have spoken out about these impacts have been subject to threats and harassment as a result, this case study is anonymous.

In 2018, Uintah County was recently listed as "nonattainment" with health-based standards for ground level ozone pollution by the U.S. EPA.¹⁹ A study by the Utah Department of Environmental Quality found that oil and gas-related sources were responsible for the majority of NO_x and VOC emissions – ozone smog precursors – in the Uintah Basin in 2011.²⁰ The number of oil and gas wells in the

In 2018 the EPA listed Uintah County as "nonattainment" with health-based standards for ground level ozone pollution, with 2/3 of the pollutants contributed by gas operations.

county has grown by 24 percent since 2011.²¹ The nonattainment designation will require the state to do more to address the ozone problems caused by oil and gas pollution. The state has three years to act to reduce ozone levels, or it will face a federal crackdown.

Residents experience the worst impacts of air pollution during winter inversions, when dense, cold air gets trapped under a layer of warmer air, sealing in pollution in the basin. In the past, communities could expect some relief from these respiratory stressors during warmer months, but this has become less common. Some residents attribute this failure of seasonal respiratory relief to the rise in oil and gas industry activity.



Oil and gas operation in the Uintah Basin. Residents experience the worst impacts of air pollution during winter inversions when dense, cold air is trapped under a layer of warmer air, sealing in pollution in the basin.

Other health impacts have also been observed in the county. One medical professional in Vernal reports that, the three most common health impacts in adults are respiratory issues, heart disease, and kidney disease. During the onset of fracking in the basin, health impacts were first noticed in infants and children, but the rates of health issues have been increasing in the adult population as well – anecdotal evidence suggests that adult asthma rates are going up.

Humans are not the only population suffering from oil and gas air pollution. Horses, cattle, and other animals breathe the region's air and are being negatively impacted. Concerns have been raised within the Utah Department of Natural Resources over increasing animal infant mortality rates, particularly in cattle, horses, and domestic pets.

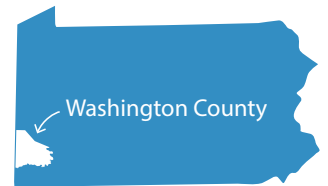
Residents of Vernal have observed an increased prevalence of certain illnesses that coincide with oil and gas development, and they would like to see an unbiased scientific study of the causes, including monitoring and evaluation by public health researchers to determine whether the oil and gas emissions are contributing. Residents are also calling for more accurate air monitoring that can help residents make informed decisions about their activities and when they may need to avoid spending time outside, but city council members and other local leaders have been unsupportive of this kind of change in monitoring methods. ■

Hydrogen sulfide (H_2S) is emitted from many oil and gas wells. It is a colorless gas that is toxic even at very low concentrations.



Photos: Left image shows a normal view of an Uintah County oil and gas facility. Right image is an infrared view of the same facility, showing normally invisible pollution.

Case Study #3



WASHINGTON COUNTY, PENNSYLVANIA

“The people living in these rural areas with gas development should have a say-so,” asserts Dale Tiberie, a 23-year resident of a small rural community, West Pike Run Township. That right to have a say pertains to the heavy development of gas around them, as well as the emissions they are breathing. With his back door less than 500 feet from a fracked well named Mad Dog 2020, that’s one of Dale’s biggest concerns.

We all need clean air to breathe, but Dale has extra reason for concern. A retired coal miner, Dale’s body bears the burden of that career. He undergoes on-

In March 2018, Earthworks responded to a request from the Tiberie family to visit the Mad Dog 2020 well pad. Earthworks’ certified thermographer documented emissions of concern, seen in this still image as a black plume of gas (on next page). Both Earthworks and Dale have submitted formal complaints to the Pennsylvania Department of Environmental Protection (PA DEP).

Dale and his wife raised their son in their home in Washington County, Pennsylvania. This predominantly rural county features countless working farms, dense woodlands, and quality trout streams,



Dale Tiberie, resident of Washington County, PA, stands in front of the well pad built 500 feet from his backdoor. On his left sits equipment found leaking in March, and newer equipment that the gas company installed in response to his complaint. However, the odors that prompted his concern persist and now constant noise from the new equipment also emanates from the pad.

going evaluations for black lung, the disease of the mines. He doesn’t reflect on the irony—not in our conversations, at least—of the fact that he survived one tremendously hazardous profession, only to retire in the midst of another industry.

which Dale, an avid angler, knows well. Yet, within the decade or so since unconventional gas industry took hold in Pennsylvania, Washington County has become the most heavily fracked county in the state, with over 1,600 active unconventional wells

as of May 2018.¹⁵ According to estimates by the Environmental Defense Fund, Washington County also has the highest levels of VOC emissions, precursors to ground-level ozone, from oil and gas development.¹⁶ Ozone levels in this county are barely within attainment of the EPA's 2015 National Ambient Air Quality Standards.

The Mad Dog 2020 pad is by no means the only contributor to ground-level ozone in Dale's community. Earthworks has consistently documented significant emissions at two compressor stations just a few miles from Dale's home. In fact, a PA DEP inspector recently shared the fact that his agency was responding to a complaint from that part of the township about a persistent "haze" the residents have observed.

Dale thinks a lot about the possibility of "something going wrong" at the pad – well pad fires, spills, and other accidents have happened in the county. But right behind this worry is the unknown of what he and his wife get exposed to on a daily basis by living just downhill from a well pad and in a community replete with wells and compressors. For months, the Mad Dog well pad has emitted gassy odors – at one point so strong it made him nauseated. And yet, despite communicating his concerns to the operator – and the new equipment they eventually installed in response – the odors continue and no one has told him exactly what's in his air. "That's the fear I have: Am I breathing good air or not?"

When you live in a township with 27 fracked gas wells,¹⁷ numerous compressors and other facilities, and occupied by a gas company poised to break ground on at least two new "super pads," you live with a lot of unknowns. But Dale knows what his symptoms are. His respiratory ailments seem incessant. The cold he had this winter was the worst he had experienced in a very long time.

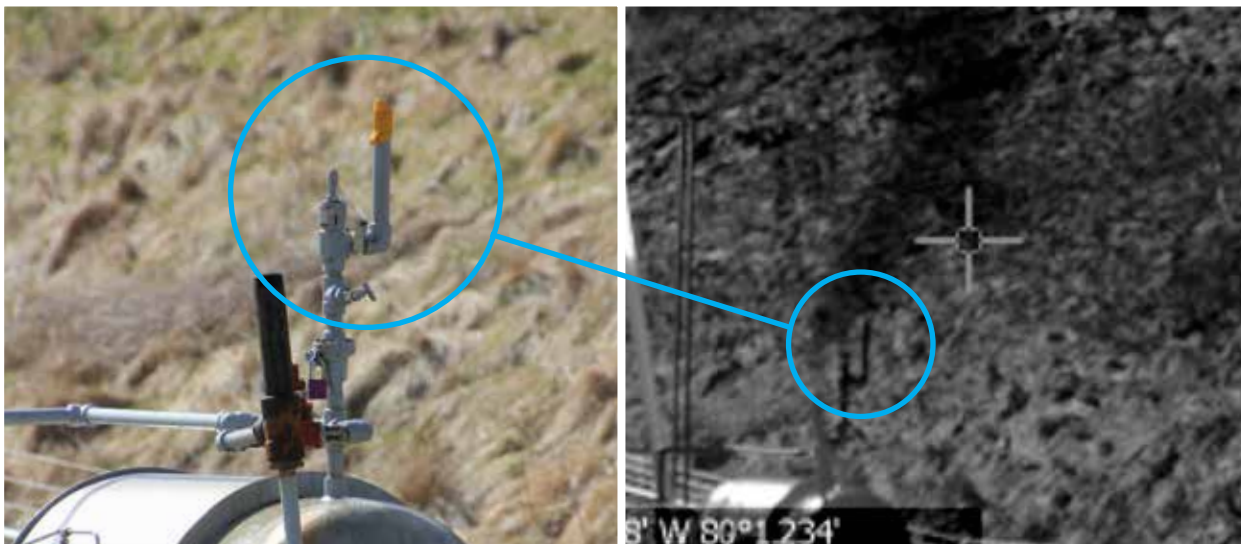
"I seem to have more respiratory tract problems than I've had in the past – even worse than when working in the coal mine." As we talk, his sniffles become a part of the conversation.

HEALTH

"I seem to have more... problems than I've had in the past—even worse than when working in the coal mine."

— Dale Tiberie, West Pike Run Township, Pennsylvania

Dale makes sure his voice is heard, as a constant presence at township meetings and by contacting both regulators and the gas company about the ongoing problems at the well pad closest to him. Dale wants transparency about what's happening in West Pike Run Township. Not just for himself and his family's well-being, but in order to educate others. He wants the public and decision-makers to fully understand what communities like his are living with, and what the consequences are shaping up to be. ■



Photos: Left image shows a normal view of oil and gas equipment in Washington County. Right image is an infrared view of the same equipment, showing otherwise invisible air pollution.

Case Study #4

NOBLE COUNTY, OHIO



The air is what drove them away. Or rather, what the gas industry was doing to their air – along with their land, water, and wellbeing.

The Smith* family called to chat from their cabin in the Smoky Mountains. After a few days spent away from their farmstead in Noble County, Ohio, and breathing air unburdened by gas development, their sinuses have cleared. They can breathe more easily. If a forced choice can still be called a choice, then they've "decided" to sell their idyllic farm in the Ohio countryside and make their mountainous vacation spot their new home.

Tammy Smith enumerates the thirty-odd well pads – each with multiple individual wellheads – and compressor stations that surround their former-

ly peaceful and productive farm back in Noble County. She passionately recounts her and husband Tom's stolid resistance to leasing to their land, but how ultimately they were pressured into signing. In the end, the gas company Antero built a pad less than a half mile from their home. The oil and gas production in Noble County has grown more than 50 times in the past 10 years. Earthworks began visiting Noble County – with FLIR camera in tow – in 2015, and have documented significant emissions on several visits. In March 2018, the Smiths filed a formal complaint with the Ohio EPA on the basis of that emissions footage.

The Crum Compressor is just one of many gas facilities near the Smith family's Noble County home.



EPA data shows that as a whole Noble County has, despite its agrarian nature exemplified by the Smith's farm, ozone pollution is so high that it barely meets federal standards (which is far from clean air).



Earthworks documented emissions at this facility in 2015 and again in March 2018.

According to Tammy, the Ohio EPA recently conducted an “air grab” sampling near their home. The results showed levels of harmful VOCs like benzene and toluene high enough to make their air quality “worse than downtown Chicago.” EPA data shows that as a whole Noble County, despite its agrarian nature exemplified by the Smith’s farm, ozone pollution is so high that it barely meets federal standards (which is far from clean air).

Tammy and Tom’s symptoms range from skin rashes to respiratory ailments. Tom has perpetually blocked sinuses that just won’t abate until they put distance between them and Noble county. And they aren’t the only ones experiencing symptoms. One of the most disturbing parts of their story happened over Christmas, when their six-year-old grandson, who lives next to the farm, awoke crying and gasping for air. Over and over, he choked out

The oil and gas production in Noble County has grown more than 50 times in the past 10 years.

the terrifying words “I can’t breathe, I can’t breathe,” she recounts. A registered nurse, Tammy has been able to help administer breathing treatments for her young grandson, who continues to experience breathing difficulties.

For their family and neighbors still there, Tammy and Tom are calling for meaningful enforcement of the standards that

Ohio has already set for gas facilities. They have lived next to well pads and compressors since early in Ohio’s shale gas boom. Over years of careful observation and vigilant reporting of complaints, the response of health and environmental regulators strikes them as lackluster, if not negligent. They’re willing to share their story, they explain, because they want others to know the truth. Even as they pack up and prepare to sell off their beautiful farm and move far from their grandson, they haven’t given up on Noble county. ■

BENZENE

A toxic VOC that is high enough here to be “worse than downtown Chicago” according to Ohio EPA.

— Tammy Smith, resident of Noble County

*Pseudonym used at request of the family to avoid harassment by the oil and gas industry and its operatives paid to divide communities.



Photos: Left image shows a normal view of a Noble County oil and gas facility. Right image is an infrared view of the same facility, showing normally invisible pollution.

Case Study #5



REEVES COUNTY, TEXAS

When Sue Franklin moved to Reeves County's slice of the West Texas high desert outside Balmorhea she expected rural, southwestern America. Friendly people, wide open vistas, and a direct connection to the land. And that's exactly what she got until the oil and gas industry moved in.



Balmorhea is literally an oasis. The town owes its existence to the San Solomon Springs complex, a group of artesian springs feeding Balmorhea State Park and the desert marsh

and 1.75 acre swimming hole it contains. The springs and the Park draw tourists from all around the world to swim and dive with the Texas spiny softshell turtle and many species of fish, several of which are endangered. And those tourists sustain the shops in town, including the Rock Shop which Sue owns and runs with her husband Jim.

Balmorhea also has the misfortune to sit atop the Permian shale which, as of 2018, is the number one oil producing region in the lower 48 states. 'Misfortune' is a fair characterization of the Permian's effect on the Balmorhea area because of its impacts on the health and well being of people like Sue and Jim.

Before fracking brought the oil and gas industry to the area, Sue and Jim's home outside Balmorhea was a refuge. They enjoyed the panoramic view of the Davis mountains, 20 miles away. They kept their house open to hear the sounds of the desert and to be cooled by desert breezes.

All that changed starting in early 2017 when the first of three oil and gas wells were drilled as close as one-half mile from their home. Now their house is effectively a prison. Sue started suffering from nosebleeds and impaired breathing, and Jim start-



Once they enjoyed the panoramic view of the Davis mountains, 20 miles away. Now the mountain views are a thing of the past, lost in smoggy haze.

ed experiencing debilitating headaches. If they don't keep their house closed up tight with the air conditioning constantly running their health problems become especially severe. And the mountain views are a thing of the past, lost in the smoggy haze.

Operated by Primexx, one of the wells is particularly worrisome. Intermittently posted with a warning sign "Caution Poison Gas", when the wind is out of the east its pollution blows right through the Franklin's property.

The impacts have been devastating to not just Jim and Sue's health, but also to their quality of life. "The oil and gas industry took my nature away," says Sue Franklin.

The data suggest that the Franklin's experience should not come as a surprise. Since 2011, before

the onset of the regional shale boom, volatile organic compound pollution from oil and gas has increased more than six times, and benzene emissions have increased more than 68 times.¹⁸

It's no secret to Sue and Jim that Texas' state government puts the interests of the oil and gas industry ahead of the public interest. There are no current state rules to control oil and gas methane pollution, nor are there likely to be any in the future. That is why she hopes against hope that the EPA's methane and VOC safeguards stay in effect. ■

LIFE
"The oil and
gas industry
took my nature
away."

— Sue Franklin, Reeves
County, Texas

Since 2011, before the onset of the regional shale boom, volatile organic compound pollution from oil and gas has increased more than six times, and benzene emissions have increased more than 68 times.



Photos: Left images show normal views of Reeves County oil and gas facilities. Right images are infrared views of the same facilities, showing normally invisible pollution.

Case Study #6

SAN JUAN COUNTY, NEW MEXICO



With 22 years in Farmington, New Mexico, including 12 years as the Energy and Climate Program Manager for the San Juan Citizens Alliance (SJCA), Mike Eisenfeld and his family are all too familiar with the brown cloud and smog that frequently hangs over his home in San Juan County. Mike noticed that the smog grew as the oil and gas extraction rapidly expanded in the area – oil production in the county has tripled over the past decade.¹²

With over 12,000 wells in the county, $\frac{3}{4}$ of the residents live within a half mile of an oil and gas facility – one for every 10 people. “Early on, concerned citizens knew about the NO_x emissions and the potential impacts. However, general awareness of the impacts of VOCs from natural gas facilities didn’t come about until later, following an education process,” Mike reflected.

The health impacts in San Juan County are well known as rates of asthma, in particular in children, continue to rise. In 2007 the New Mexico Department of Health conducted a study linking the frequency of respiratory emergency room visits to high ozone days.¹³ Unfortunately, there are no regular public service announcements regarding high ozone days and the recommended precau-

tionary measures citizens could take. This area is not densely populated and does not have heavy car traffic. The air quality here should be clear and clean. However, the air quality is jeopardized by the oil and gas industry which is the largest source of VOCs and toxic air pollution in the county. EPA reported the sector’s emissions increased more than 50% between 2011 and 2014—and it is likely even higher today.¹⁴

Looking forward, Mike hopes that the oil and gas industry will clean up its act, including eliminating methane pollution and associated air toxics, and ultimately shifting extraction away from residential communities in San Juan County. In his role as Energy and Climate Program Manager at the SJCA, he focuses on the fact that the coal and oil and gas extraction are the greatest sources creating the bad ozone days in San Juan County. SJCA calls for stringent regulatory oversight and structure to reduce VOC and NO_x emissions and thereby reduce the ozone problem in the area. ■

“EMISSIONS
Have increased
more than 50%
between 2011-2014
according to EPA.”

— Mike Eisenfeld



Photos: Left image shows a normal view of a San Juan County oil and gas facility. Center image is an infrared view of the same facility, showing otherwise invisible air pollution. At far right, a flare burns excess volatile organic compounds.

Solutions

NEED TO BE MORE THAN VOLUNTARY

Strong and enforceable federal standards would better protect public health and the environment

Many proven, low-cost technologies and practices are available to reduce air pollution from the oil and gas industry. In fact, dozens of companies in the methane mitigation industry are providing technologies and services to the oil and gas industry to help reduce methane and other air pollution. Despite the availability of inexpensive solutions, oil and gas operators cannot be relied upon to reduce their emissions voluntarily, even when they clearly promise to do so.²² We need enforceable government safeguards to protect public health and the environment.

Federal standards can cut methane emissions from the oil and gas industry by half.²³

These methane safeguards would also significantly cut toxic and ozone smog-forming air pollution, which would have important benefits for air quality and public health in and downwind of oil and gas producing areas including rural areas like those featured in this report's case studies.

Key opportunities include:

- **Finding and fixing leaks:** Unintentional leaks of natural gas from static components such as connectors, valves, regulators, and hatches throughout the oil and natural gas sector are widespread. Leaks will eventually occur at all oil and gas facilities; failing to fix them in a timely manner is a wasteful and harmful practice that leads to clearly avoidable emissions. Leak emissions can be reduced with rigorous leak detection and repair (LDAR) programs. These programs require frequent, regular surveying of facilities for leaks using instruments that detect methane and other hydrocarbons in natural gas.
- **Eliminating or minimizing equipment venting:** Methane pollution from existing compressors and automatic pneumatic valve controllers can be cut dramatically by using up-to-date technology and maintenance practices to reduce intentional emissions.
- **Capturing gas and minimizing flaring:** Many oil wells produce and then vent or flare large quantities of natural gas. These emissions can be curbed by requiring oil producers to capture gas otherwise emitted from oil wells after hydraulic fracturing, as well as during oil production.

Action Steps

To put the solutions we know exist into action and thereby protect rural communities and climate from oil and gas industry methane pollution and associated air toxics, we need strong federal safeguards. Although state rules and company promises are better than nothing at all, they are not sufficient.

As a first step, we must defend existing federal methane pollution safeguards finalized during the Obama administration. We must also push for additional protections to cover currently unregulated oil and gas industry air pollution sources.

We know this is possible because it has already occurred at the state level. Colorado, working together with industry, wrote and implemented methane safeguards that are stronger than existing federal safeguards. They have been in place since 2014, endorsed by the oil and gas industry, and haven't negatively impacted oil and gas production.

Although not a substitute for national safeguards because air pollution doesn't recognize state boundaries, we call on additional states to follow Colorado's lead and protect the health of their communities, and those downwind.

Common sense, low cost safeguards can cut methane pollution by at least half and also significantly cut toxic and ozone smog-forming air pollution, which would have important benefits for air quality and public health in and downwind of oil and gas producing areas.

Ultimately, we must transition to clean energy and conservation. But until that day, there is no substitute for clear, enforceable methane safeguards to protect communities, rural and otherwise. ■

Endnotes

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