



THE THREAT OF OIL & GAS POLLUTION

Montana

Methane, the primary component of gas, is an invisible, odorless greenhouse gas that is a powerful driver of climate change — 87 times as powerful as carbon dioxide during the time it remains in the atmosphere.¹ The oil and gas sector is the largest source of methane in the U.S., leaking or intentionally venting large quantities of this dangerous pollutant into our air every day. In 2014, the oil and gas industry emitted over 9.8 million metric tons of methane, a number 34% higher than previous estimates.² The near-term climate impact of these emissions is equal to the pollution caused by more than 200 coal-fired power plants over 20 years.

Along with methane, oil and gas facilities often release other air pollutants that can harm our health, including formaldehyde, benzene, acetaldehyde, and ethyl benzene. These toxins can cause cancer, respiratory symptoms, anemia, brain damage and birth defects, eye irritation, and blood and neurological disorders.

THE THREAT RADIUS

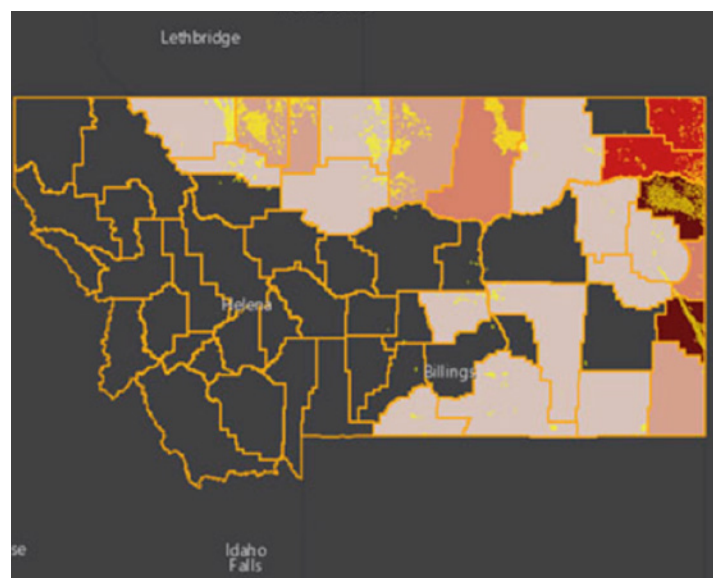
Peer-reviewed studies have documented higher levels of harmful air pollutants in and around areas with oil and gas production activity, and have shown that oil and gas facilities are the source of the excess pollution. Research indicates links between risks and/or prevalence of disease and proximity to facilities.³ The half mile “threat radius” is a very conservative estimate of the area within which higher levels of toxic pollution are seen, and the distance within which health impacts have most clearly been correlated with the presence of oil and gas facilities.⁴

There are currently 12.4 million people living within a half mile of one of 1,193,118 active oil and gas wells, compressors, and processors in the United States. In total, 184,578 square miles are covered by the threat radius⁵, which includes 11,543 schools and 639 medical facilities. Nationwide, 238 counties in 21 states face a cancer risk

that exceeds EPA’s one-in-a-million threshold level of concern, **including four counties in Montana.**⁶

OIL & GAS THREATENS MONTANA

Nearly seven thousand of Montana’s residents live within a half mile threat radius of one of the state’s 9,771 methane-emitting oil and gas facilities. In addition to Richland, Fallon, Roosevelt and Sheridan counties



MAP: OILANDGASTHREATMAP.COM/THREAT-MAP/MONTANA

exceeding the EPA's cancer risk level of concern, Phillips and Wibaux counties have cancer risks in the highest 10%.

The Williston Basin, covering portions of Montana and the Dakotas, was the twelfth highest methane emitting oil- and-gas-producing basin in 2014, emitting 1,769,469 metric tons of carbon dioxide equivalent from 13,799 wells—a rate of 125 metric tons per well.⁷

THE NUMBERS⁸

TOTAL POPULATION Living in the Threat Radius (within a half mile of a facility)	6,868
TOTAL NUMBER of Active Oil and Gas Wells, Compressors, and Processors	9,771
NUMBER OF COUNTIES that Exceed EPA's Cancer Risk Level of Concern	4
NUMBER OF SCHOOLS in the Threat Radius	96
NUMBER OF MEDICAL FACILITIES in the Threat Radius	4
SQUARE MILES COVERED by the Threat Radius	3,096

STRONG FEDERAL STANDARDS ARE KEY

On May 12, 2016, the Environmental Protection Agency (EPA) finalized the first-ever federal standards addressing new and modified sources of methane pollution from the oil and gas sector. These standards require, among other things, that companies regularly monitor for and repair leaks.⁹ The EPA expects this rule to cut 510,000

ENDNOTES

- [1 http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WGIAR5_Chapter08_FINAL.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WGIAR5_Chapter08_FINAL.pdf)
- [2 https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf](https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf)
- [3 http://ehp.niehs.nih.gov/1306722/](http://ehp.niehs.nih.gov/1306722/)
- [4 http://oilandgasthreatmap.com/about/threat/](http://oilandgasthreatmap.com/about/threat/)
- [5 http://oilandgasthreatmap.com/threat-map/](http://oilandgasthreatmap.com/threat-map/)
- [6 http://www.catf.us/resources/publications/files/FossilFumes.pdf](http://www.catf.us/resources/publications/files/FossilFumes.pdf)
- [7 https://cdn.americanprogress.org/wp-content/uploads/2016/06/20070044/MethanePollution-report.pdf](https://cdn.americanprogress.org/wp-content/uploads/2016/06/20070044/MethanePollution-report.pdf)

tons of methane pollution from oil and gas facilities and equipment, the emissions equivalent of 11 coal-fired power plants or taking 8.5 million cars off the road every year.¹⁰ These standards will also significantly impact public health by curbing emissions of smog-forming volatile organic compounds (VOCs) and toxic air pollutants.

The 2016 standards were an important first step, but in 2018, nearly 90% of methane emissions will come from existing sources not covered by this rule.¹¹ Strong methane standards for both new *and existing* sources are key to the Administration's ability to meet its Paris climate commitments to reduce greenhouse gas emissions 26-28% below 2005 levels by 2025.¹² Therefore, the EPA must develop strong and effective standards for existing sources as soon as possible, both to meet its legal commitments and to protect public health and welfare. **Without strong standards on existing sources, millions of people—including the nearly seven thousand in Montana within the threat radius—will continue to be at risk.**

COMMON-SENSE SOLUTIONS ARE READILY AVAILABLE

Thankfully, common-sense solutions exist not only to clean-up and fix methane leaks, but to boost local economies as well. More than 500 locations in 46 states are already manufacturing the equipment and providing the services needed to reduce methane pollution, **including a service facility in Baker, Montana.** These businesses are helping to grow the local economy by creating highly skilled, good-paying jobs.¹³

- [8 http://oilandgasthreatmap.com/threat-map/montana/](http://oilandgasthreatmap.com/threat-map/montana/)
- [9 https://www.epa.gov/newsreleases/epa-releases-first-ever-standards-cut-methane-emissions-oil-and-gas-sector](https://www.epa.gov/newsreleases/epa-releases-first-ever-standards-cut-methane-emissions-oil-and-gas-sector)
- [10 https://www.epa.gov/newsreleases/epa-releases-first-ever-standards-cut-methane-emissions-oil-and-gas-sector](https://www.epa.gov/newsreleases/epa-releases-first-ever-standards-cut-methane-emissions-oil-and-gas-sector)
- [11 https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf](https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf)
- [12 https://www.whitehouse.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc](https://www.whitehouse.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc)
- [13 https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf](https://www.edf.org/sites/default/files/us_methane_mitigation_industry_report.pdf)

APPENDIX

MT Counties	Total Population	Threatened Population	Number of Facilities	Threatened Schools	Threatened Medical Facilities	Threatened Square Miles	Other Risks
Glacier County	13,399	2,528	752	4	4	231.27	
Richland County	9,746	1,062	1,121	12	0	541.02	Exceeds EPA level of concern for cancer risk*
Fallon County	2,890	726	1,487	3	0	198.10	Exceeds EPA level of concern for cancer risk*.
Hill County	16,096	707	517	3	0	216.87	
Phillips County	4,253	515	1,431	21	0	467.22	County Cancer Risk is in highest 10%.
Toole County	5,324	330	1,744	11	0	439.30	
Big Horn County	12,865	305	194	0	0	52.80	
Liberty County	2,339	145	260	2	0	98.19	
Roosevelt County	10,425	120	253	5	0	121.13	Exceeds EPA level of concern for cancer risk*
Pondera County	6,153	101	270	4	0	74.72	
Blaine County	6,491	86	693	12	0	265.39	
Valley County	7,369	75	161	5	0	64.40	
Sheridan County	3,384	60	140	6	0	76.33	Exceeds EPA level of concern for cancer risk*.
Dawson County	8,966	28	58	0	0	28.05	
Carbon County	10,078	21	108	2	0	20.03	
Teton County	6,073	21	110	1	0	21.95	
Powder River County	1,743	10	60	0	0	17.87	
Chouteau County	5,813	8	105	1	0	43.26	
Rosebud County	9,233	6	58	0	0	28.50	
Musselshell County	4,538	4	48	0	0	26.74	
Golden Valley County	884	2	4	0	0	2.32	
Prairie County	1,179	2	10	0	0	5.00	
Wibaux County	1,017	2	111	1	0	22.20	County Cancer Risk is in highest 10%.
Fergus County	11,586	1	3	0	0	2.36	
McCone County	1,734	1	6	1	0	3.38	
Petroleum County	494	1	33	2	0	7.90	
Stillwater County	9,117	1	15	0	0	6.42	
Carter County	1,160	0	1	0	0	0.79	
Custer County	11,699	0	5	0	0	3.70	
Daniels County	1,751	0	1	0	0	0.79	
Garfield County	1,206	0	5	0	0	3.31	
Sweet Grass County	3,651	0	2	0	0	1.12	
Wheatland County	2,168	0	1	0	0	0.79	
Yellowstone County	147,972	0	4	0	0	2.38	

*County-wide average cancer risk is equal to or greater than 1 in 1 million.