



OIL AND GAS METHANE POLLUTION IN MONTANA: THREATS AND OPPORTUNITIES

Methane: Quick Facts

- Methane is the chief component of natural gas¹, which can also be a by-product of oil production. The oil and gas sector is the largest contributor to methane emissions, accounting for one-third of the total.²
- Methane emissions can occur at any stage of the oil and gas supply chain (i.e., drilling and production, processing, transmission, storage, and distribution to end users), but most arise during the production phase.³ Methane typically is released through venting (direct release), flaring (burning), or through leaks in oil and gas infrastructure.⁴
- Other harmful pollutants also are emitted by the oil and gas sector, including volatile organic compounds (VOCs) and air toxics like benzene (a known carcinogen) that can cause a range of harmful health effects, such as asthma and some cancers, as well as environmental impacts.
- Methane waste is a significant contributor to climate change, which endangers wildlife and outdoor recreation, human health, and the environment.
- Common-sense federal regulations to reduce methane pollution will help retain or capture this valuable resource and thereby better ensure it can be used to help power homes and businesses, generate revenues, and reduce its impacts as well as those of other damaging pollutants.

Wildlife Impacts

- Oil and gas wells and associated infrastructure can fragment wildlife habitat for a variety of species, compounding harm for wildlife already impacted by a rapidly-changing climate. This can hinder migration routes, limit access to food, water, and other resources, and ultimately can lead to species population declines. Wildlife also can be harmed as a result of spills, chronic leaks, and crude oil releases.
- Climate change—partly fueled by methane pollution—is leading to rapid shifts in the habitat, landscapes, and seascapes that American wildlife depend on, placing numerous species at risk of decline or extinction if current rates of emissions continue unabated.⁵
- Loss of wildlife affects hunters and anglers, as well as wildlife watchers, outdoor recreational businesses, and wildlife managers.⁶
- In Montana, thousands of whitefish were killed when temperature increases and reduced flow in the Yellowstone River led to the proliferation of a deadly parasite. Nearly 200 miles of the river have had to be closed to fishing and all other forms of water recreation, with significant cost to many local businesses, and derailing tourist fishing and boating plans at peak summer vacation time.⁷
- According to the National Park Service, Glacier National Park in Montana contained more than 150 glaciers in 1910 but now features only 26, and may lose all glaciers by as early as 2020.⁸
- Bull trout—a popular game fish—are severely threatened by climate change in Montana.



Bull trout. Photo: USFWS.

According to researchers with the U.S. Forest Service, the species could lose 18-92 percent of its suitable habitat in the interior Columbia River basin, due to warming waters, with some populations facing higher risks than others.⁹

Impacts of Methane Waste on the Economy

- More than 10 million tourists visit Montana each year, supporting 38,200 jobs and bringing in \$3.9 billion to the economy.¹⁰ Montana ranks second in the nation for most visits due to wildlife viewing.¹¹
- In Glacier National Park, 2.2 million visitors in 2013 spent nearly \$179 million in surrounding communities, supporting 2,824 jobs.¹²
- In 2011, total expenditures on wildlife watching, hunting, and fishing in the U.S. amounted to \$54.9 billion.¹³ A rapidly-changing climate threatens this outdoor economy. Fees and taxes paid by hunters and anglers support non-game conservation programs run by state wildlife agencies, so a decline in outdoor recreation means a decrease in the funds for such programs.¹⁴

Policy recommendations

In May 2016, the Environmental Protection Agency finalized a rule to reduce methane and volatile organic compound (VOC) emissions from new and modified oil and gas sources, including regular methane leak inspection and repair requirements.¹⁵ This rule provides companies with methods by which to align the final standards with state-specific requirements. EPA estimates that this rule will result in net climate benefits of \$170 million in 2025. While additional emissions reductions can and should be achieved, ***NWF urges Congress to defend the new and modified source rule so that it can bring about much-needed pollution reductions for the benefit of our wildlife and economy.***

¹ U.S. EPA 2014. Overview of Greenhouse Gases: Methane Emissions. <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>.

² *Ibid.*

³ ICF International "Methane Emissions from the Oil and Gas Industry: 'Making Sense of the Noise,'" 2015, page 4.

<http://www.icfi.com/insights/white-papers/2015/methane-emissions-from-the-oil-and-gas-industry>

⁴ U.S. GAO 2016. Oil and Gas, Interior Could Do More to Account for and Manage Natural Gas Emissions, page 6. <http://democrats-naturalresources.house.gov/imo/media/doc/Interior%20Could%20Do%20More%20to%20Account%20for%20and%20Manage%20Natural%20Gas%20Emissions.pdf>

⁵ U.S. National Climate Assessment 2014, Ecosystems and Biodiversity. <http://nca2014.globalchange.gov/highlights/report-findings/ecosystems-and-biodiversity#statement-16341>

⁶ NWF 2015. Game Changers: Climate Impacts to America's Hunting, Fishing, and Wildlife heritage. <http://www.nwf.org/News-and-Magazines/Media-Center/Reports/Archive/2015/11-16-2015-Game-Changers.aspx>

⁷ Brown, M. 2016. More tests for Yellowstone, tributaries after fish kill. ABC News.

<http://abcnews.go.com/US/wireStory/tests-set-yellowstone-tributaries-fish-kill-41579828>. See also: Robbins, J. 2016. Tiny Invader, Deadly to Fish, Shuts Down a River in Montana. New York Times 2016. http://www.nytimes.com/2016/08/24/us/tiny-parasite-invader-deadly-to-fish-shuts-down-yellowstone-river-in-montana.html?_r=0.

⁸ National Park Service (NPS). Ice Patch Archeology and Paleocology at Glacier National Park. <https://www.nps.gov/articles/glacicepatch.htm>.

⁹ Reiman, B. F. 2007. Anticipated Climate Warming Effects on Bull Trout Habitats and Populations Across the Interior Columbia River Basin. Transactions of the American Fisheries Society 136:1552–1565.

http://www.fs.fed.us/rm/boise/publications/fisheries/rmrs_2007_riemanb001.pdf.

¹⁰ Voices of Montana Tourism. <http://www.voicesoftourism.com/tourisms-value/>

¹¹ NWF 2015. Losing Ground: Wildlife and Energy Development in the Powder River Basin.

<http://www.nwf.org/News-and-Magazines/Media-Center/Reports/Archive/2015/11-17-2015-Losing-Ground.aspx>

¹² NPS 2014. Glacier Creates 179 Million in Economic Benefit. <https://www.nps.gov/glac/learn/news/glacier-creates-179-million-in-economic-benefit.htm>.

¹³ USFWS. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. <http://www.census.gov/prod/2012pubs/fhw11-nat.pdf>

¹⁴ Voggesser, Garrit, "Big Impacts on Big Game, Voices from the Field: Sportsmen Speak Out," NWF Blog, November 17, 2015.

<http://blog.nwf.org/2015/11/big-impacts-on-big-game/>

¹⁵ EPA 2016. EPA's Actions to Reduce Methane Emissions from the Oil and Natural Gas Industry: Final Rules and Draft Information Collection Request, pages 1-2. <https://www.epa.gov/stationary-sources-air-pollution/epas-actions-reduce-methane-and-volatile-organic-compound-voc>