

## Summary

New Mexico is the United States second largest producer of oil, producing 15.1 percent of the country's oil as of February 2024, averaging roughly 1.98 million barrels of oil production a day<sup>1</sup>. New Mexico currently has 73 thousand active oil and gas wells, and nearly 100 active rigs drilling new wells each month. Revenues from the oil and gas industry account for an estimated 38 percent of the state's general fund budget in FY24.

While generating revenue for the state, oil and gas production has also resulted in methane, particulate matter, nitrogen oxide, and other chemicals compounds to be released into the air.<sup>2</sup> These chemicals from fossil fuel production have been linked to increased risk of asthma, lung diseases, and mortality, with the risk of these diseases generally found to be increasing with closer proximity to production centers that produce air pollutants.<sup>3</sup> Setbacks, distances set by law between production facilities and protected areas, are meant to alleviate the risks of disease for people who live in these areas.

While there is currently no universal consensus on recommending a specific setback distance to protect citizens, proximity has been associated with health risks<sup>4</sup>. Any new setbacks are highly likely to reduce potential production as oil and gas land is currently slated for production near population centers and environmental areas. New Mexico does not have state laws creating setbacks and, according to the Associated Press, over 144 thousand New Mexicans are estimated to be living in or attending school within a half-mile of oil and gas production.

## Setbacks in New Mexico

While the state has an emergency declaration by the State Land Office regarding setbacks, the state has no statutory laws regarding oil and gas setbacks. However, some counties and municipalities have imposed their own. Eddy County has oil and gas ordinances requiring 300ft distance between wells and residences, mercantile establishments, schools, and churches. The Eddy County setbacks also allow for exceptions to the setbacks if written consent is provided from the owner of protected areas to allow production within the setback zone. The City of Carlsbad also has setbacks in place. Drilling of wells must be approved first by the City Council and the company must show it will not contaminate the city's water supply. Additionally, the city requires wells, storage tanks, and compressors to be

**AGENCY:** Oil Conservation Division

**DATE:** June 11<sup>th</sup>, 2024

**PURPOSE OF HEARING:**  
Setback discussions

**WITNESS:**

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**EXPECTED OUTCOME:**

What are setbacks?

Oil and Gas Setbacks (also referred to as "buffer zones" or "health zones") are required distances set by law between oil and natural gas development and homes, schools, healthcare facilities, environmental areas, and other kinds of human-populated buildings. These zones are created to protect the residents and environment near oil and gas facilities that release potentially harmful chemicals. Setbacks can vary between state, federal, and local law and can also overlap in some instances. New Mexico, like Texas, currently has no statewide setback laws. Some local governments have implemented setbacks in the state's largest oil and gas producing areas.

<sup>1</sup> U.S. Energy Information Administration, *Oil and Petroleum Production Yearly Statistics*, EIA.gov

<sup>2</sup> Jonathan Buonocore, *Air Pollution and health impacts of oil & gas production in United States*, Environmental Research: IOP Science

<sup>3</sup> Yu-Fei Xing, *Impact of PM2.5 on human respiratory system*, NCBI, NLM.gov, Jill Johnston, *Impact of upstream oil extraction and environmental public health: a review of evidence*, NCBI, NLM.gov

<sup>4</sup> Ibid.

**Recent Legislation regarding Setbacks**

During the 2024 legislative session, House Bill 32 sought to amend the Oil and Gas Act. HB 32 proposed to create a “children’s health zone” that extended 5,280 feet from the property line of a school. Also, HB 32 proposed to make changes to the Air Quality Control Act, suspending oil and gas operations within 5,280 feet from the property line of a school due to new, tighter air quality regulations.

In the same session, House Bill 133 enacted new capture requirements for natural gas into statute, requiring 98 percent of produced gas to be gathered and not flared or vented in each calendar year. The bill also increased and created tiers for required financial assurances for plugging abandoned wells based on an operator’s quantity of active wells. Initially, the bill also created setbacks for new well pads, production facilities, tank batteries, compressor stations, and gas plants at 2,250 feet for most residential, educational, and health or correctional institutions, 650 feet from regular or intermittent streams, lakes, ponds, wetlands, or irrigation infrastructure, and 300 feet from all other surface water.

Additionally, Senate Memorial 8 called for EMNRD to study the risks of populations near oil and gas production and asked for recommendations to be developed.

500 feet away from commercial and residential buildings, and pipelines to be 40 feet away from commercial, industrial, or residential buildings.

In Lea County, only municipalities have setbacks, including the City of Hobbs. Hobbs requires well distances of 300 feet from any building, 750-foot distances for natural gas processing, and 1,500-foot distances from municipal freshwater supplies.

San Juan County, New Mexico’s third largest oil and gas producing region, has no setbacks. However, Aztec imposes a setback of 400 feet from structures and 100 feet from roads, requires operations comply with air quality standards, and operations protect water resources from contamination. Farmington prohibits wells, tanks, and pipelines within 75 feet of roads, 200 feet of residences, and 300 feet from schools, institutions, and places of assembly.

**Other state setbacks:**

Other oil and gas producing states have adopted a variety of setbacks. Colorado increased their initial setback of 500 feet to 2,000 feet in 2020, the largest setback in practice, nationwide.<sup>5</sup> Colorado allows oil and gas facilities to locate within these setbacks if the project, which must be approved by Colorado’s Oil and Gas Conservation Commission, is deemed to have “substantially the equivalent” protections in place as a 2,000-foot buffer zone would provide.

Similarly, Wyoming has instituted a setback of 500 feet from wellheads to the closest occupied structure. However, North Dakota allows development without setbacks and instead requires property owners within 1,000 feet of a proposed well to petition for the state’s director of oil to stop the well, if a setback is desired. Although none have been enacted yet, other states like Oklahoma and Montana have also considered setbacks for oil and gas production, citing similar concerns about health impacts.

**Air Quality**

While New Mexico does not have statewide setbacks, it does have laws regulating air quality. New Mexico standards for air quality are governed by the Federal Clean Air Act (CAA). Passed in 1963, the CAA is a large body of law outlining minimum air quality and pollution control standards. It specifically tasked states with creating State implementation plans (SIP). An SIP is drafted by the state, sent to the Environmental Protection Agency to be reviewed, and then adopted for implementation by New Mexico’s Environment Department’s Air Quality Bureau.

New Mexico’s multiple SIP’s since 1963 led to the creation of 20 air pollutant monitoring sites. Located in 11 of New Mexico’s 33 counties, the sites monitor levels of ozone, nitrogen dioxide, sulfur dioxide, fine particulate matter, and particulate matter. Each monitoring site is not equipped to monitor each level of pollutant, but most have dual or triple compound monitoring capabilities.

In their annual network review, the New Mexico Environment Department’s Air Quality Bureau reported Eddy and Lea counties have some of the worst air quality

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<sup>5</sup> California enacted Senate Bill 1137, legislation that enacted a 3,200-foot public health and safety setback, or buffer zone, to protect homes and schools, from emissions

in the state. Both counties were in the 95th-100th percentile of national levels for ozone and in the 95th-100th percentile of state levels for particulate matter.<sup>6</sup> Both pollutants are linked to asthma, heart disease, and preterm births.<sup>7</sup> Current research in the Permian Basin is being conducted to identify sources and locations of pollutants. Preliminary results show proximity to oil and gas production is likely the cause of higher pollutant levels in the region.<sup>8</sup>

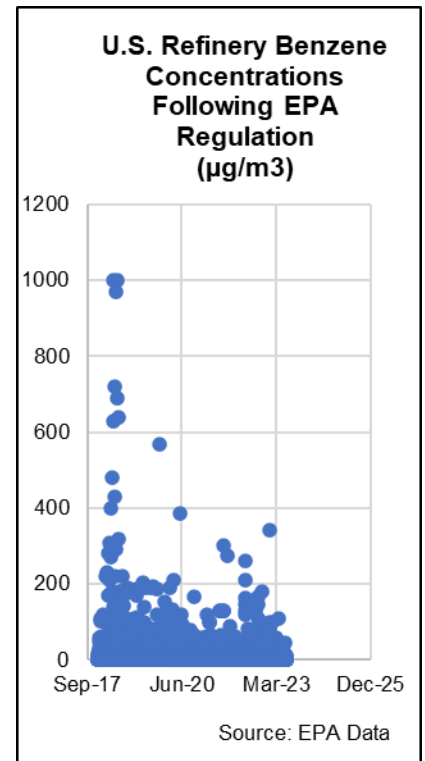
However, research identifying the health benefits of setbacks remains incomplete. Because pollutants can travel hundreds of miles, the reduced risk from a setback of several thousand feet has not been substantiated in studies of states with setbacks. Furthermore, basins and production companies may differ in pollutant makeup, especially with evolving regulations. Reductions in venting and flaring, for example, could result in reduced human exposure to pollutants which has yet to be studied fully in the Permian. More conclusive research on how setbacks can mitigate health impacts could be prioritized by the Legislature for a better understanding of the current quality and impacts to air quality from potential setbacks.

Finally, other regulatory options may exist to achieve the desired health outcomes. For example, the Environmental Protection Agency (EPA) implemented the Petroleum Refinery Sector Rule (method 325) and successfully reduced pollutant levels since fully implementing in 2018. Under the program, oil refining companies report fence line monitoring data to EPA, and if their pollutant levels are above an EPA action level, the refinery must conduct investigations and implement corrective measures to reduce pollution. Recent data show a marked improvement, with the most extreme cases of benzene pollution falling more than 60 percent.

## Drilling Implications

Depending on setback limits, certain leases held for oil and gas production could become stranded in areas where production is no longer possible. As proposed in the 2024 legislative session, setbacks would apply to new production, and as such, is difficult to quantify without industry reporting of potential production sites. Should industry compile and report potential drilling sites, staff could quantify losses in state and local revenue. In the absence of such information, staff estimates are used to provide context for potential losses in government revenue given certain setback parameters.

LFC staff analysis of the most recent permitting data shows of the over 12.5 thousand wells currently permitted but not yet producing, about 1.3 thousand wells could be within a setback zone. Because permitted wells reflect a minimum number of wells planned within setback zones and a typical spudding duration of



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associated with oil and gas extraction. But, after passage into law, the law is currently on hold due to a referendum on the law being on the ballot for local 2024 elections.

<sup>6</sup> Air Quality Bureau, New Mexico Air Quality Bureau Annual Network Review 2024, [env.nmed.gov/air-quality](https://env.nmed.gov/air-quality)

<sup>7</sup> National Library of Medicine, Thangavel P, Park D, Lee YC. Recent Insights into Particulate Matter (PM<sub>2.5</sub>)-Mediated Toxicity in Humans: An Overview., NCBI.NLM.NIH.gov

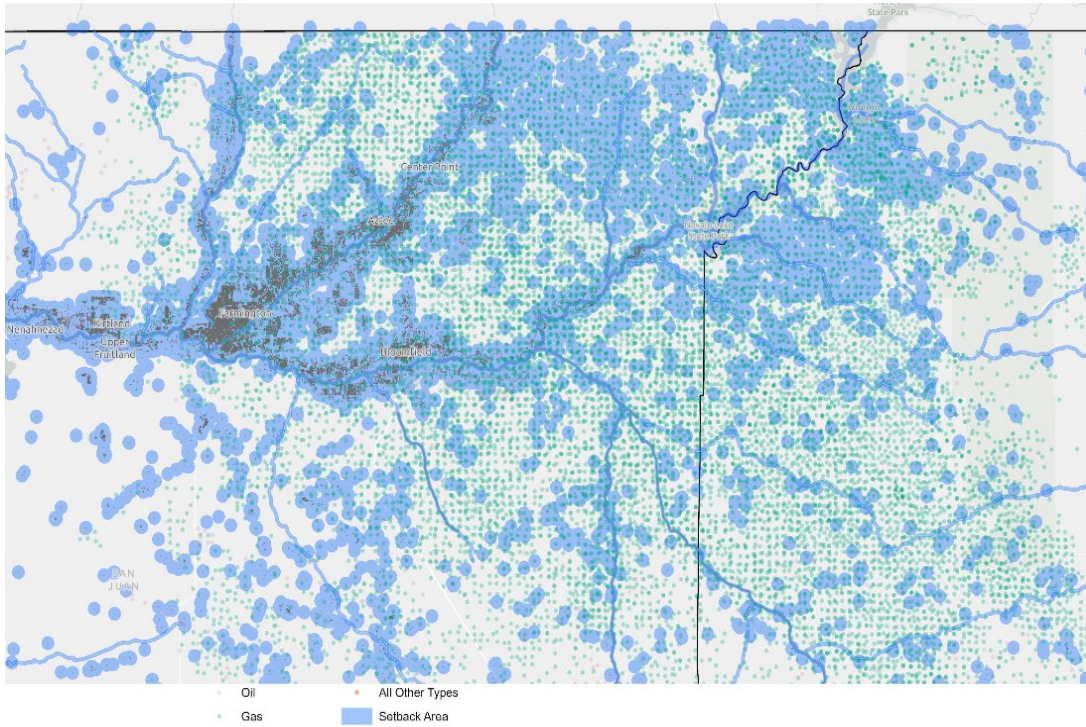
<sup>8</sup> National Library of Medicine, International Journal of Environmental Research and Public Health, NCBI, NLM.gov

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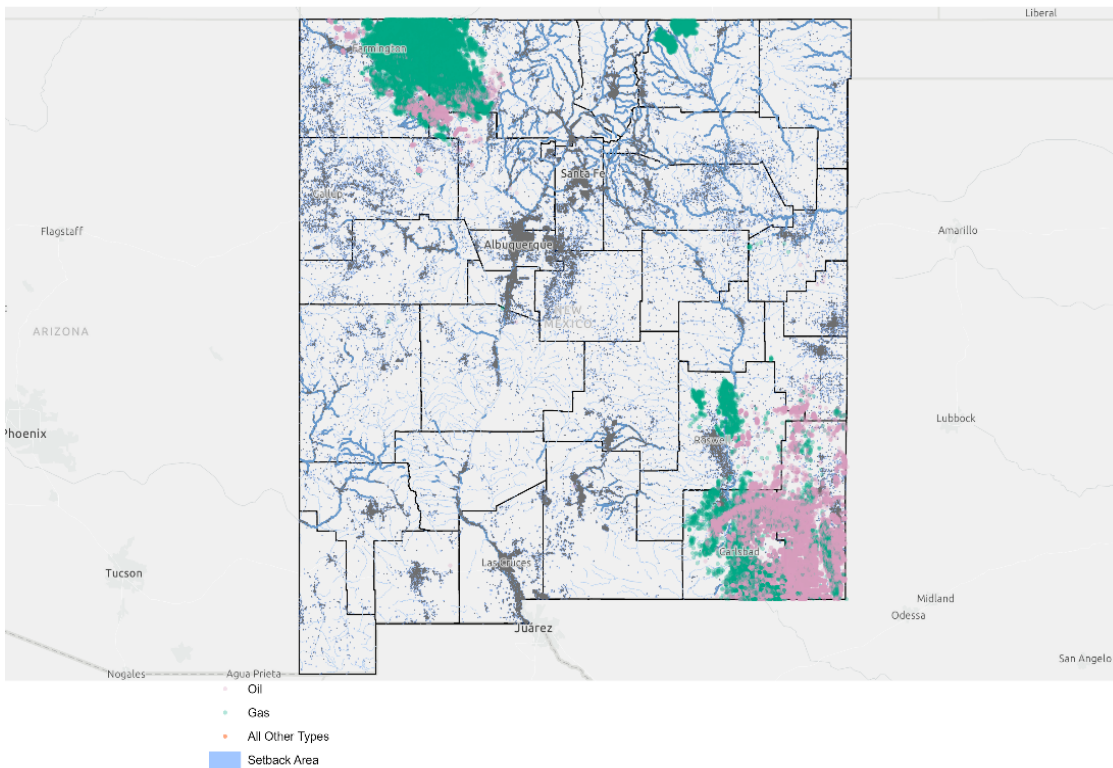
less than 3 years from permitting, the potential impact to drilling could be even greater. From the available data is unclear how much of the impacted drilling could be recouped by industry with reorganizing well locations. Should no opportunity to relocate wells exist, more than 10 percent of future drilling could be impacted. Industry cooperation on well sites is needed to accurately estimate impacts.

## Appendix

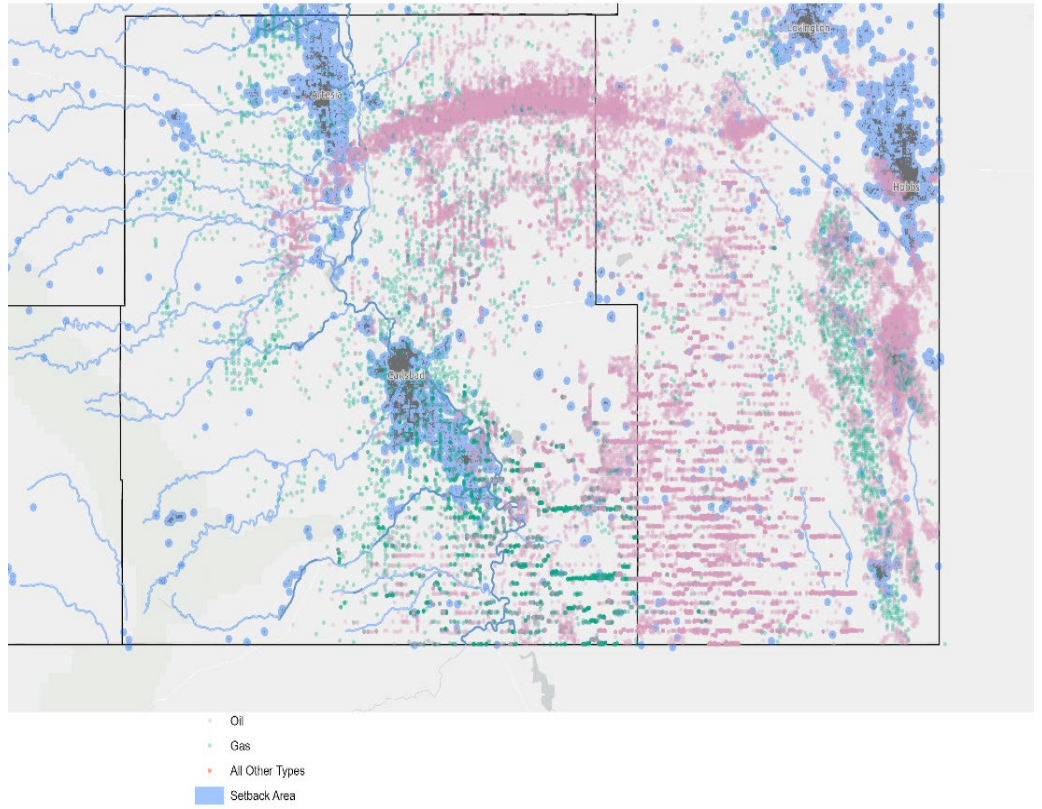
## San Juan Setback Areas and Wells



## Statewide Setback Areas and Wells



## Permian Setback Areas and Wells



### Northern Carlsbad Setback Areas and Wells

