

Monitoring air pollution near oil & gas extraction

Around Loving, New Mexico, an oil and gas (O&G) boom is happening near where people live and work.

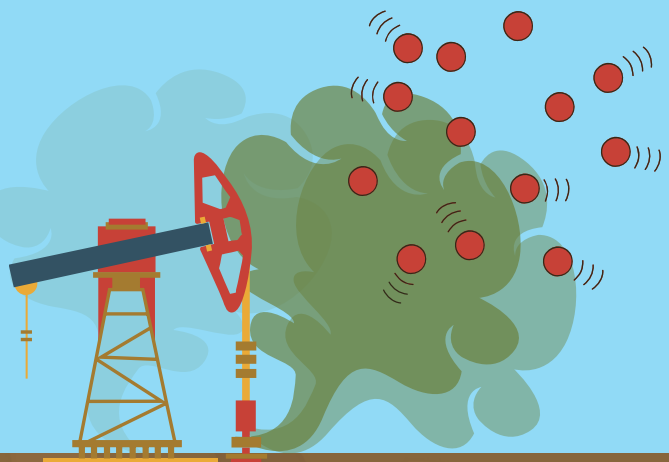
Air quality in the Permian Basin

The increase in oil extraction puts residents at risk of exposure to air contaminants and noise.

The Permian Basin is the largest oil producing region in the US.

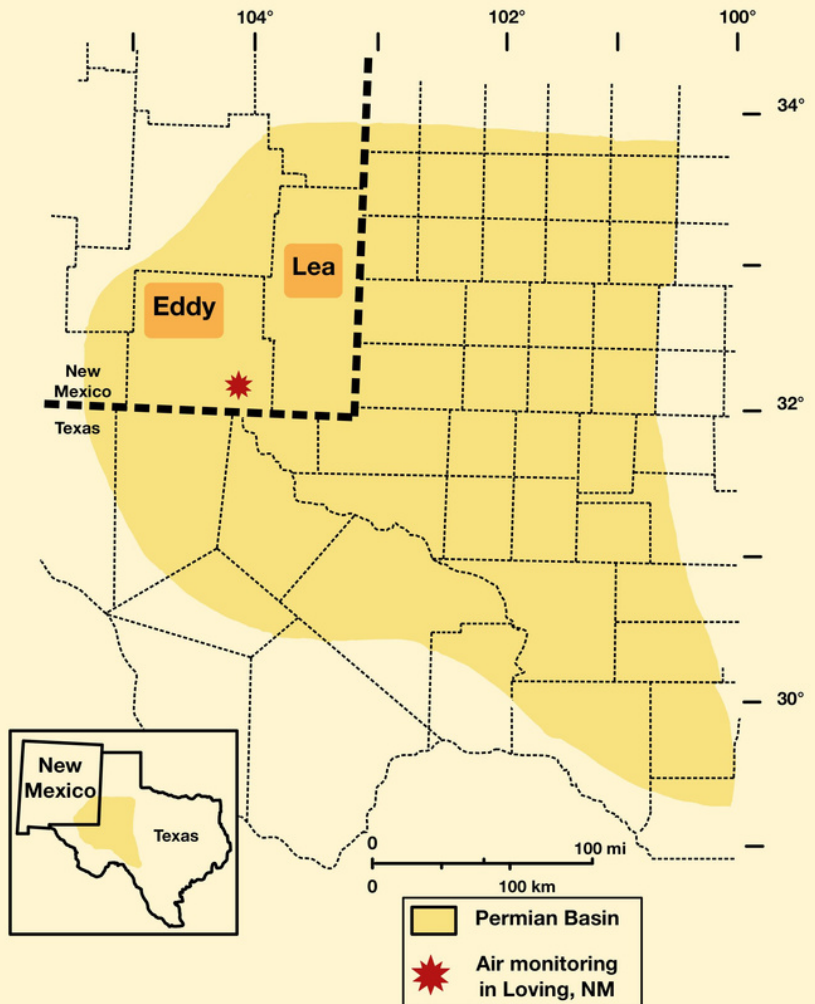
Lea and Eddy counties (NM) produce almost a third of all crude oil from the Permian Basin.

Natural gas production in Lea and Eddy counties (NM) has nearly doubled since 2021.



Horizontal drilling is an “unconventional oil extraction” method used in this region.

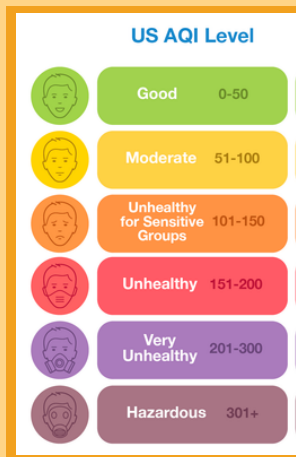
oil and gas-rich shale



WHO regulates air quality?

Federal level

The US EPA sets national air quality rules under the Clean Air Act.



State level



NMED Air Quality Bureau

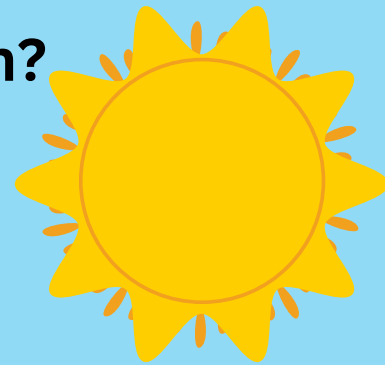
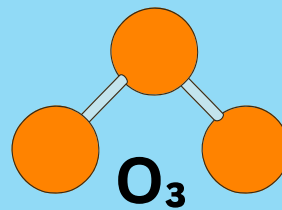
New Mexico is in EPA Region 6.

The Air Quality Index (AQI) is EPA's color-coded scale for reporting air quality and its health impacts.

WHAT is in oil & gas air pollution?

O&G related activities emit

- Volatile Organic Compounds (VOCs)
- Nitrogen Oxides (NO_x)
- Sulfur Dioxide
- Hydrogen sulfide
- Methane
- Particulate Matter (PM)
- Radon
- Carbon Monoxide



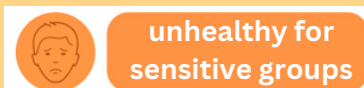
Ozone (O₃) forms when NO_x and VOCs react in the presence of heat and sunlight.

Ozone is a *secondary pollutant*, meaning that it is not directly emitted, but is formed in the air as a product from emitted pollution.

WHAT levels of ozone did we find?

From **4/16/23- 9/26/23** there have been:

- **31 days** where average O₃ levels over an 8-hour period exceeded the standard.
- A maximum 8-hour average of **87 ppb** was observed on 8/31/23.



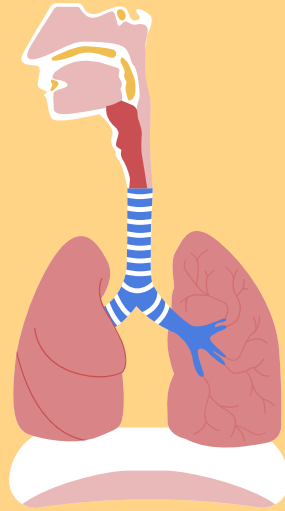
The EPA standard is **70** parts-per-billion (**ppb**) of monitoring data averaged over an 8-hour period.

Ozone can reach harmful levels on hot sunny days.

Even relatively low levels of air pollution can cause health effects.

HOW does ozone affect your health?

- Asthma attacks
- Coughing
- Difficulty breathing
- Sore throat
- Can aggravate chronic lung and heart disease



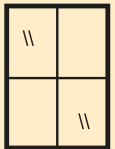
- High O₃ levels may lead to increased
- School absences
 - Medication use
 - Visits to doctors & emergency rooms
 - Hospital admissions

WHAT can you do to protect your health?

Personal health



Limit outdoor physical activity on bad air days.

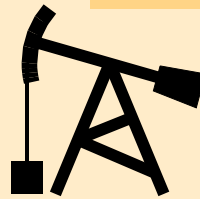


Keep house windows closed.



Use home air purifiers to improve indoor air quality.

Community health



Increase buffers (setbacks) between homes & industry.



Reduce outdoor recess on bad air days.



Increase green space & native vegetation.



Support investing in HVAC in schools & community centers.

HOW can you learn more?



NMED Environmental Emergencies:
(505) 827-9329 (24 hours)



Air quality monitoring & data:
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Public health specialists:
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