

Developing New Mexico's Oil and Natural Gas Methane Strategy

NEW MEXICO ENVIRONMENT DEPARTMENT

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES
DEPARTMENT

Summer 2019

Developing New Mexico's Methane Strategy



“EMNRD and NMED shall jointly develop a statewide, enforceable regulatory framework to secure reductions in oil and gas sector methane emissions and to prevent waste from new and existing sources and enact such rules as soon as practicable.”

- Governor Michelle Lujan Grisham

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Science: Using the best available science to inform our decision-making in protecting public health, the environment and minimizing waste.



Innovation: Employing creative engineering and technological solutions to address the public health, environmental and waste challenges.

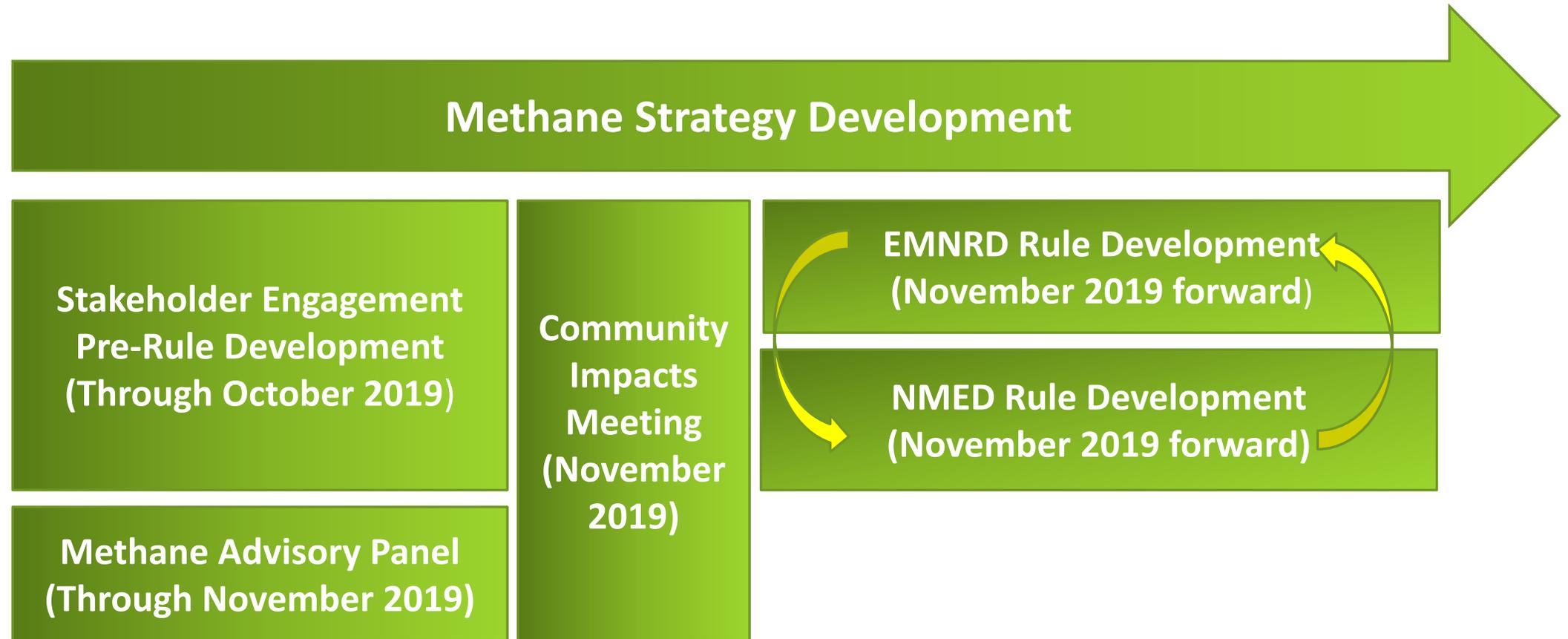


Collaboration: Engaging communities and interested stakeholders in our methane strategy decision-making.



Compliance: Ensuring meaningful compliance with state regulations and permits.

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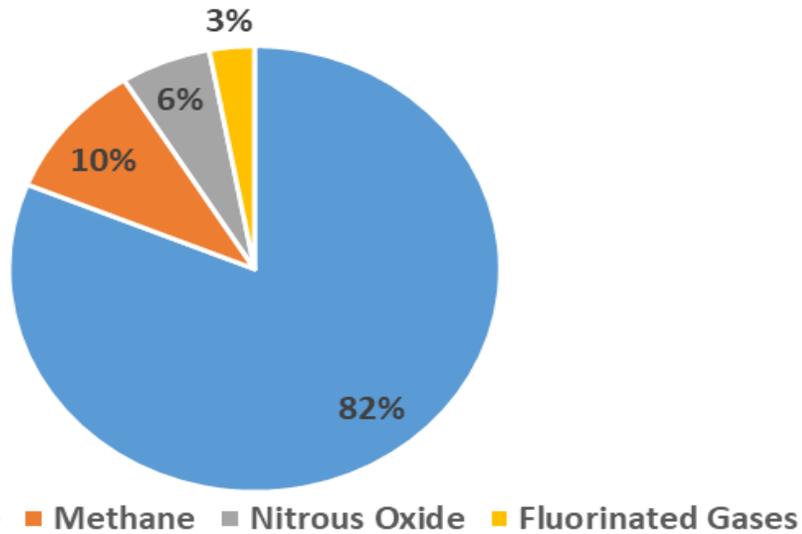
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Methane is a **potent greenhouse gas** with a global warming potential 25 times greater than that of carbon dioxide.

Methane is the **second most prevalent greenhouse gas emitted** in the United States and New Mexico from human activities. Nationally, approximately one-third of methane emissions come from natural gas and petroleum production. In New Mexico, approximately 60 percent of methane emissions come from natural gas and petroleum production.

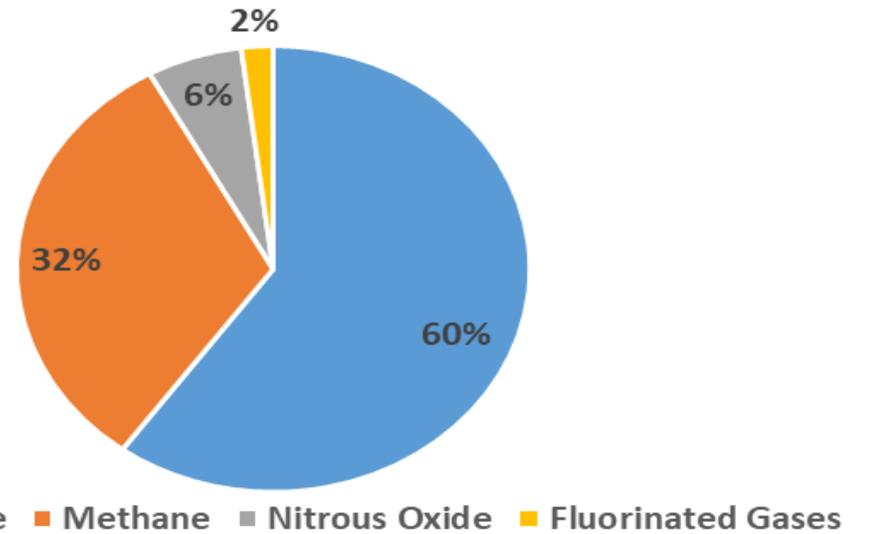
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US Greenhouse Gas Emissions



Data Source: US EPA

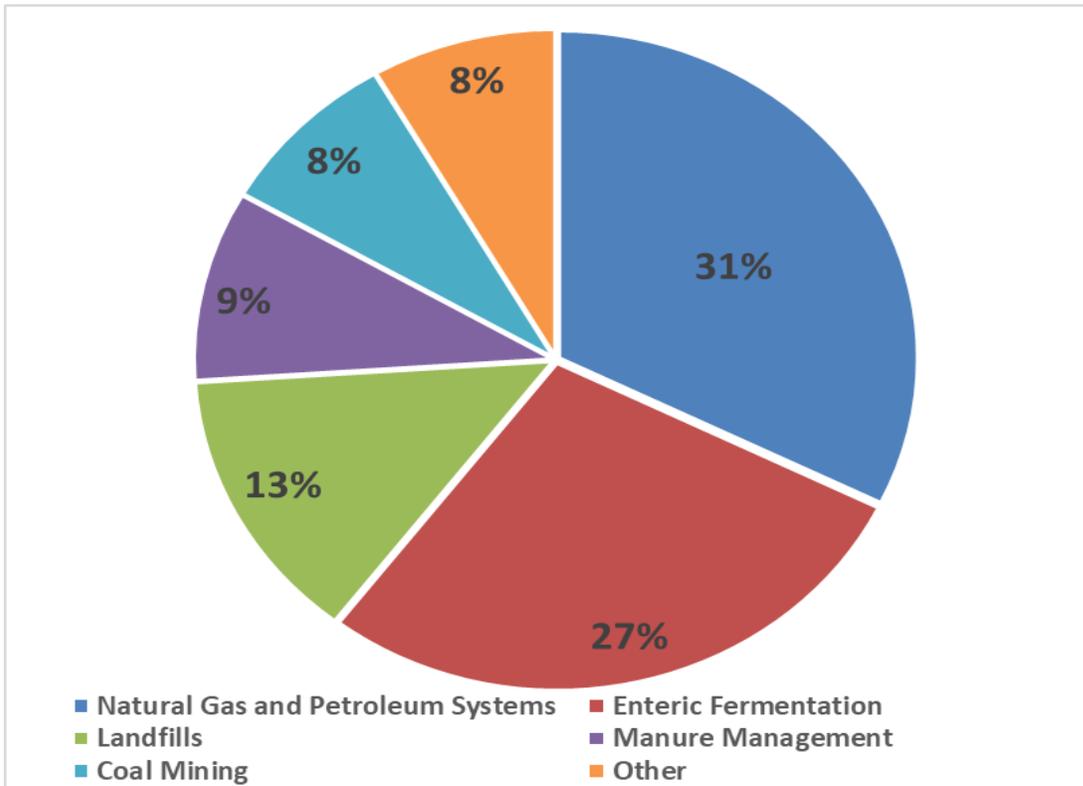
New Mexico Greenhouse Gas Emissions



Data Sources: US EPA, US EIA, and Rhodium Group

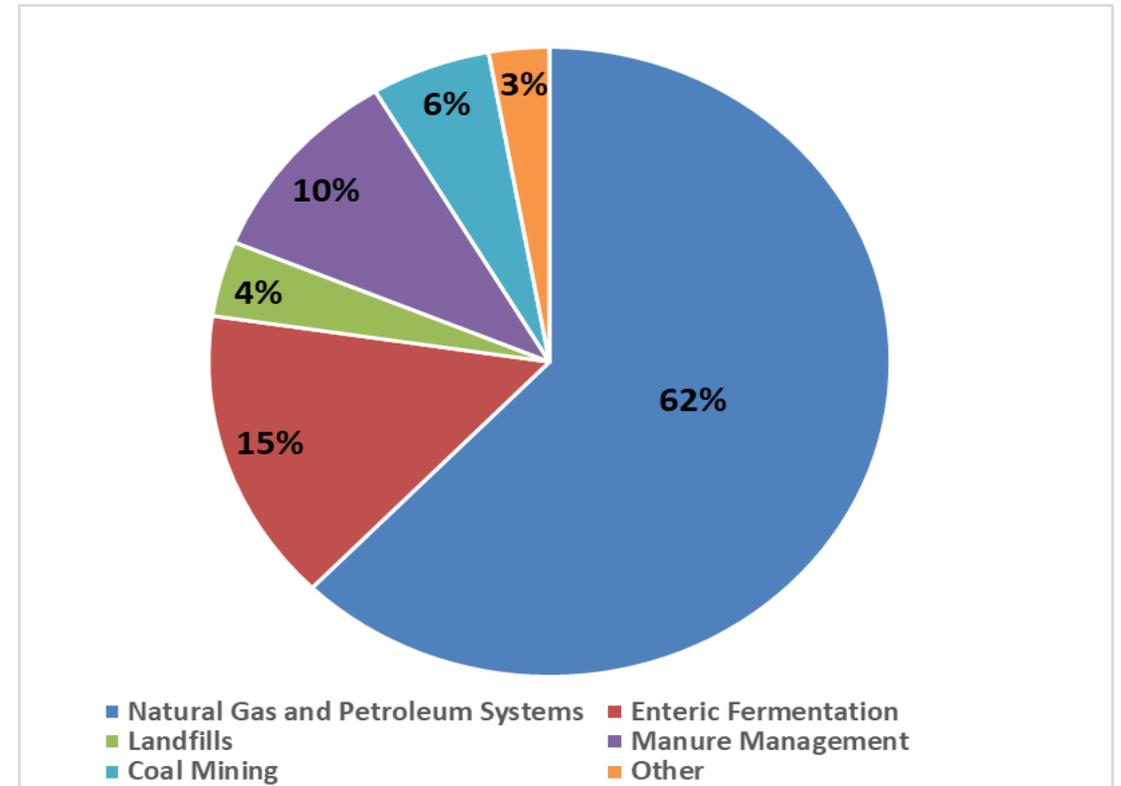
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US Methane Emissions



Data Source: US EPA

New Mexico Methane Emissions



Data Source: Rhodium Group

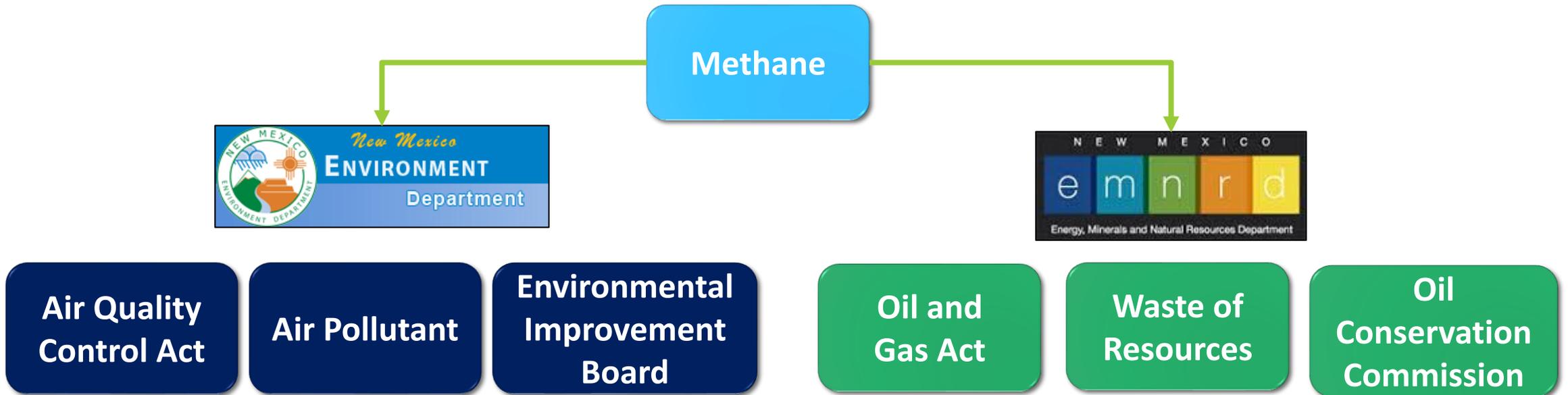
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In 2018, oil and natural gas companies reported over **36 billion cubic feet of vented or flared natural gas**. This information was collected using the New Mexico Oil Conservation Division's required production reports (known as C115 reports).

This equated to approximately **\$10 million in lost revenues** to New Mexico in 2018.



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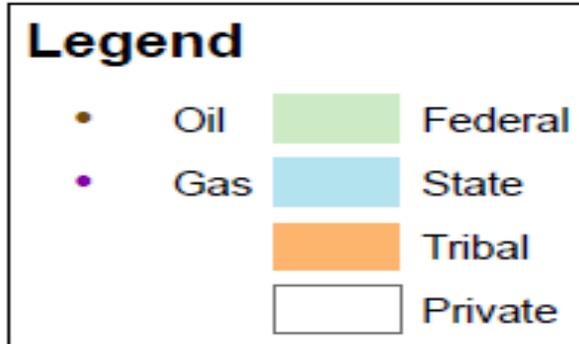
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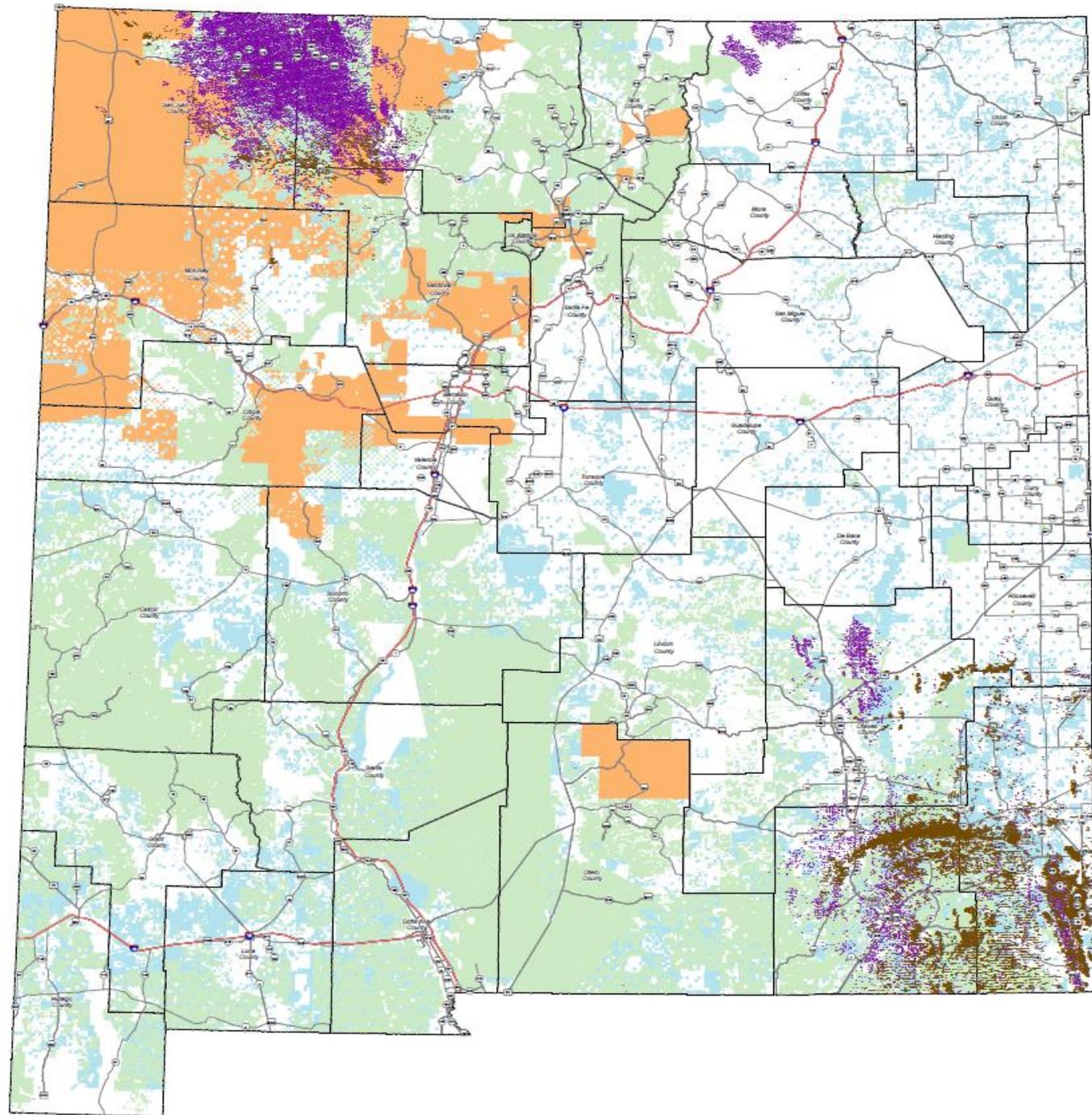
Methane from the oil and natural gas industry is **packaged with other pollutants**: volatile organic compounds (VOCs), which are a key ingredient in ground-level ozone (smog); and a number of other pollutants known as “air toxics” – in particular, benzene, toluene, ethylbenzene and xylene.

Methane can be a **waste product** from the oil and natural gas industry. This occurs through the venting and flaring of methane at various points across the oil and gas value chain. When natural gas is wasted, there may be lost revenue to the state of New Mexico, and the resource is not available for future beneficial use.

Active Oil and Gas Wells Shown on Land by Jurisdiction Type



	State	Private	Federal	Tribal
Oil Wells	14.3%	16.2%	20.4%	1.3%
Gas Wells	5.7%	12.0%	25.2%	4.8%



Data Source: EMNRD OCD

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Agency Authority to Regulate Pollution and Waste in Different Jurisdictions

	State Lands (SLO)	Federal Lands	Tribal Lands	Private Lands
NMED 	Permitting and Other Air Quality Regulatory Oversight	Permitting and Other Air Quality Regulatory Oversight	Tribal/EPA Jurisdiction	Permitting and Other Air Quality Regulatory Oversight
EMNRD 	Permitting and Other Waste Related Regulatory Oversight	Conditionally approved by BLM pending final review and approval by OCD	Tribal/BLM Jurisdiction	Permitting and Other Waste Related Regulatory Oversight

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Permitted Annual VOC Emissions by County

County	Permitted VOC Emissions ¹
Lea	58,018,000
Eddy	90,824,200
San Juan	44,080,000

1. Values are in pounds of pollutant for calendar year 2018

Excess VOC Emissions Reported to NMED¹

County	VOC Emissions Above Permit Limits ¹
Lea	632,364
Eddy	1,238,104
San Juan	11,724

1. Values are in pounds of pollutant for calendar year 2018



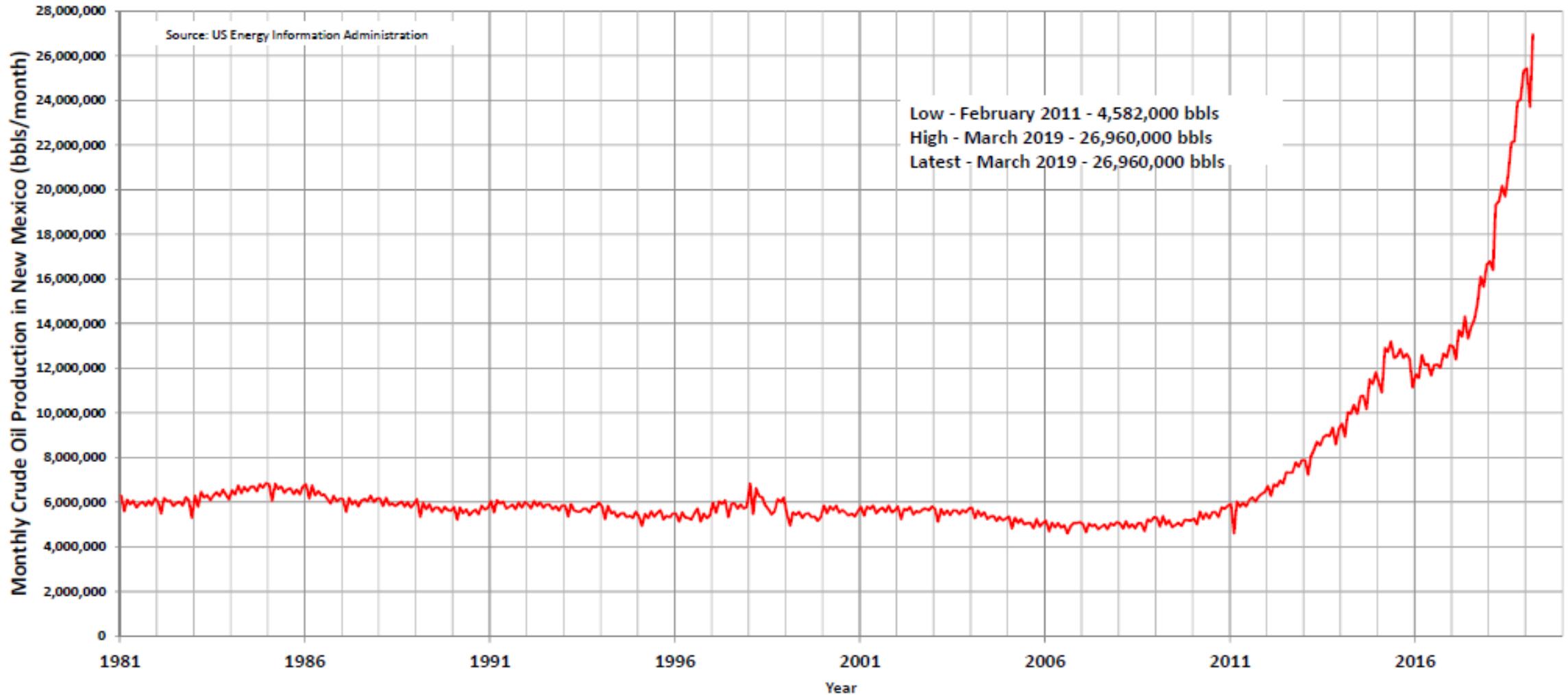
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- 2,000,000 pounds of excess emissions equals 10 natural gas processing plants



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Monthly Crude Oil Production in New Mexico Since 1981



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Waste Reported to EMNRD

Year	Venting	Flaring	Total
2016	3,376,009	21,799,677	25,175,686
2017	2,123,452	14,886,332	17,009,784
2018	3,462,237	32,749,804	36,212,041

*Values in Mscf

**Values reported in C115 form

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- The Air Quality Control Act requires the State to develop a plan, including the adoption of regulations, to reduce ozone precursors (VOC and NOx) in areas where monitored ozone levels are greater than 95% of the ozone standard.
- NMED is developing rules targeting VOC and NOx reductions in seven counties. **Such reductions in VOC will collaterally reduce methane.**
- Multiple stages of stakeholder and public engagement are planned.
- Initial outreach to the general public, industry, local and county governments followed by draft rules are planned.

Seven Counties:

Bernalillo

Chavez

Doña Ana

Eddy

Lea

Rio Arriba

San Juan



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- NMED is currently gathering or developing information related to:
 - Ozone formation science in the seven counties;
 - Ozone-related health effects;
 - Monitoring data (for the entire State, excluding Bernalillo County and Tribal Lands); and
 - Source-specific information (point and non-point emission information from equipment and facilities).



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- NMED is seeking feedback from stakeholders on options to reduce VOC/methane.
- NMED must go before the EIB to request adoption of the proposed rule.
- In adopting regulations, the Air Quality Control Act requires the EIB to consider:
 1. Public interest, including the social and economic value of the sources of emissions;
 2. Energy, environmental, and economic impacts;
 3. Efforts by sources to reduce emissions prior to the effective date of the rule; and
 4. The remaining useful life of existing sources.
- In the meantime, NMED is committed to enforcing permitted emissions and regulations.

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- New Mexico Oil and Gas Act:
 - Written in 1935 and amended to prevent waste, protect correlative rights, and protect public health and the environment (70-2-12 NMSA)
 - The Oil and Gas Act prohibits “waste” from oil and gas production.
- To prevent waste of gas resources, the OCD has a “no vent or flare” rule.
 - Rule 19.15.18.12(A) NMAC, titled “Casinghead Gas” states: An operator shall not flare or vent casinghead gas produced from a well after 60 days following the well's completion

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- EMNRD will review the current rules governing the prevention of waste to determine what changes in rules and procedures are necessary.
- EMNRD will seek feedback from stakeholders on various options to address waste issues.
- EMNRD will develop draft rule proposals based on feedback during initial outreach.
- Draft rule changes will be made available for comment as part of the public outreach.

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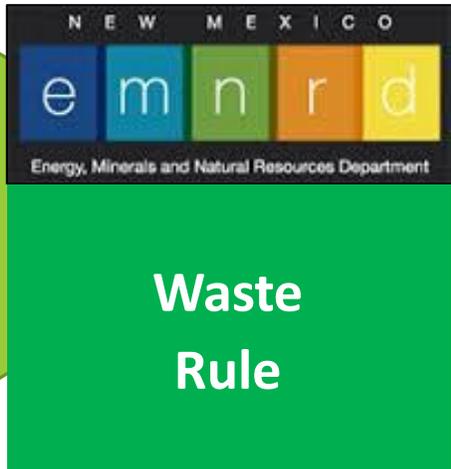
- To amend the rule on venting and flaring, EMNRD must file an application with the Oil Conservation Commission (OCC). The OCC must determine when to hold a hearing.
- Public notice of the rulemaking will be provided before the public hearing will be held.
- Any action by the OCC on a rule may be appealed to the New Mexico Court of Appeals.

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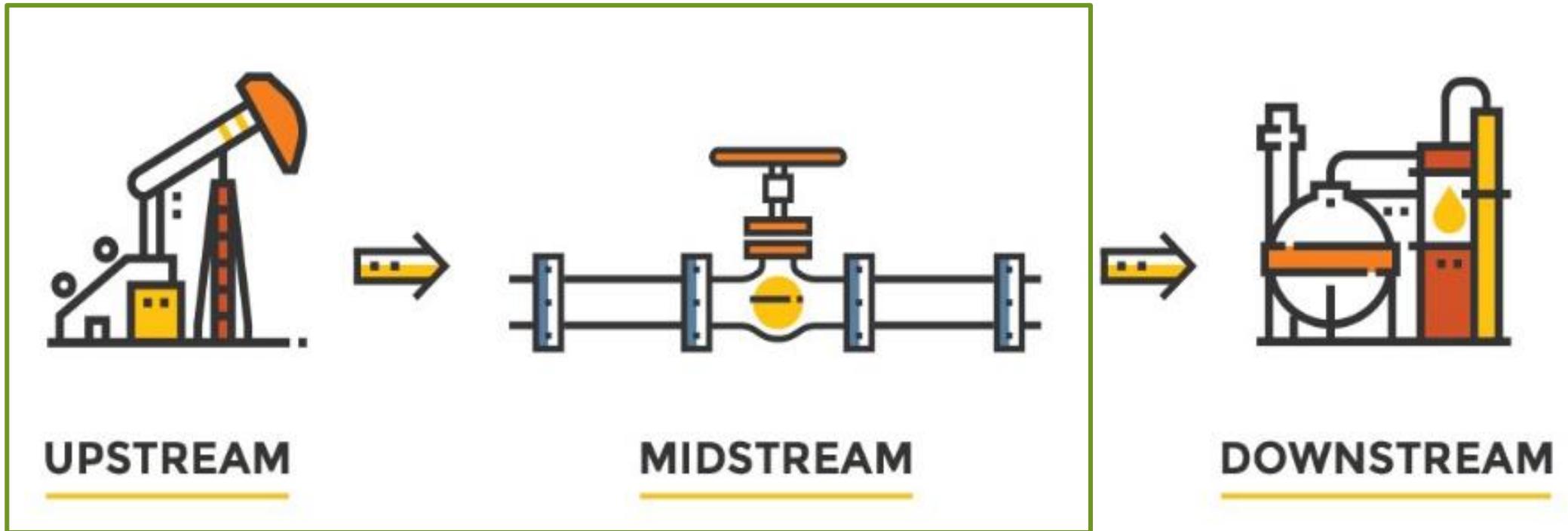


Goals of Oil and Natural Gas Methane Rules:

- Achieve measurable, durable reductions
- Create regulatory certainty
- Promote technology innovation
- Ensure compliance mechanisms



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Source: Energy HQ

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- Methane Advisory Panel (MAP) formed to focus on processes and equipment associated with exploration, production, gathering and processing.
- Members Include Representatives From:

Aztec Well Service, Chaco Canyon Coalition, Center for Civic Policy, Chevron, ConocoPhillips, Devon Energy, DJR, Earthworks, Enduring Resources, Environmental Defense Fund, EOG, Epic Energy, Hanson Operating, Hilcorp Energy, Lucid, Marathon Oil, Merrion Oil and Gas Corp, Mewbourne Oil, New Mexico Environmental Law Center, Occidental Petroleum, Sierra Club, San Juan Citizen Alliance, Western Environmental Law Center, Whiptail Midstream, XTO

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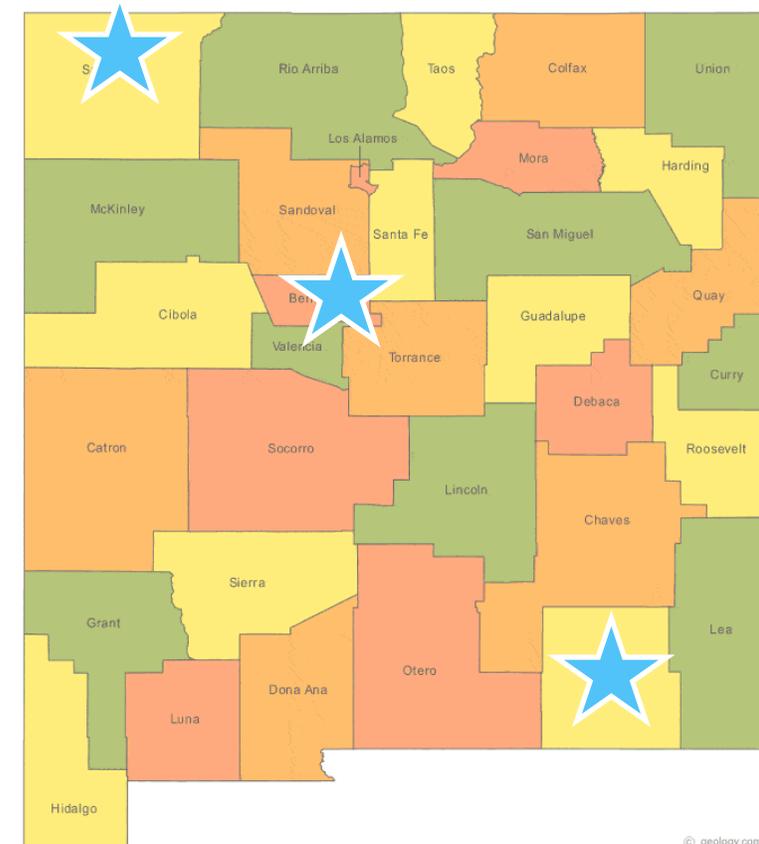
- Invited Technical Guests From: Los Alamos National Lab, New Mexico Tech and University of Colorado
- Charge to the MAP:
 - Discuss emission- and waste-based standards for equipment/operations
 - Discuss monitoring, recordkeeping and reporting structures
 - Draft a technical background document to inform the state's methane reduction strategy

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- Meeting Structure:
 - Two, four hour meetings every other week
 - Held over a twelve week period (August thru November)
 - Facilitated discussion focused on reducing waste and VOC emissions by equipment type and processes
 - Workgroups to meet in between meetings
 - Example Agenda Items:
 - First Meeting- Completions and Simulations
 - Second Meeting- Workovers
 - Third Meeting- Heater Treaters

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- Stakeholder Meetings:
 - July 29, 2019 - Farmington
 - July 30, 2019 - Albuquerque
 - August 6 & 7, 2019 - Carlsbad
- Tribal Meetings:
 - June 11, 2019 - Tribal Consultation
 - July 18, 2019 - All Pueblo Council of Governors
 - August 12, 2019 - Counselor Chapter House



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Public Engagement

Phase 1 (2019)

- Follow the MAP at: <https://www.env.nm.gov/new-mexico-methane-strategy/>
- Look for public meeting announcements, receive updates and provide input on the draft technical document
- Attend and provide input at the Community Impacts meeting in November/December

Phase 2 (2020)

- Follow and provide public comment during the rulemaking process for OCC and EIB: <https://www.env.nm.gov/new-mexico-methane-strategy/>

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