

# Loud and Clear

What public regulatory complaints reveal about New Mexico's oversight of oil and gas pollution and whom it serves

SEPTEMBER 2020



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Report available at [earthworks.org/loudandclear-NM](http://earthworks.org/loudandclear-NM)

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*Earthworks is dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.*

# Table of Contents

<b>1. Introduction: The Oil and Gas Pollution Threat .....</b>	<b>4</b>
Earthworks' Community Empowerment Project: Documenting Pollution to Protect People and the Planet.....	5
<b>2. The Complaint Process: Difficult and Unreliable for the Public.....</b>	<b>6</b>
New Mexico's Separate and Limited Complaint Systems .....	6
Complaints Were Ignored – Until Recently .....	7
Tracking Pollution on Public Lands: BLM Farmington Office.....	9
Agency Response Limited and Slow – But Slated to Improve.....	10
<b>3. New Mexico's Pollution Measures: Nonexistent, but Signs of Progress.....</b>	<b>11</b>
Leak Detection and Repair on the Horizon .....	11
Oil and Gas Pollution Levels Remain Unclear .....	12
<b>4. Looking Ahead and Recommendations .....</b>	<b>14</b>
<b>Endnotes .....</b>	<b>16</b>



# 1

## Introduction: The Oil and Gas Pollution Threat

**The rapidly expanding oil and gas industry in New Mexico is releasing large volumes of greenhouse gases – despite scientific consensus that fossil fuel pollution must instead be greatly curtailed in order to prevent the most catastrophic effects of climate change.<sup>1</sup> This includes methane, which is 86 times more powerful than carbon dioxide over a 20-year time scale.<sup>2</sup>**

At the same time, air quality is worsening for the communities living near oil and gas operations. The main reason is increased pollution from methane and volatile organic compounds (VOCs), which science associates with a range of health problems.<sup>3</sup>

Yet despite these trends, policymakers (and the general public) continue to assume that state and federal governments have both the will and the resources to adequately oversee a complex and increasingly polluting industry. Years of research and field experience by Earthworks have demonstrated that this is not the reality on the ground.<sup>4</sup>

### **Currently, state regulatory and enforcement agencies are:**

- Inconsistent and insufficient in how they respond to the public
- Primarily focused on issuing permits quickly
- Underfunded and short-staffed
- Subject to the political influence of the oil and gas industry



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COMMUNITY EMPOWERMENT PROJECT  
*Loud and Clear — Public Complaints Reveal Lack of Oil and Gas Pollution Oversight*  
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## Earthworks' Community Empowerment Project: Documenting Pollution to Protect People and the Planet

Earthworks started the Community Empowerment Project (CEP) because the oil and gas industry is putting people and the climate at risk – and agencies are failing in their responsibility to prevent that from happening.

Most air pollution from oil and gas operations is invisible, making it easy for companies and regulators to dismiss residents' concerns. CEP's certified thermographers use optical gas imaging (OGI) to make visible the pollution caused by intentional safety releases, equipment failures, and operator errors in oil and gas fields.

CEP staff then use that OGI evidence to file regulatory complaints with relevant state agencies and to document gaps in how those agencies track and address oil and gas air pollution. It is a critical time to do so, with some states already committed to reducing oil and gas pollution and others moving in that direction. This report details findings of CEP's work in New Mexico from 2017-2020.

Nearly all state regulatory agencies have a complaint system. If properly designed and implemented, residents can notify regulators about problems at oil and gas sites – being critical “eyes and ears” while gaining needed assistance from public agencies.

For oil and gas regulatory regimes to be effective – in both combating pollution and protecting the public – complaint systems must be accessible, usable, responsive, and transparent.

### Robust complaint systems help to:

- Reduce pollution that harms health and the climate.
- Build trust in agencies mandated to both work with industry and serve the public.
- Respond to community concerns and experiences.
- Make government agencies more effective.
- Foster agency and operator accountability.



Seeing is Believing.

Earthworks uses Optical Gas Imaging to make invisible pollution visible.



Pollution viewed with the naked eye versus an OGI camera. Encana Corporation, Betonnie Tsosi Wash Unit #601H, Nageezi, San Juan County New Mexico.



# 2

## The Complaint Process: Difficult and Unreliable for the Public

### New Mexico's Separate and Limited Complaint Systems

Two agencies oversee New Mexico's oil and gas industry. The Oil Conservation Division (OCD) issues permits to drill and enforces regulations related to spills and waste (including the venting and flaring of gas). The New Mexico Environment Department (NMED) issues air emissions permits for larger oil and gas facilities.

NMED accepts and processes complaints on the state's oil and gas operations by phone and through an online complaint tool.<sup>5</sup> Each complaint is assigned a unique NMED complaint tracking number. OCD primarily accepts complaints regarding spills or other concerns by phone or email and does not issue a complaint tracking number.

Neither NMED nor OCD have a publicly accessible complaints database to track regulator responses, inspections conducted on site, operator responses to concerns, or the final complaint outcome. There are no policies or guidelines regarding how long staff have to respond to or investigate complaints.

The table below highlights the limited NMED and OCD oil and gas inspectors charged with enforcing New Mexico's oil and gas and air permit requirements.

NEW MEXICO'S OIL AND GAS INDUSTRY INSPECTION CAPACITY (2019)					
	# Active Permits (as of Feb. 2020) <sup>6</sup>	# Inspectors	Ratio of wells and emission sources to inspectors	# Inspections per inspector in 2019	# Inspections conducted annually
NMED	1,261 (air only)	7	180	32	224 <sup>7</sup>
OCD	57,422	9	6,380	3,084	27,756 <sup>8</sup>



**New Mexico has 1 inspector in the Oil Conservation Division for every 6,380 wells and pollution sources.**



## Complaints Were Ignored – Until Recently

In over two years, Earthworks made 26 trips to 6 New Mexico counties to film oil and gas pollution. We made over 300 visits to about 200 sites, and documented significant problems at many wells, compressor stations, and storage facilities.

Between 2018-2020, Earthworks staff filed 108 complaints with NMED, based on our OGI findings and any odor or health impacts recorded by field staff. Nine (8%) of these complaints resulted in direct pollution reductions. One led to an equipment repair and one was connected to a regulatory violation issued after NMED and the US Environmental Protection Agency (EPA) conducted an inspection. Seven complaints resulted in unprecedented Letters of Potential Violation issued directly to the operators that gave operators 14 days to demonstrate compliance or be subject to further NMED enforcement actions.

A handful of Earthworks' complaints (6, or nearly 6%) generated some oversight action by regulators, in the form of inspections; however, none of these resulted in the issuance of violations. About half (60, or 55%) generated no regulatory action. The results of the remainder (33, or 31%) are pending, as they were filed more recently and were not closed out at the time of writing.



**Earthworks made over 300 visits to well sites, compressor stations, and other oil and gas facilities in the last two years in New Mexico.**

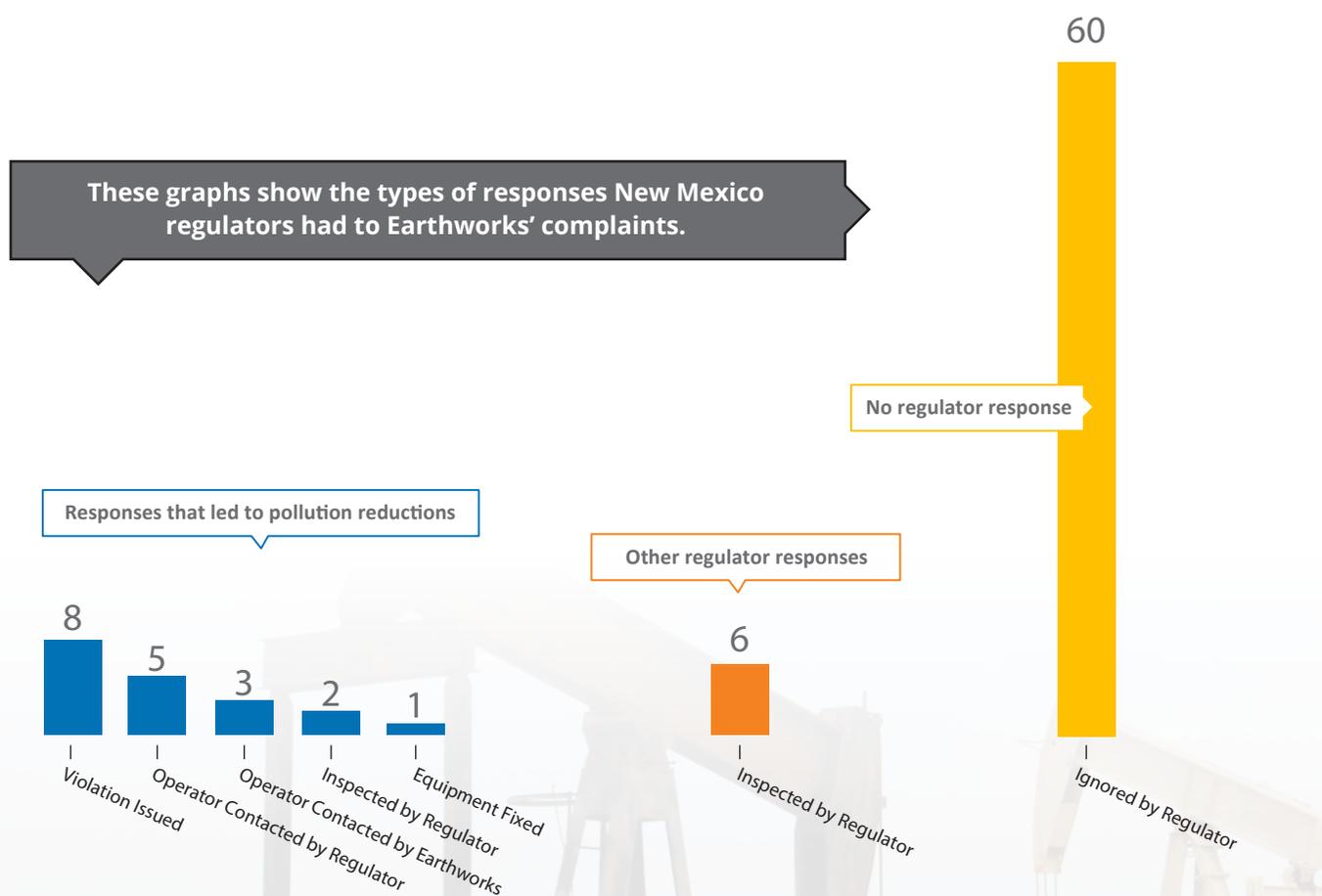
RESULTS OF COMPLAINTS — FILED BY EARTHWORKS IN NEW MEXICO   AS OF JUNE 2020	
Closed — Action taken to reduce pollution	9
Closed — Other regulatory action taken	6
Closed — No action taken	60
Open Complaints	33
<b>Total Complaints Filed by Earthworks with NMED</b>	<b>108</b>



Earthworks uses the following three categories to track the regulator and operator responses to our complaints :

- 1 **Action taken is a regulator action specifically intended to reduce emissions** (i.e., the regulator requires an operator to replace or fix a piece of equipment).
- 2 **Other action is a regulator action** that, while not leading to pollution reduction, does potentially support more oversight (i.e., a regulator inspection or informing an operator of a problem).
- 3 **No action taken** means that agencies lost or ignored complaint submissions or otherwise declined to take action in response to a complaint.

Every complaint generated at least one type of response, although regulators often had more than one response (for example, contacting an operator and requiring an equipment fix that reduced emissions).



# TRACKING POLLUTION ON PUBLIC LANDS

## BLM Farmington shows the way for improved industry accountability



**The U.S. Bureau of Land Management (BLM) oversees oil and gas operations on federal public lands nationwide.** In 2010, Earthworks joined partners to file a lawsuit against the BLM’s Farmington, New Mexico office for the agency’s contribution to the Four Corners “methane hot spot” (where levels in the air are particularly high) by granting oil and gas leases and failing to enforce regulatory compliance at those sites.

The lawsuit ended in a settlement requiring BLM to take a more proactive role in holding operators accountable for the pollution they release. Under the terms of the Settlement Agreement, BLM Farmington agreed to purchase OGI cameras to conduct inspections. While these inspections got off to a slow start, after eight years BLM Farmington has set an unprecedented enforcement and inspection example for other BLM offices to follow.

Starting in June of 2018, BLM Farmington committed to conducting five OGI inspections per week, totaling about 60 per quarter. The OGI inspections are in addition to the approximately 400 inspections each BLM oil and gas inspector

conducts each year. As part of the settlement, BLM Farmington also created a new OGI inspection tracking system and agreed to provide quarterly reports that include:

- Summary of inspections with OGI findings, inspector action and operator response
- Inspection sheets for each OGI inspection conducted, including field notes from the BLM inspector and detailed explanation of the operator response and repair
- OGI video footage from each OGI BLM inspection conducted.

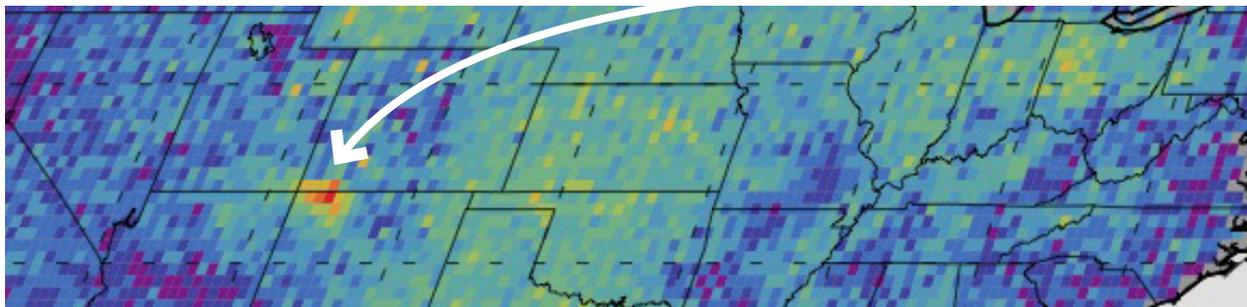
Approximately every quarter, Earthworks field staff meet (in-person and remotely) with BLM Farmington inspectors to discuss

the office’s most recent OGI findings. In addition, Earthworks has joined BLM on three field visits to sites in the Four Corners area, where expanded and consistent OGI inspections have resulted in greater responsiveness and oversight by operators and a decline in pollution. BLM Farmington’s responsiveness and transparency sets an example that could contribute to greater accountability of the industry and reduction of oil and gas pollution from sites on federal lands.

**From 2018-2020, Earthworks filed nine complaints directly with BLM Farmington based on our own OGI investigations that also prompted agency response.**

REGULATOR RESPONSES TO THE COMPLAINTS FILED BY EARTHWORKS WITH BLM FARMINGTON   AS OF JUNE 2020	
Inspections conducted	6
Equipment fixed	2
New Equipment Installed	2
No action taken (due to jurisdictional issues)	3

Methane hot spot map from NASA.gov.



## Agency Response Limited and Slow – But Slated to Improve

When CEP began to submit field complaints with NMED, the agency simply did not respond. Nor did NMED provide any updates or follow up—except when Earthworks filed formal records requests to obtain documents.

In the absence of publicly accessible complaint tracking tools, automatic status updates from the agencies, or guidance on the process and timeline for regulatory review of complaints, Earthworks found public record requests (under the New Mexico’s Inspection of Public Records Act, or IPRA) to be the most effective approach to acquire complaint updates, in the form of inspection reports and other documentation.<sup>9</sup>

A few months after filing each round of complaints and receiving no response or updates, Earthworks compiles the information in a summary table and submits an IPRA request to NMED asking for a status update for each complaint. Since many complaints can remain pending for months, Earthworks has been re-filing IPRA requests in an effort to track and ultimately be able to close out complaints.

The IPRA process is labor-intensive and clearly not a reasonable undertaking for frontline community members who want to file complaints. In addition, some IPRA requests require a fee to cover the NMED staff time required to prepare the response.

Under a new Governor and administration, New Mexico has recently begun to confront years of very limited enforcement actions and penalties issued by NMED and OCD. In addition, as Earthworks detailed in a recent report, for a decade OCD lacked the regulatory authority to issue civil penalties to oil and gas operators, until legislation reversed that restriction in 2019.<sup>10</sup>

**New Mexico has recently begun to confront years of very limited enforcement actions and penalties issued by state regulators.**

New leadership in New Mexico has brought a new approach to enforcement for NMED and OCD. In November 2019, NMED launched a new effort to identify potential violations of pollution limits by oil and gas operators, prompted by the state’s climate and ozone pollution concerns and based in part on agency field observations using OGI cameras.<sup>11</sup>

The resulting NMED Letters of Potential Violation relied in some cases on and referenced the OGI footage included in Earthworks’ complaints. Of the seven NMED letters of potential violation, four have resulted in equipment repairs or adjustments that led to immediate emissions reductions (whether these reductions were permanent isn’t yet clear).

NMED has also released an interactive map focusing on methane emissions from the oil and gas industry, which includes links to Earthworks’ OGI videos of sites on the map related to specific complaints.<sup>12</sup> NMED plans to make more information available by expanding the map to include compressor stations, gas plants, and pipelines, in addition to wells and tanks.

Earthworks’ inventory of OGI evidence of pollution reflects the concerns of frontline community members and encourages them to file additional complaints with NMED. Earthworks’ complaint submissions have also opened lines of communication with NMED and OCD staff that revealed key issues regarding agency transparency and resident response. In addition, Earthworks’ complaints, research, and engagement in rulemaking processes – including using OGI and other field evidence – have helped draw attention to the critical need for state regulatory agencies to improve oversight and transparency.



# 3

## New Mexico's Pollution Measures: Nonexistent, but Signs of Progress

New Mexico is emerging from a decade of inaction to limit oil and gas pollution and address the industry's health and climate impacts. In late 2011, the state Environmental Improvement Board passed rules requiring large polluters (including some oil and gas operators) to track and reduce their carbon dioxide emissions and committed the state to an emissions cap and trade program.<sup>13</sup> Just a few months later, under a new Governor, those measures were repealed.<sup>14</sup>

Today, New Mexico is reckoning with this legacy at a time when the state is undergoing an unprecedented boom in energy production, centered in the Permian Basin of southeastern New Mexico. This rapid and intense development has catapulted the state to the third largest onshore oil producer in the nation.<sup>15</sup> Whether and how this position shifts in the wake of the industry downturn related to the COVID-19 pandemic remains to be seen.

### Leak Detection And Repair on the Horizon

Currently, oil and gas operators in New Mexico are subject to federal rules to reduce emissions of VOCs and methane using Leak Detection and Repair (LDAR) protocols and the installment of new control technologies.<sup>16</sup>

However, with these rules threatened by federal rollbacks and new interest by state officials in reducing greenhouse gases, New Mexico established a Methane Advisory Panel (MAP) in 2019 to lay the foundation for regulatory strategies to reduce pollution from the oil and gas industry.<sup>17</sup> To date, the MAP has conducted a series of meetings with industry and environmental organization representatives and issued a technical report detailing key issues and pollution control technologies.

The state has signaled it will begin a formal rulemaking in 2020 to enact additional oil and gas pollution regulations. These are expected to include requirements for industry to conduct frequent LDAR and air sampling and improve project planning to reduce oil and gas waste and land impacts, among other measures.

According to calculations by Clean Air Task Force, a comprehensive set of oil and gas pollution control rules in New Mexico, if properly enforced, could achieve a lower level of methane, VOC, and hazardous air pollution than in the absence of such regulations, with annual reductions of about 350,000 metric tons starting in 2021.<sup>18</sup>



## Oil and Gas Pollution Levels Remain Unclear

New Mexico requires oil and gas operators to report some of the pollution from their operations. Currently, it isn't possible to determine the full scope of that pollution because systems to track it largely rely on self-reported estimates by operators and have not kept pace with the state's rapidly expanding oil and gas industry. Existing inventories provide some information for regulators, policymakers, researchers, and the public but also fall short in significant ways:

### ■ EPA's Greenhouse Gas Reporting Program (GHGRP)

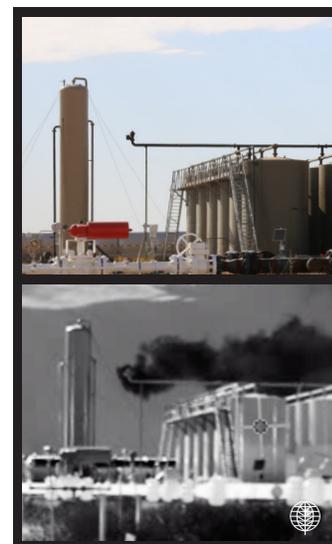
New Mexico's largest oil and gas polluters submit annual data on their estimated greenhouse gas emissions directly to the GHGRP.<sup>19</sup> This database is frequently used by regulators and policymakers to judge how much the oil and gas sector emits. However, it only covers sources releasing more than 25,000 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) – the common measurement of total greenhouse gases – per year. This effectively excludes thousands of wells, compressor stations, and other facilities that report lower volumes of emissions but nonetheless collectively have a widespread, significant pollution impact.

Given this, the MAP technical report emphasized that “care should be taken in estimating emissions” in New Mexico based on the GHGRP alone. Reasons cited include the omission of smaller operations and the combination of multiple states into oil and gas regions (i.e., New Mexico and Texas into the Permian Basin).<sup>20</sup>

### ■ State Emissions Inventory for “Major Sources”

These are facilities classified as needing federal Title V air permits because they have the potential to release high levels of the “criteria” pollutants,” or those regulated under the US Clean Air Act.<sup>21</sup> Major sources have to report to the inventory on an annual basis, as do certain facilities located in “non-attainment” areas for (i.e., inability to meet) federal standards for health-harming ozone pollution.

Major source operators report estimated emissions for these pollutants and for greenhouse gases to the state inventory. For the latter, operators can provide to the state the same data submitted to the GHGRP.<sup>22</sup> Inventory data can be downloaded and searched by year and county. The current data list and accompanying interactive map contain only about 100 facilities statewide and include only three of the criteria pollutants (carbon monoxide, nitrogen dioxide, and sulfur dioxide) along with greenhouse gases.<sup>23</sup>



**Pollution viewed with the naked eye versus an OGI camera.**

**TOP: Matador Production Company, Joe and Kathy Coleman Well Site, Loving, Eddy County New Mexico.**

**BOTTOM: Enduring Resources, MC 8 #410H Well Site, Counselor, Rio Arriba County New Mexico.**



### ■ State Emissions Inventory for “Minor Sources”

NMED has established a process for operators of smaller facilities – any pollution source that requires a state air permit or has applied for one – to report emissions of criteria pollutants, VOCs, hazardous air pollutants, and greenhouse gases.<sup>24</sup> Operators are required to report actual emissions, based on hours of operation and production and consumption data. These data should be more accurate than the estimates that operators use to obtain permits, which are based on engineering information and pre-set calculations.

Operators have to conduct recordkeeping throughout 2020, with the first inventory due in April 2021. NMED will use the same data submission platform as it does for the major source inventory. It is not clear when, how, or how much of the data will be made accessible to the public.

### ■ Excess Emissions Reporting

Since 2008, New Mexico has required operators to report their “excess emissions,” or pollution events that were unforeseen and are larger in volume, rate, or concentration than specified in an air permit (e.g., from startups and shutdowns, operational malfunction, or blowdowns to release pressure in a system).<sup>25</sup> In late 2019, NMED began posting reports on the excess emissions that occurred in the previous year (with monthly updates) that the public can download and search. The data cover a few criteria pollutants, VOCs, and hydrogen sulfide – but not greenhouse gases.

**New Mexico requires operators to report “excess emissions” that are above levels allowed in air permits — an important indicator of how much more polluting the oil and gas industry is than it seems.**



# 4

## Looking Ahead and Recommendations

New Mexico's Governor, state land commissioner, and NMED Secretary have committed to ensuring greater accountability and pollution reductions by the oil and gas industry. In addition, New Mexico recently adopted a climate plan; among other issues, it emphasizes the need to address pollution from the oil and gas sector, which generates the largest proportion of greenhouse gases in the state (including 62% of methane emissions).<sup>26</sup> In early 2019, the Governor issued an Executive Order establishing the ambitious goal of achieving a statewide reduction in greenhouse gas emissions of at least 45% by 2030, compared to 2005 levels.<sup>27</sup>

**New Mexico is poised to greatly improve its record on both climate and health – but the state still has many steps to take. To better respond to the public's concerns and ensure that complaint and pollution tracking systems are responsive, accessible, and informative, New Mexico should:**

- 1 Adopt a public service lens when assessing complaint systems.** A complaint system is supposed to serve the impacted public. Currently New Mexico only does so if complainants invest considerable time and effort, or indirectly to the extent that professional groups like Earthworks can make use of it in service of communities. A properly functioning system would allow residents to use the complaint system themselves easily and without assistance.
- 2 Shift the burden of proof for problems underpinning complaints.** Earthworks' experience filing complaints and assessing agency response in New Mexico has shown the need for a fundamental shift as to who regulators are accountable to, and where the "burden of proof" regarding impact lies. Contrary to the agencies' current attitude, if the problems residents are experiencing haven't been resolved, inspectors should continue to investigate until operators can demonstrate they're not causing harm.
- 3 Work directly with impacted community members.** Inspectors often "resolve" complaints by contacting operators directly to inquire whether there was an operational problem or not. The people living daily with oil and gas impacts should be confident that regulators won't dismiss their experiences in favor of communication with industry. Inspectors should follow up with residents directly and promptly and view their concerns as possible grounds for enforcement action.



- 4 Create a publicly accessible tracking system for complaints.** Any resident should be able to go online and easily obtain information about the oil and gas facilities that concern them, including the status of complaints they or others have filed about specific operations and concerns (e.g., persistent odors, noise, and onset of health symptoms). The timeframe for which complainants can expect a response and/or resolution should be made publicly available, alongside the information for reporting complaints.

Every time a member of the public files a complaint, they should receive a tracking number, guidance on use of the complaint tracking system, and information on NMED's procedures for following up on the identified problems and responding to complainants. Impacted residents should not be forced to make multiple calls, send numerous emails, and "connect the dots" among several sources of information.

- 5 Create a publicly accessible map of all complaints.** Community members should be able to easily see where complaints have been filed, via a map that reflects data in the complaint tracking system. They should be able to identify the operators and facilities nearby that could be connected to the problems they're experiencing. This map could also include additional data layers, such as well sites, violations, and inspections.

- 6 Expand field measurement projects to determine actual volumes of oil and gas pollution.** Operators should continue to be required to report data to emissions inventories, but these data should be accompanied by direct measurement. As the MAP recognized in its technical report, several studies demonstrate that measured emissions can be significantly higher than what operators report to inventories.<sup>28</sup> To more clearly understand how much pollution needs to be reduced to reach climate goals, New Mexico should conduct its own measurements, at a minimum near significant pollution sources (e.g., compressor stations, processing plants, and large well pads).



- 7 Expand the Excess Emissions inventory.** Pollution events in this inventory represent significant additional pollution above permitted levels. Given New Mexico’s climate goals and expressed commitment to reining in oil and gas pollution, all greenhouse gases (including methane, carbon dioxide, ethane, nitrous oxide, and hydrofluorocarbons) and sources should be added to this inventory.

These data are necessary to determine whether future state policies and regulations to rein in climate pollution are actually effective. More data on greenhouse gas releases will also help paint a clearer picture of how oil and gas operations impact health and the state’s ability to meet federal air quality standards, given the role of methane and ethane in the formation of ozone.<sup>29</sup>

NMED should make publicly available reports on agency actions taken in response to excess emission events. Residents have a right to know how large pollution releases are being addressed and whether regulators are holding operators accountable. Environmental health research confirms that large, episodic emission events can cause health impacts immediately or in as little as 1-2 hours, in part because toxicity is determined by the concentration of the chemical and intensity of exposure.<sup>30</sup>

- 8 Expand and improve methane and VOC monitoring in oil and gas regions.** Accurate data is the only way to know whether health-harming pollution is going up or down. More monitors are needed in areas with growing numbers of oil and gas wells and facilities, particularly in close proximity to more developed and populated areas. The public should be able to access regularly updated information on the monitors and facilities near them.



# Endnotes

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EARTHWORKS

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