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June 16, 2026

via TCEQ Public Comment Portal

Texas Commission on Environmental Quality
Office of Legal Services, MC 205
P.O. Box 13087
Austin, Texas 78711-3087

Re: WildEarth Guardians comments on Rule Project No. 2026-006-309-OW, Land Application of Produced Water, Proposed Amendments to 30 Texas Administrative Code Chapters 210 and 309

Dear Commissioners and TCEQ Staff:

WildEarth Guardians (“Guardians”) submits these comments on the Texas Commission on Environmental Quality’s proposed amendments to 30 Texas Administrative Code Chapters 210 and 309 governing land application and reuse of treated produced water.

WildEarth Guardians is a nonprofit conservation organization working to protect and restore the wildlife, wild places, wild rivers, and health of the American West. Guardians has long worked to address the public health, climate, water, and waste impacts of oil and gas extraction, including produced water management, spills, contamination risks, and the regulatory gaps that allow oilfield waste burdens to fall on communities, land, water, and ecosystems.

Guardians opposes finalizing the proposed rule as drafted. Before authorizing land application or reuse of treated produced water, TCEQ must clarify how the rule accounts for the limits of the oil and gas exploration and production exemption under the Resource Conservation and Recovery Act; adopt produced-water-specific safeguards; and require enforceable permit conditions addressing the full treatment and waste-management chain, including characterization of the untreated produced water entering the treatment system, treatment processes, treatment efficacy, treatment residuals, concentrates, brines, sludges, spent media, storage, transport, spills, releases, cleanup, corrective action, and long-term monitoring.

The proposed rule implements Senate Bill 1145, which transfers permitting authority for land application of produced water treated for beneficial use from the Railroad Commission of Texas to TCEQ for applications filed on or after September 1, 2025.¹ The proposed amendments to Chapter 309 would establish minimum standards for the location of land application of industrial wastewater, including produced water under Texas Water Code § 26.131.² TCEQ proposes to regulate produced water as industrial wastewater and to rely largely on existing wastewater

¹ TCEQ, Proposed Rule, Chapter 309, Rule Project No. 2026-006-309-OW, Background and Summary of the Factual Basis for the Proposed Rules, at 1.

² TCEQ, Proposed Rule, Chapter 309, Rule Project No. 2026-006-309-OW, proposed 30 TAC § 309.10(a)(1), at 19.

permitting and siting provisions. That approach is inadequate for a complex oilfield waste stream whose chemistry varies widely and may include salts, metals, radionuclides, PFAS, organic compounds, proprietary chemical additives, and other constituents of concern.

TCEQ's own proposal states that the rulemaking "is not specifically intended to protect the environment or reduce risks to human health from environmental exposure."³ TCEQ should not rely on a rule that disclaims that purpose as a substitute for enforceable safeguards necessary to prevent contamination and other adverse impacts associated with produced-water treatment, storage, transport, reuse, and land application.

I. TCEQ must clarify how the proposed rule accounts for the limits of the RCRA E&P exemption and downstream waste-management obligations

Produced water generated during oil and gas exploration and production is excluded from regulation as hazardous waste under 40 C.F.R. § 261.4(b)(5). That exclusion should not be treated as a blanket authorization for off-field land application, nor does it resolve the status of all materials and downstream waste streams associated with treatment, reuse, and land application.

The proposed rule does not explain how the E&P exemption applies, or does not apply, once produced water is treated, transported, stored, reused, and applied to land outside the production context. Nor does the proposal address the status of treatment residuals, concentrates, brines, sludges, spent treatment media, contaminated soils, runoff, crop uptake, or groundwater contamination associated with land application.

Before finalizing the rule, TCEQ should explain how the proposed program will account for the limits of the E&P exemption and ensure that permits issued under Chapters 210 or 309 do not waive, determine, limit, or preclude otherwise applicable federal or state waste-management, cleanup, or endangerment obligations.

At minimum, TCEQ should address the following in the rulemaking record:

1. How will TCEQ evaluate whether treated produced water used for off-field land application, treatment residuals, brines, sludges, concentrates, spent treatment media, contaminated soils, runoff, crop uptake, or groundwater contamination are exempt E&P wastes or separately regulated waste streams?
2. How will the rule distinguish between produced water subject to the E&P exemption and downstream materials generated through treatment, storage, transport, land application, accumulation, runoff, or contamination?
3. How will TCEQ ensure that permits issued under Chapters 210 or 309 do not waive, determine, limit, or preclude otherwise applicable obligations or liability under federal or state waste-management, cleanup, or endangerment law?

³ TCEQ, Proposed Rule, Chapter 309, Rule Project No. 2026-006-309-OW, Draft Regulatory Impact Analysis Determination, at 7 to 8.

4. How will TCEQ ensure that treatment residuals, concentrates, brines, sludges, spent media, contaminated soils, and other downstream waste streams are properly characterized, managed, transported, disposed of, and reported?

TCEQ should not finalize the rule without addressing these questions. At minimum, TCEQ must make clear that any state permit for land application or reuse of treated produced water does not insulate permittees, treatment companies, transporters, landowners, or other responsible parties from otherwise applicable federal or state legal obligations.

II. The proposed rule lacks produced-water-specific standards

The proposed amendments to Chapter 309 establish minimum location standards for land application of industrial wastewater, including produced water, but do not establish produced-water-specific contaminant limits, monitoring requirements, or treatment performance standards.⁴ The proposed amendments to Chapter 210 would add produced water regulated under 40 C.F.R. Parts 435 and 437 to the list of process wastewater exceptions that may be authorized for reuse.⁵ These changes are insufficient.

TCEQ should not rely on a municipal or general industrial wastewater framework for produced water land application. Produced water is not ordinary reclaimed wastewater. Produced water is a complex oilfield waste stream whose composition can vary significantly depending on geology and production chemicals and can contain salts, heavy metals, naturally occurring radioactive materials, PFAS, and chemicals used in drilling and production.⁶ Land application creates exposure pathways that differ from other industrial reuse contexts, including soil accumulation, crop uptake, groundwater migration, runoff, wildlife and livestock exposure, and long-term cumulative loading.

At minimum, any final rule authorizing land application of treated produced water must require:

1. full influent, treatment-residual, and effluent characterization before any permit is issued;
2. enforceable numeric limits for PFAS, radionuclides/TENORM, heavy metals, salts, bromide, organic compounds, proprietary chemicals, and whole-effluent toxicity;
3. public disclosure of all sampling results, treatment failures, exceedances, and spills;
4. source-by-source characterization of produced water rather than reliance on generalized treatment assumptions;

⁴ TCEQ, Proposed Rule, Chapter 309, Rule Project No. 2026-006-309-OW, proposed 30 TAC §§ 309.10(a)(1), 309.13(c), at 19, 22 to 24.

⁵ TCEQ, Proposed Rule, Chapter 210, Rule Project No. 2026-006-309-OW, Background and Summary of the Factual Basis for the Proposed Rules, at 1 to 2; proposed 30 TAC § 210.54(a)(5)(J), (L), at 10 to 11.

⁶ See Amarjit Rajbongshi & Subrata Borgohain Gogoi, [A review on oilfield produced water and its treatment technologies](#), *Petroleum Research* 9:640–656 (2024); Matthew S. Varonka et al., [Per- and polyfluoroalkyl substances in waters associated with oil and gas development in the Denver Basin](#), *Scientific Reports* 16, Article 5743 (2026), also available through the U.S. Geological Survey at <https://www.usgs.gov/publications/and-polyfluoroalkyl-substances-waters-associated-oil-and-gas-development-denver-basin>; Emily A. Chittick & Tanja Srebotnjak, [An analysis of chemicals and other constituents found in produced water from hydraulically fractured wells in California and the challenges for wastewater management](#), *Journal of Environmental Management* 204:502–509 (2017).

5. site-specific limits based on soil type, depth to groundwater, proximity to wells and surface water, flood risk, crop type, grazing use, wildlife exposure, and cumulative contaminant loading;
6. prohibition on land application where contaminants may accumulate in soil, enter crops or forage, migrate to groundwater, or run off to surface water;
7. enforceable requirements for management and disposal of brines, sludges, concentrates, spent treatment media, and other residuals; and
8. clear cessation, corrective-action, and cleanup requirements for exceedances, releases, or evidence of contamination.

III. TCEQ must account for foreseeable spills, releases, treatment failures, and residual waste management

TCEQ should not evaluate land application only under ideal operating conditions. Produced water management systems fail. Spills, leaks, transport incidents, storage failures, treatment upsets, over-application, runoff, and residual mismanagement are foreseeable risks associated with produced water handling, transport, treatment, storage, and disposal.

Guardians submits its New Mexico oilfield spill report and supporting New Mexico spill data as Exhibits A and B.⁷ Though Guardians' spill data are New Mexico-specific, Texas reporting confirms that produced-water spills and oilfield wastewater releases are also recurring and significant in Texas. A Texas Tribune/Inside Climate News analysis found that oil and gas companies spilled nearly 150 million gallons of produced water in Texas over the last decade, and additional reporting has documented produced-water releases affecting soil, water resources, and wildlife.⁸ The Texas Permian is part of the same broader oil- and gas-producing basin that spans West Texas and southeastern New Mexico.⁹ Accordingly, Guardians submits the New Mexico spill data only to illustrate foreseeable failure modes in produced-water management systems and urges TCEQ to require applicant-specific Texas spill, release, compliance, and enforcement histories before issuing any permit.

Any final rule authorizing land application of treated produced water must require each permit applicant to submit and comply with enforceable plans for:

1. spill prevention, control, and response;
2. emergency shutdown and immediate cessation of land application after exceedances, treatment failures, spills, or releases;

⁷ WildEarth Guardians, New Mexico Spill Report, Exhibit A

⁸ Texas Tribune and Inside Climate News, *Oil and gas companies spill millions of gallons of wastewater in Texas* (Oct. 31, 2023), <https://www.texastribune.org/2023/10/31/texas-oil-gas-fracking-wastewater-spills-railroad-commission/>; Inside Climate News, *Thousands of Oil and Gas Wastewater Spills Threaten Texas Land, Water and Wildlife* (Dec. 18, 2023), <https://insideclimatenews.org/news/18122023/state-of-denial-oil-gas-wastewater-spills-texas/>; Texas Tribune, *Ranchers reported abandoned oil wells spewing wastewater. A new study blames fracking*. (Aug. 7, 2024), <https://www.texastribune.org/2024/08/07/texas-oil-fracking-wastewater-injection-blowouts-permian-basin/>.

⁹ Railroad Commission of Texas, *Permian Basin Information*, <https://www.rrc.texas.gov/oil-and-gas/major-oil-and-gas-formations/permian-basin>.

3. public reporting of spills, exceedances, treatment upsets, and corrective actions;
4. post-release soil, groundwater, surface-water, crop, forage, and livestock/wildlife monitoring;
5. cleanup and remediation of contaminated soil, water, crops, and affected lands;
6. management and disposal of contaminated soils and treatment residuals;
7. financial assurance sufficient to cover investigation, cleanup, monitoring, and restoration; and
8. notice to affected landowners, water users, local governments, and the public.

Without these requirements, the proposed rule fails to address reasonably foreseeable consequences of the activity it authorizes.

IV. TCEQ's own proposal recognizes uncertainty and the need for new policy development

TCEQ recognizes that permit costs and requirements will depend on site characteristics, the permitted amount of produced water applied to land, and the quality of the produced water.¹⁰ Those variables are exactly why the rule must contain clear, enforceable baseline standards rather than deferring essential safeguards to case-by-case permit development.

TCEQ's interoffice memorandum further recognizes that this is a new program for TCEQ and that the agency may need to develop new policies. It also identifies potential public concerns from land application sites, including air quality, odor, and well-water contamination.¹¹ That record supports stronger rules now. TCEQ should not authorize land application first and develop necessary waste-management, compliance, emergency-response, and monitoring policies later.

V. Requested action

Guardians requests that TCEQ not finalize the proposed rule as drafted. TCEQ should either prohibit land application of treated produced water or revise the rule to include produced-water-specific standards that fully address contaminant characterization, treatment performance, residual waste management, spills and releases, public reporting, groundwater and soil protection, crop and ecological exposure, cumulative loading, cleanup, financial responsibility, and the limits of otherwise applicable federal and state waste-management obligations.

At minimum, TCEQ must:

1. clarify that permits issued under Chapters 210 or 309 do not determine, waive, limit, or preclude otherwise applicable federal or state waste-management, cleanup, or endangerment obligations;

¹⁰ TCEQ, Proposed Rule, Chapter 309, Rule Project No. 2026-006-309-OW, Fiscal Note and Public Benefits and Costs, at 4 to 5.

¹¹ TCEQ, Interoffice Memorandum to Commissioners, Docket No. 2026-0018-RUL, Rule Project No. 2026-006-309-OW, Apr. 10, 2026, at 2 to 3.

2. explain how the proposed rule accounts for the limits of the E&P exemption as applied to treated produced water and downstream waste streams;
3. require produced-water-specific contaminant testing and enforceable limits;
4. require site-specific monitoring for soil accumulation, crop uptake, groundwater migration, surface-water runoff, wildlife and livestock exposure, and cumulative loading;
5. require enforceable management and disposal requirements for treatment residuals, brines, sludges, concentrates, spent media, and contaminated soils;
6. require applicant-specific Texas spill, release, compliance, and enforcement histories;
7. require spill prevention, public reporting, shutdown triggers, cleanup obligations, and financial assurance; and
8. prohibit land application where TCEQ cannot ensure protection of human health, agricultural land, groundwater, surface water, wildlife, livestock, and ecological receptors.

Thank you for considering these comments.

Sincerely,

Rebecca Sobel
Climate & Health Program Director
WildEarth Guardians

Attachments:

Exhibit A: WildEarth Guardians New Mexico Spill Report

THE 2025 NEW MEXICO SPILL REPORT

**Land,
Air, &
Water
Pollution
from Oil & Gas**





**The 2025 New Mexico Spill Report is
written by lead author Melissa Troutman
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*Cover photo: A 2025 spill in the Loco Hills region of southeastern New Mexico. Charlie Barrett / Oilfield Witness
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2025 SPILL DATA SUMMARY



Leaking pipelines are everywhere in the Permian. This pipeline was spewing liquid on the landscape. It appeared as if this pipeline was carrying water used in drilling and fracking. This water is not potable and usually contaminated and only used for drilling and fracking.

38,153 Spills in One Year

- Oil and gas companies reported 38,153 spills in New Mexico in 2025.
- That equals 104 spills every day, on average statewide.

Air Pollution is the Primary Spill Problem

- More than 96% of spills (36,683) were gaseous releases, totaling 9,219,554 thousand cubic feet (MCF) of pollution, mostly methane, a highly potent climate pollutant.
- Gaseous spills occurred every 15 minutes on average.

Volume of Liquid Waste Spills Increase, Damage More Permanent

- Liquid oil and gas spills occurred every six to seven hours on average.
- Operators reported 9.4 million gallons of liquid waste spilled, with over 3.5 million gallons “lost” to the environment.

Public Lands and Waterways are Disproportionately Impacted

- 15 waterways were contaminated by oil and gas spills, 12 waterways were in San Juan County alone.
- The majority of land and water impacts occurred on federal and state public lands.

“Produced Water” is the Most Common Liquid Spill

- Oil and gas production generates at least four barrels of toxic waste known as “produced water” for every barrel of oil.
- This waste contains radioactive materials, heavy metals, carcinogens, and hazardous chemicals, and is the most frequently spilled liquid in New Mexico.

Waste Reuse Facilities Drive Large Spills

- Some of the largest liquid spills occurred at produced water storage and reuse facilities.
- Sites concentrate massive volumes of waste, increasing spill severity when failures occur.

Spills Are Routine, Not Rare

- Gaseous spills are commonly caused by high line pressure, equipment failure, and routine maintenance or normal operations, with liquid spills commonly caused by equipment failure, corrosion, human error and “other.”
- Causes indicate spills are predictable outcomes of oil and gas production, not isolated incidents.

Enforcement Lags Behind Pollution

- The same operators repeatedly rank among the top spillers, quarter after quarter.
- Public records show few penalties issued compared to tens of thousands of spills.

INTRODUCTION

What happened in 2025

New Mexico's oil and gas boom has produced record-breaking profits for industry and significant revenue for the state, but it has also produced a growing volume of toxic waste and pollution that current regulatory systems have struggled to manage. Ranking second in oil production and third in natural gas production nationwide, New Mexico experienced tens of thousands of oil and gas spills in 2025, the vast majority of which were releases of air pollutants, primarily methane, making air pollution the most frequent and persistent form of oil and gas pollution statewide.¹

The liquid material most spilled is oil and gas liquid waste, which industry has euphemistically labeled “produced water.” The volume of this waste generated by oil and gas companies in New Mexico has grown so large that disposal capacity is running out. The industry's primary disposal method—injecting waste underground—has been linked to earthquakes and well blowouts as disposal formations become increasingly overpressurized.² At the same time, large-scale recycling and storage facilities have become a leading source of major spills. As disposal constraints intensify, oil and gas companies are increasingly pursuing ways to reclassify oil and gas waste as a resource rather than pollution, including proposals to treat and release it into rivers and waterways—setting the stage for major regulatory conflict.³ These pressures came to a head in 2025 as state regulators were forced to confront whether oil and gas waste should be more tightly regulated—or further commodified—despite rising spill rates and unresolved scientific uncertainty.⁴

Who bears the cost

Despite decades of intensive oil and gas development, New Mexico continues to rank near the bottom nationally on measures of well-being. National data consistently place New Mexico last or near-last in child well-being, poverty, and family economic security, reflecting the failure of extractive development to translate into durable public benefits.⁵ Currently, New Mexico has the third highest poverty rate in the nation behind Mississippi and Louisiana, two states that also carry a disproportionate burden of oil and gas development and its associated pollution-related health costs.⁶

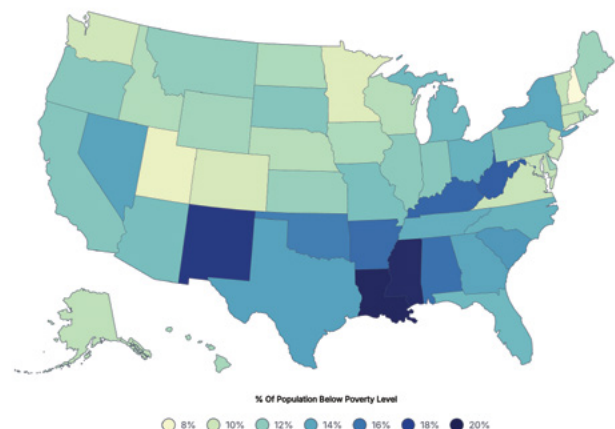
Why the system allows it

While oil and gas production is not the sole driver of poverty, decades of intensive extraction have failed to deliver durable improvements in health, income, or child well-being while imposing disproportionate environmental and public-health burdens. The state's economy remains heavily reliant on extractive industries that externalize environmental and public health costs while shielding operators from accountability, allowing pollution to increase even as social indicators stagnate or worsen.

What must change now

The spill and pollution data presented in this report demonstrate that New Mexico's current regulatory framework permits oil and gas companies to repeatedly pollute land, air, and water while failing to deliver meaningful improvements in quality of life. Without structural reforms to enforcement, transparency, and waste regulation, these dynamics will continue to undermine the health and future of New Mexico's children and communities.

Poverty Rate by State



Source: World Population Review 2026

WHAT'S AT STAKE

New Mexico is home to world-renowned cultural and natural beauty: rare and endangered species, World Heritage sites like Chaco Culture National Historical Park, the world's largest gypsum dunefield (White Sands National Park), cavernous karst geology that includes Carlsbad Caverns National Park, and part of the largest and most diverse desert in North America – the Chihuahuan Desert. New Mexico holds immense wind and solar energy potential, yet it has instead become a central node in the world's highest-producing oil field, the Permian Basin—an industrial footprint increasingly at odds with the state's ecological, cultural, and public health priorities.

Before oil was discovered and drilling companies descended, what has become the “Permian oil patch” was once the largest continuous prairie in North America, full of flora and fauna, especially ground-dwelling birds like the lesser prairie chicken. Oil and gas extraction has transformed the landscape through dense networks of wells, pipelines, tanks, and disposal facilities that routinely result in equipment failure, corrosion, and spills of toxic materials across the state.

New Mexico has long functioned as a national sacrifice zone for extractive and military industries. The state was home to the first nuclear weapons detonation in history at Trinity Site, exposing nearby communities to radioactive fallout later recognized under the federal Downwinders program.⁷ New Mexico also bears the legacy of uranium mining on Navajo lands, including the Church Rock uranium mill spill, the largest uranium



spill in U.S. history, which contaminated the Rio Puerco watershed and remains one of the most extensive unfinished uranium cleanups in the country.⁸

Today, the state hosts the nation's only deep geologic repository for transuranic nuclear waste at the Waste Isolation Pilot Plant, where incidents such as the 2014 radiation release have raised ongoing concerns about long-term containment and worker safety.⁹ Against this backdrop, widespread oil and gas spill pollution represents not an isolated problem, but another chapter in a long pattern of New Mexico communities bearing disproportionate environmental and health risks for the sake of national energy and security priorities.



POLLUTION FROM OIL & GAS SPILLS

Oil and gas spills can contain known toxic and carcinogenic substances, including per- and polyfluoroalkyl substances (PFAS), radioactive materials such as radium, volatile organic compounds, hazardous air pollutants, gases like methane and hydrogen sulfide, heavy metals including arsenic, and hydrocarbons such as benzene. In addition, spills can include undisclosed “trade secret” chemicals, creating uncertainty about the full range of health and environmental risks wherever spills contact land, water, wildlife, domesticated animals such as cattle, or people. Because oil and gas companies self-report spills, the public record only shows what industry discloses under existing rules. Incomplete spill reports labeled “other,” “unknown,” or “blank” further obscure the true extent of pollution and prevent meaningful assessment of cumulative environmental and public health harm—harm that has been shown to be widespread and persistent in other oil-producing regions.¹⁰

Air pollution from oil and gas operations is already the dominant source of statewide emissions in New Mexico. According to the New Mexico Environment Department’s most recent greenhouse gas inventory, oil and gas production accounted for roughly half of all statewide greenhouse gas emissions, making it the single largest emissions source, even as production and spill volumes continued to rise.¹¹

What Is a “Spill”

Under New Mexico law, an oil and gas “spill” refers to the illegal release, discharge, escape, or disposal of oil, gas, produced water, or other substances associated with oil and gas operations into the environment, including onto land, into surface water or groundwater, or into the air.¹² Spills are reported by operators to the New Mexico Oil Conservation Division (OCD) and entered into the state’s spill database as individual releases of specific materials. A single spill event may involve multiple substances, each reported separately.¹³

Oil and gas spills occur in multiple forms, each with their own environmental consequences. Surface spills can contaminate soil, vegetation, surface water, and wildlife habitat. Subsurface spills may migrate underground, contaminate groundwater, or reemerge far from their original source, complicating detection and cleanup. Spills are also categorized by volume contained—or not. “Recovered” spills involve the capture of some portion of the spilled material, while “lost” spills occur when pollutants seep into soil, groundwater, waterways, or the atmosphere. In practice, some spills result in permanent contamination, particularly when gases are released into the air.

What Is Not Accounted For

Even when spills are reported, state spill databases capture only a partial picture of pollution from oil and gas operations. Spill reporting and cleanup requirements in New Mexico are governed by rules adopted by the New Mexico Oil Conservation Commission (OCC) and implemented by the Oil Conservation Division (OCD), which require reporting of certain listed materials but do not mandate comprehensive disclosure or routine testing for many contaminants used or released during drilling, hydraulic fracturing, or waste management.

As a result, spill records generally exclude hazardous air pollutants released during venting, flaring, and equipment failures, including volatile organic compounds (VOCs) and other hazardous air pollutants (HAPs) linked to respiratory, cardiovascular, neurological, and developmental health harms, particularly for communities living near production, distribution, and waste infrastructure.¹⁴ Reporting also fails to capture radioactive constituents and many trade secret chemicals, including per- and polyfluoroalkyl substances (PFAS).

These omissions have consequences. The U.S. Environmental Protection Agency and the National Academies of Sciences report that most chemicals used in oil and gas extraction lack adequate public toxicity data.¹⁵ This is particularly true for chronic exposures, chemical mixtures, and proprietary substances, making comprehensive health risk assessment impossible for the majority of chemicals in use.¹⁶ **The public record therefore does not reveal the full toxicity or scale of pollution released during spill events.** This obscures risks to workers, first responders, nearby communities, and ecosystems and limits regulators’ and the public’s ability to assess cumulative and long-term impacts.

These data gaps are compounded by the oil and gas industry’s long-standing exemption from key federal hazardous-waste and environmental laws, including the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Safe Drinking Water Act (SDWA).¹⁷ Under these exemptions, substances that would otherwise trigger hazardous-waste handling, testing, cleanup, and disclosure requirements are regulated under a less protective framework.

Research also documents the widespread use of PFAS in oil and gas operations. PFAS are highly persistent “forever chemicals” linked to cancer, immune suppression, endocrine disruption, and developmental harm, yet they are not required to be tested for or identified in spill reports.¹⁸ PFAS use in oil and gas operations can also be kept hidden from the public under trade-secret claims.¹⁹ As a result, PFAS contamination from oil and gas spills may go undetected, even as these chemicals accumulate in soil, water, wildlife, and human bodies.

Within these limitations, the state’s spill database identifies only a defined subset of materials that operators are required to report when a spill occurs. Those reported materials are summarized below.

MATERIALS REPORTED IN OIL AND GAS SPILLS

Produced water

Toxic liquid waste generated during oil and gas extraction that returns to the surface after drilling and hydraulic fracturing. Produced water can contain salts, heavy metals, radioactive materials (including radium), hydrocarbons, chemical additives, and undisclosed trade secret chemicals, including PFAS. It is the largest waste stream in oil and gas production. It is also the most spilled liquid material.

Crude oil

A naturally occurring mixture of hydrocarbons extracted from underground geological formations. Crude oil and petroleum liquids contain hazardous constituents including BTEX compounds (benzene, toluene, ethylbenzene, and xylenes) and sulfur-containing compounds and trace metals; when spilled, these substances can contaminate soil and water and create inhalation and fire risks.

Chemicals used in drilling, fracking, and maintenance

Chemical substances used to drill wells, hydraulically fracture formations, control corrosion, inhibit scale, and maintain equipment. These chemicals include biocides, surfactants, friction reducers, acids, solvents, and corrosion inhibitors, many of which are hazardous and may be withheld from public disclosure.

Condensate

A liquid hydrocarbon recovered from natural gas production when pressure and temperature decrease at the surface. Condensate is highly volatile and flammable and may contain benzene and other hazardous air pollutants.

Fuels (diesel and gasoline)

Refined petroleum products used to power drilling rigs, generators, vehicles, and other oil and gas equipment. Fuel spills pose risks of soil contamination, groundwater pollution, and fire or explosion hazards.

Glycol

A chemical compound, commonly ethylene glycol or triethylene glycol, used in oil and gas operations for dehydration and freeze protection. Glycols are toxic if ingested, can contaminate soil and water, and cause harm to wildlife and humans.

Natural gas liquids (NGLs)

Hydrocarbon liquids separated from natural gas during processing, including ethane, propane, butane, and pentanes. NGLs are highly flammable and pose explosion and air quality risks when released.

Natural gas (methane)

A colorless, odorless gas composed primarily of methane, the main component of natural gas. Methane is a potent climate pollutant and contributes to ozone formation when released into the atmosphere. Methane spills are typically unrecoverable once released.

Hydrogen sulfide

A colorless gas with a characteristic “rotten egg” odor that occurs naturally in some oil and gas formations. Hydrogen sulfide is highly toxic, can cause respiratory failure or death at high concentrations, and poses immediate risks to workers and nearby communities during releases.

Carbon dioxide (CO₂)

A colorless, odorless gas released during oil and gas production, processing, and waste handling, including venting, flaring, and equipment failures. While not toxic at ambient concentrations, carbon dioxide is a greenhouse gas that contributes to climate change and poses asphyxiation risks in confined or high-concentration release scenarios.

“Unknown” or “other”

A spill category used in state reporting systems when the operator does not identify the specific material released. “Unknown” and “other” designations prevent reviewers from fully assessing toxicity, exposure pathways, or appropriate cleanup requirements.

“Blank”

A spill record field left empty by the reporting operator, indicating missing or undisclosed information about the material released. “Blank” entries function similarly to “unknown” designations, undermining transparency and cumulative impact analysis.

2025 KEY FINDINGS

THESE FINDINGS SHOW OIL AND GAS SPILLS IN NEW MEXICO ARE PREDICTABLE, PERSISTENT, AND CONCENTRATED AMONG REPEAT OPERATORS.

Spills Across Time (2022-2025)

While the overall number of reported oil and gas spills has generally decreased between 2022 and 2025, **the volume of toxic waste spilled increased dramatically in 2025.** Liquid spill volumes rose by 93% compared to 2024, 84% compared to 2023, and 51% compared to 2022.

The volume of liquid waste permanently lost to the environment increased by as much as 87% year over year, showing that spills are becoming fewer in number but significantly larger in scale and impact.

Fewer spills does not equal less pollution. 2025 had fewer spill events, but more volume spilled than any other year.

	2022	2023	2024	2025
ALL SPILLS	42,725	54,618	42,208	38,153
LIQUID SPILLS	1,780	1,593	1,393	1,470
LIQUID VOLUME SPILLED	6,262,830 gal	5,120,052 gal	4,892,832 gal	9,442,230 gal
LIQUID VOLUME LOST	2,590,980 gal	1,879,374 gal	2,017,554 gal	3,515,064 gal
GASEOUS SPILLS	40,945	53,025	40,815	36,683
GASEOUS VOLUME SPILLED	16,013,546 MCF	20,020,455 MCF	11,471,954 MCF	9,219,554 MCF
GASEOUS VOLUME LOST	16,013,546 MCF	20,020,455 MCF	11,471,954 MCF	9,219,554 MCF

The table above shows the number and volumes of gaseous, liquid, and total spills for the years 2022 - 2025.

Bad Actors, Bad Neighbors

Between 2022 and 2025, the same seven oil and gas companies consistently ranked among the top spillers, reflecting the concentration of pollution among the state's largest producers.²⁰ EOG Resources reported more spilled than any other operator, ranking first each year and accounting for 34,767 spills in only four years. EOG is also the largest oil and gas producer in NM.

Spill frequency is highest among the largest oil and gas producers, indicating a clear relationship between production volume and pollution.

TOP SPILLERS ACROSS TIME, 2022-25	TOTAL SPILLS
EOG Resources	34,767
XTO Energy / XTO Permian Operating	15,338
Matador Production	11,812
Earthstone Operating	9,249
Devon Energy Production	9,008
COG Operating / COG Production	5,271
Mewbourne Oil	3,779

The table above shows total spills for seven companies that were among the top spillers every year from 2022 - 2025.

2025 BIGGEST SPILLS BY QUARTER

Q1 / LIQUID

DKL ENERGY COTTONWOOD



Date	03/11/25
Landowner	Federal
County	Lea
Cause	Corrosion
Material	Produced water
Volume	169,092 gal spilled / lost

A corroded pipeline operated by DKL Energy spilled 4,026 barrels (169,092 gallons) of toxic oil and gas waste into the surrounding landscape. The spill was discovered in May 2025 and still being remediated in September.

Q1 / AIR

DCP OPERATING

DCP Operating had to “blowdown” a section of pipeline, venting 18,647 mcf of natural gas, when a 4” poly gathering line “failed”. According to the report DCP filed with the state, the natural gas release was over 93% methane, a climate super pollutant.

Date	02/7/25
Landowner	Federal
County	Eddy
Cause	Blow out
Material	Natural gas vented
Volume	18,647 mcf spilled / lost

Q2 / LIQUID

EOG RESOURCES



Date	06/10/25
Landowner	State
County	Lea
Cause	Overflow
Material	Produced water
Volume	158,424 gal spilled / 143,094 gal lost

A June 10th spill at an EOG Resources produced water reuse pit resulted in contamination of state public lands. In the photo, sourced from state files, the path of pollution can be seen as brown stains on land and vegetation.

Q2 / AIR

XTO ENERGY

Between 2022-2025, XTO Energy reported that it released 889,494 mcf during other venting and flaring events at this single facility (XTO PERMIAN MIDSTREAM NGGS; ID # fAPP2218240516). While these other releases are not all considered “spills” by the state, they represent a pattern of reportable, routine gaseous pollution that impacts air quality in the Permian region, where air quality is already unhealthy due to oil and gas activity.

Date	06/8/25
Landowner	(blank)
County	Eddy
Cause	Repair & maintenance
Material	Natural gas flared
Volume	16,627 mcf spilled / lost

2025 BIGGEST SPILLS BY QUARTER

Q3 / LIQUID

OXY USA



Date	07/15/25
Landowner	Federal
County	Lea
Cause	Equipment failure
Material	Produced water & crude oil
Volume	Produced water: 1,608,810 gal spilled / 1,543,374 gal lost Crude oil: 126,546 gal spilled / 121,422 gal lost

The biggest spill of 2025 occurred on federal public land in Lea County when the wall of a produced water recycling pit collapsed, polluting the surrounding landscape with 36,747 barrels (1,543,374 gallons) of toxic oil and gas waste and 2,891 barrels (121,422 gallons) of crude oil. This facility was equipped with a leak detection system and constructed to prevent “overtopping” according to a remediation plan submitted to the state.

Q3 / AIR

COG OPERATING

COG Operating reported the largest gaseous spill in Q3 2025, which it blamed on another company’s failure to notify COG of production changes in a connected operation. In the oilfields, multiple companies can feed into the same natural gas pipelines. When there is too much pressure in the line, it has to be opened and vented or flared to avoid explosions and other problems.

Date	09/5/25
Landowner	(blank)
County	Eddy
Cause	High line pressure
Material	Natural gas flared
Volume	18,112 mcf spilled / lost

Q4 / LIQUID

XTO ENERGY



Date	10/31/25
Landowner	Federal
County	Eddy
Cause	Human error
Material	Produced water
Volume	130,284 gal spilled / 126,084 gal lost

XTO reported a major spill of toxic oil and gas waste from a pipeline caused by “third party” operations nearby. According to state records, soil sampling and remediation efforts were ongoing as of January 15, 2026.

Q4 / AIR

CIVITAS PERMIAN OPERATING

COMPONENTS	MOL. %
Nitrogen	0.586
Carbon Dioxide	0.207
Methane	77.896
Ethane	11.118
Propane	4.867
Iso-butane	0.880
n-Butane	1.883
Iso-pentane	0.551
n-Pentane	0.617
Hexanes Plus	1.445
	100.00

Date	12/17/25
Landowner	(blank)
County	Eddy
Cause	Normal operations
Material	Natural gas vented
Volume	18,301 mcf spilled / lost

Civitas reported the largest gaseous spill of Q4 2025, which the company attributed to “normal operations,” writing in state records that there was “no way to avoid” the release due to “maintenance/repairs to address unforeseen issues.” Like most gaseous spills, the major component reported was methane, which is 80x more potent a greenhouse gas than carbon dioxide in the near term.

2025 TOTAL SPILLS

Oil and gas companies reported **38,153 spills in New Mexico in 2025** - an average of **104 spills per day** - reflecting an immense amount of pollution to air, land, and water.²¹

Gaseous spills overwhelmingly dominated spill activity in 2025, accounting for 96% of all reported spills, averaging **one gaseous spill every 14-15 minutes**, and releasing more than **9.2 million thousand cubic feet (MCF)** of methane and other gases, none of which was recovered once released.²²

The methane spilled into New Mexico's air in 2025 caused climate damage comparable to **putting more than a million additional cars on the road** for an entire year—without moving a single person or producing any public benefit.²³

Liquid spills, occurring on average every six to seven hours, resulted in **9,446,051 gallons of liquid waste released in 2025**, consisting mostly of crude oil and toxic waste known as “produced water.”²⁴

3.5 million gallons of waste were “lost” to the environment through seepage into the ground or groundwater, runoff into waterways, and contamination of soil, flora, and fauna.

The volume of waste spilled would fill about **1,900 tanker trucks**, with roughly 700 tanker trucks' worth of unrecoverable waste released into soil and water.²⁵ The volume of toxic waste spilled would fill a convoy stretching **over 20 miles**, roughly the north-south length of the greater Albuquerque urbanized area.²⁶

On average, companies spilled 104 times per day in 2025; gas spills occur every 15 minutes, liquid spills every 7 hours.

2025	All Spills	Gaseous Spills	Gaseous Spill Volume (MCF)	Liquid Spills	Liquid Volume Spilled (GAL)	Liquid Volume Lost (GAL)
Q1	10,578	10,237	2,752,067	341	3,294,174	490,562
Q2	10,250	9,888	2,609,056	362	1,547,028	425,922
Q3	9,515	9,094	2,089,964	421	3,188,485	2,061,047
Q4	7,810	7,464	1,768,457	346	1,416,364	538,349
TOTAL	38,153	36,683	9,219,544	1,470	9,446,051	3,515,880

The table above shows the number of times a gaseous or liquid spill was released into the environment on a quarterly basis.

MOST COMMON POLLUTANTS

The most frequently reported materials spilled in 2025 were natural gas (methane), and produced water. Methane is a potent climate pollutant, over 80 times more potent than carbon dioxide over a 20-year time-frame.²⁷ For every barrel of oil produced, oil and gas companies generate an average of four barrels of produced water, a toxic waste stream known to contain radioactive materials, heavy metals, volatile organic compounds, and undisclosed chemicals.²⁸ Despite its toxicity, produced water spills remain poorly characterized, and research has shown that 86% of chemicals found in produced water lack sufficient toxicity data to complete a risk assessment, underscoring the significant uncertainty about health and environmental impacts.²⁹

The most common spill materials are also among the most dangerous to communities and ecosystems.

POLLUTANT	# OF SPILLS
Natural Gas Flared	34,978
Produced Water	925
Other	833
Natural Gas Vented	739
Crude Oil	391
Carbon Dioxide	150
Condensate	102
Chemical	7
Drilling Fluid	6
Lube Oil	5
Unknown	5
Motor Oil	4
Gasoline	2
Hydrogen Sulfide	2
Diesel	1
Glycol	1
Natural Gas Liquids	1
Sulfuric Acid	1

The table above shows the number of times a particular spill material was reported in 2025.

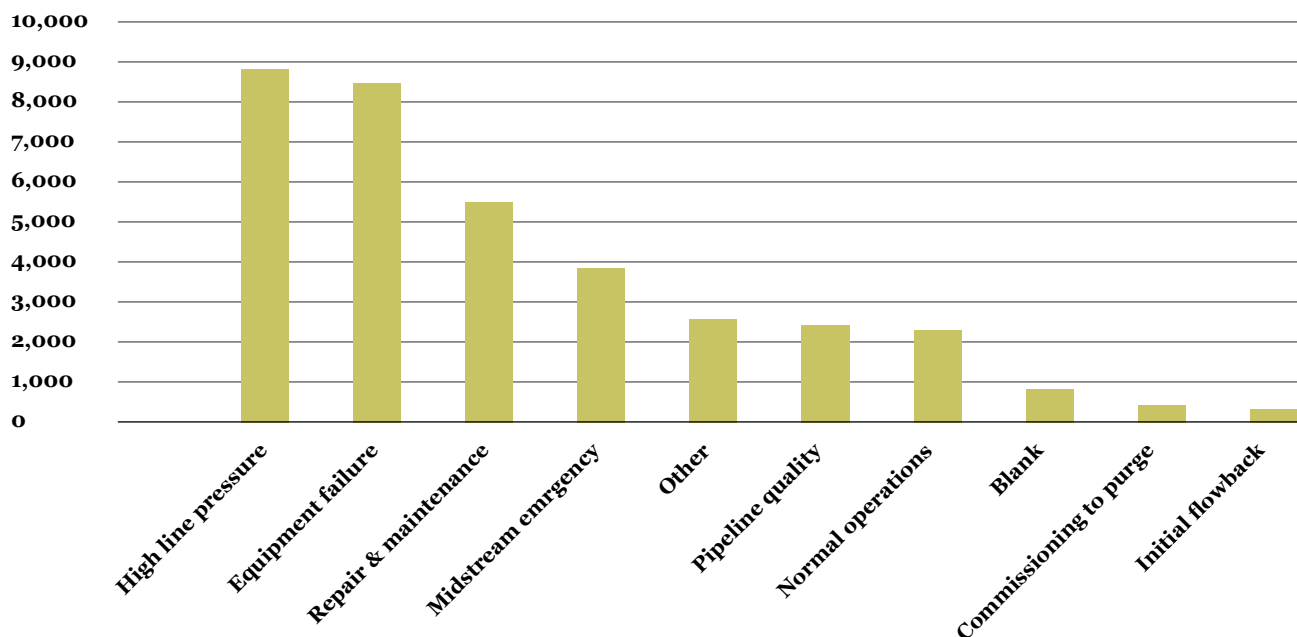
MOST COMMON CAUSES OF GASEOUS SPILLS

The most common causes of gaseous spills causing air pollution were attributed to high line pressure, equipment failure, and repair and maintenance activities.

CAUSE	GASEOUS SPILLS
High line pressure	8,815
Equipment failure	8,509
Repair and maintenance	5,639
Midstream emergency maintenance	3,922
Other	2,599
Pipeline quality specifications	2,446
Normal operations	2,351
Blanks	803
Commissioning to purge	461
Initial flowback	302

The table above shows the self-reported cause of spill and the number of spills associated with that cause.

2025 TOP GASEOUS SPILL CAUSES



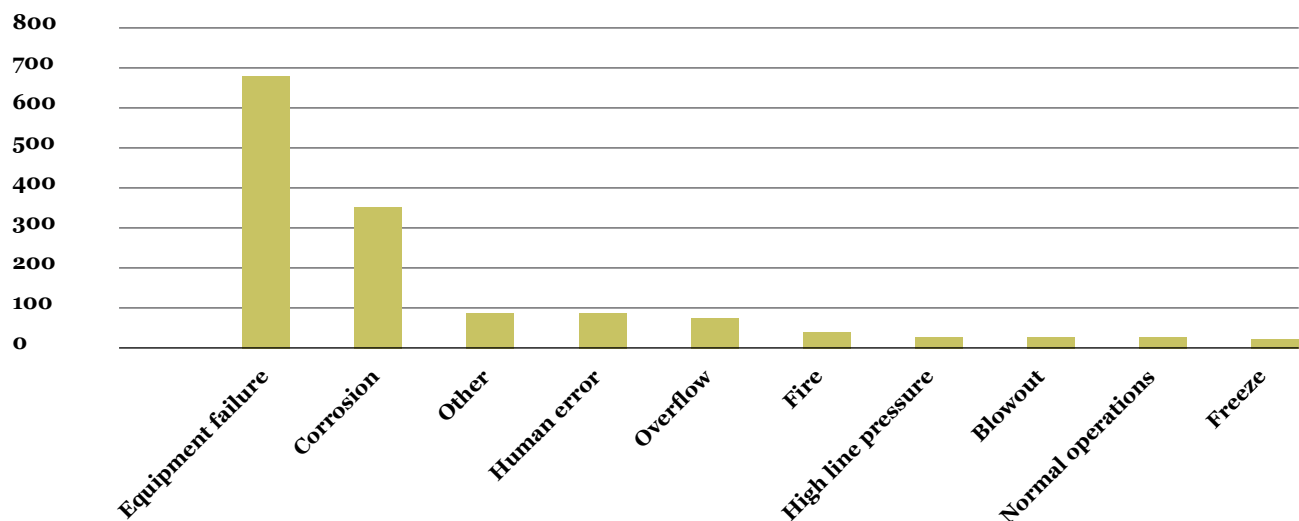
MOST COMMON CAUSES OF LIQUID SPILLS

The most common causes of liquid spills causing land and water pollution were attributed to equipment failure, corrosion, human error and “other.”

CAUSE	LIQUID SPILLS
Equipment failure	679
Corrosion	363
Other	85
Human error	85
Overflow	69
Fire	39
High line pressure	29
Blowout	26
Normal operations	25
Freeze	18

The table above shows the self-reported cause of spill and the number of spills associated with that cause.

2025 TOP LIQUID SPILL CAUSES



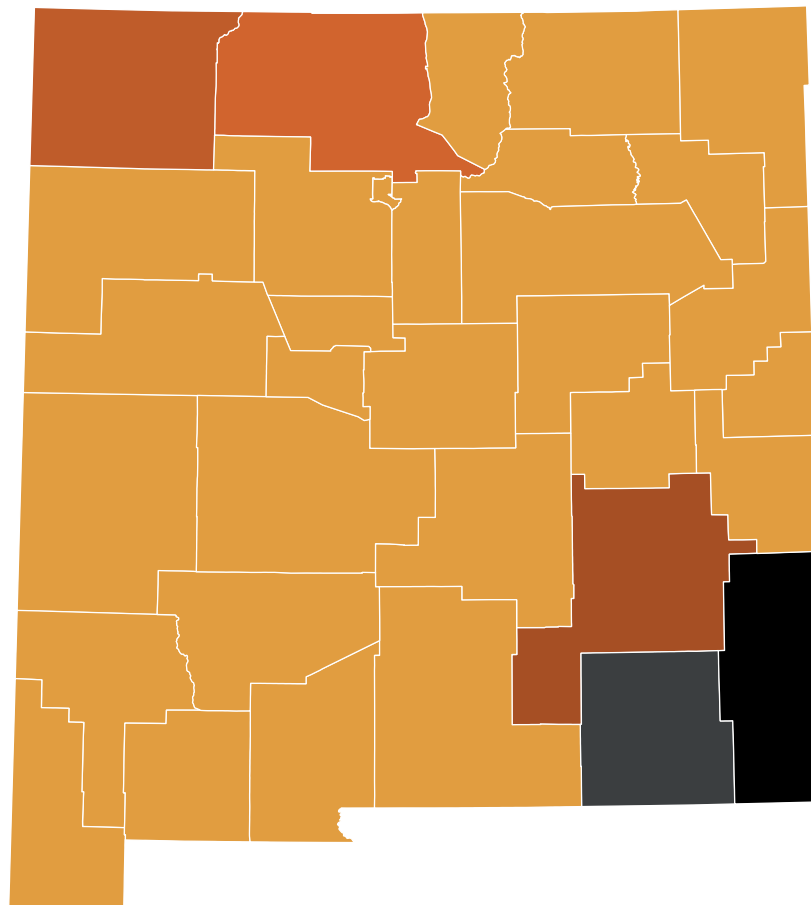
MOST POLLUTED COUNTIES

Oil and gas spills were heavily concentrated in southeastern New Mexico, with Lea and Eddy counties accounting for the vast majority of reported spills. Together, these two counties experienced over 37,000 spills in 2025. Spills were also reported in counties far from the Permian Basin, including San Juan and Rio Arriba Counties, demonstrating that spill risks extend beyond a single region. Spills were also reported in Roosevelt County (9), Sandoval County (6), Harding County (2), Union County (1), Otero County (1), and Torrance County (1).

Spill pollution closely tracks oil and gas development intensity. Communities in the Permian Basin bear the greatest burden, but other regions are not immune.

COUNTY	# OF TOTAL SPILLS
• Lea	22,137
• Eddy	15,301
• Chaves	365
• San Juan	219
• Rio Arriba	110

The table above shows the number of total spills that occurred within each county.



MOST IMPACTED LANDOWNERS

For all 1,470 liquid spills in 2025, state data identifies the affected landowner. In contrast, of the 36,683 gaseous spills, land ownership was left blank for 36,282 events (98%). As a result, it is not possible to determine which landowners or communities were most impacted by air pollution releases, including methane and other hazardous gases. Among liquid spills where land ownership was identified, federal public lands were the most impacted, followed by state trust lands, highlighting the disproportionate burden placed on public resources held in trust for New Mexicans.

Data gaps prevent transparency related to air pollution impacts, while liquid spill data show that public lands bear the greatest documented harm.

WATER CONTAMINATION

In 2025, 15 waterways were contaminated by oil and gas spills, with 12 of these incidents occurring in San Juan County. Pipeline corrosion and equipment failure were responsible for the majority of water contamination events. A small number of operators accounted for multiple waterway impacts, with Harvest Four Corners, LLC responsible for six contaminated waterways, all in San Juan County.

Repeat offenders are responsible for spills impacting waterways, posing significant risks to water quality, mostly in the San Juan Basin.

LEASEHOLDER	LIQUID SPILLS	GASEOUS SPILLS
Federal	828	57
State	323	36
Private	309	302
Navajo	5	6
Indian	3	0
Jicarilla	1	0
“Blank”	0	36,282

The table above shows the number of liquid and gaseous spills for 2025 by land ownership.

OPERATOR	WATERWAYS AFFECTED	COUNTY
Harvest Four Corners	6	San Juan
Hilcorp Energy Company	2	San Juan
Dugan Production	2	San Juan
Enduring Resources	1	San Juan
DJR Operating	1	San Juan
Enterprise Field Services	1	San Juan
Solaris Water Midstream	1	Eddy
Targa Northern Delaware	1	Lea

The table above shows the number of spills affecting waterways per county in 2025.³⁰

2025 TOP POLLUTERS

The following companies reported the most spills, sorted here into three categories – total spills, gaseous spills of air pollutants, and liquid spills of land and water pollutants.³¹ A relatively small number of operators accounted for a disproportionate share of reported spills in 2025. The same companies appear repeatedly quarter after quarter, indicating a chronic pattern of pollution. Companies such as EOG Resources, Devon Energy, Matador Production, XTO/ExxonMobil, Civitas Permian, and Occidental (OXY) ranked among the top polluters across multiple categories, underscoring the role of large, high-producing operators in driving spill totals.

Spill pollution is concentrated among repeat operators, demonstrating that existing enforcement mechanisms have failed to meaningfully change behavior among chronic polluters.

AIR POLLUTANTS

1	EOG Resources	(8,255)
2	Matador Production	(4,546)
3	XTO/ExxonMobil	(3,769)
4	Civitas Permian	(2,200)
5	Permian Resources	(2,150)
6	Longfellow Energy	(1,456)
7	Avant Operating	(1,301)
8	OXY / Occidental	(1,285)
9	COG	(1,132)
10	Raybaw Operating	(1,129)

LAND / WATER POLLUTANTS

1	Devon Energy	(276)
2	XTO/ExxonMobil	(162)
3	COG	(97)
4	OXY / Occidental	(75)
5	EOG	(47)
6	Permian Resources	(38)
7	Matador Production	(35)
8	Cotera Energy	(26)
9	Mewbourne Oil	(23)
10	Avant Operating	(17)

The tables above shows the number of spills, gaseous and liquid the top 10 operators released in 2025.³²



ACCOUNTABILITY & ENFORCEMENT

On February 25, 2020, New Mexico's Oil Conservation Division (OCD) regained authority to assess civil penalties for violations of the Oil and Gas Act following updates to its enforcement rules. Under these rules, OCD may assess penalties of up to \$2,500 per day per violation, and up to \$10,000 per day when a violation presents a risk to public health or safety, causes significant environmental harm, or continues beyond the time specified in a notice of violation or stipulated order. Total civil penalties are capped at \$200,000 per violation.³³

On August 24, 2021, the New Mexico Oil Conservation Commission adopted a rule that explicitly prohibited liquid oil and gas spills, including releases of oil, chemicals, and produced water.³⁴ This regulatory update followed a petition filed by WildEarth Guardians and the Oil Conservation Division and was intended to strengthen spill prevention and cleanup authority. At the time, the Energy, Minerals and Natural Resources Department (EMNRD) described the rule change as providing OCD with additional tools to prevent and remediate spills in the oil and gas field.³⁵

Together, these actions restored and expanded the state's legal authority to penalize spill-related violations and require cleanup. Yet publicly available records show that enforcement has not been applied at a scale commensurate with the volume and frequency of reported spills. From 2021 to 2025, only a small number of civil penalties were issued by the New Mexico Oil Conservation Division, despite tens of thousands of reported spills and clear evidence that the same operators repeatedly rank among the top polluters quarter after quarter.³⁶

The gap between legal authority and enforcement outcomes indicates a systemic failure to use existing tools to deter repeat pollution.

Absent consistent enforcement, the spill problem is likely to intensify as wells age and production declines. When revenues fall below cleanup costs, operators often delay or abandon plugging and remediation obligations, increasing the risk of leaks from deteriorating wells, pipelines, and tanks. New Mexico already faces an estimated \$200 - \$400 million in plugging and remediation liabilities from abandoned wells—costs that are increasingly shifted from polluters to taxpayers.³⁷

Spill Response and Cleanup

While liquid oil and gas spills are explicitly prohibited under state law, gaseous releases are often reported as “spills” or “releases” without clear legal consequences, despite their frequency, climate impact, and public health risks. New Mexico law requires oil and gas operators to promptly control, contain, and remediate spills and to clean up contaminated soil and water resulting from oil and gas operations.³⁸ In practice, however, not all spills can be fully remediated, and many require years of monitoring and corrective action. In cases involving groundwater contamination, subsurface releases, or unknown spill sources, contaminants may persist indefinitely in the environment.

State regulations specify cleanup requirements and the substances that must be addressed when contamination occurs. Soil cleanup standards for oil and gas releases require removal or treatment of contaminated soil to protective levels based on the type and extent of contamination.³⁹ Water contamination standards are governed by New Mexico water quality criteria adopted and enforced by the Water Quality Control Commission (WQCC), including standards designed to protect surface water, groundwater, and designated uses such as drinking water, agriculture, and aquatic life.⁴⁰

Despite these requirements, cleanup obligations are not absolute. When an operator asserts that meeting cleanup standards is “technically infeasible” or would impose an “unreasonable burden,” the company may petition the OCD for an alternative abatement standard. If approved, this allows reduced cleanup requirements and permits some contamination to remain in place, subject to conditions set by the Division.⁴¹

These provisions create a regulatory pathway for pollution to persist in the environment, particularly where contamination is difficult to locate, expensive to remediate, or challenging to verify. Over time, the cumulative effect of incomplete cleanup, undocumented contaminants, and repeated spills compounds risks to land, water, air quality, and public health, while shifting long-term burdens away from polluters and onto taxpayers and communities.



HOW TO STOP SPILL POLLUTION

1. Enforce civil penalties consistently and transparently

The Oil Conservation Division should assess civil penalties for recurring spill violations, with penalty amounts reflecting the severity, duration, and environmental harm of each incident. Enforcement outcomes should be publicly reported and linked to specific spill events, allowing the public to evaluate deterrence and compliance.

2. Require mandatory penalties for illegal liquid spills

Liquid oil and gas spills have been illegal in New Mexico since 2021. Penalties for these violations should be mandatory, not discretionary, particularly where spills involve produced water, crude oil, or chemicals that contaminate land or water.

3. Impose permit consequences for chronic polluters

Operators with repeated spill violations should face permit suspensions, denials of permit renewals, or increased bonding requirements. Allowing chronic violators to continue expanding operations without consequence undermines spill prevention and rewards noncompliance.

4. Require full chemical disclosure and end trade secret exemptions

All chemicals used or released during oil and gas operations must be fully disclosed to regulators, emergency responders, and the public to enable meaningful risk assessment and spill response. Trade secret claims should not shield hazardous substances from disclosure or accountability when public health and environmental safety are at stake.

5. Ban PFAS in all oil and gas operations to protect public health

PFAS and other “forever chemicals” used in oil and gas operations pose serious health risks, including cancer, immune system damage, and developmental harm, and persist in the environment long after release. New Mexico should prohibit the use of PFAS in oil and gas drilling, fracking, and waste handling to prevent irreversible contamination of land, water, and communities.

6. Close loopholes that inhibit full cleanup

The use of alternative abatement standards should be strictly limited. Cleanup standards must prioritize complete remediation, not long-term contamination management framed as technical infeasibility. Removing the hazardous waste exemption for oil and gas materials will increase remediation standards and clean up oversight.

7. Strengthen spill prevention and reporting rules

OCD should update rules to require greater spill prevention measures, such as improved monitoring for most common spill causes, and accessible reporting of all spill information to the public. Data gaps, including the “unknown” or “blank” categories in the spill data, make it impossible to assess risk for specific demographics.

8. Accelerate cleanup of inactive and orphaned wells

Legacy infrastructure remains a major source of spills and leaks. The state should expedite plugging and remediation of inactive and orphaned wells and update rules to require operators to post sufficient financial assurance to prevent future abandonment.

9. Prevent reuse of oil and gas waste off the oilfield

New Mexico should prohibit the reuse of treated or untreated “produced water” outside of oil and gas activities. Moving this waste off the oilfield would create additional pathways for spills, leaks, contamination, and other accidents to occur.

10. Pause new permitting until spill pollution declines

The state should pause approval of new drilling permits until spill pollution demonstrably declines and enforcement capacity matches the scale of oil and gas activity. Expansion without accountability will only compound existing harm.

CONCLUSION

The data presented in this report show that oil and gas spill pollution in New Mexico is routine, persistent, and largely unpenalized. In 2025 alone, operators reported more than 38,000 spill events, the vast majority involving uncontrolled releases of gas to the atmosphere, alongside hundreds of liquid spills contaminating land and water. These releases are not isolated accidents, but predictable outcomes of an extraction system that generates enormous volumes of waste and relies on aging infrastructure, high-pressure operations, and insufficient oversight.

While New Mexico has taken important steps to strengthen spill rules and restore enforcement authority, the scale and persistence of spill pollution reveal that existing tools are not being used effectively. The same operators are repeatedly the top spillers, yet public records do not show corresponding consequences sufficient to deter future violations. Data gaps and undisclosed chemicals further obscure the true extent of harm and long-term risks to communities, public

lands, and taxpayers. The state has clear authority to enforce penalties, require full chemical disclosure, deny permits to chronic violators, and prevent the discharge of toxic oil and gas waste. **What is lacking is not legal authority, but the political and regulatory will to apply it at the scale this crisis demands.**

Protecting New Mexico's land, water, air, and communities requires treating spill pollution as the public health and environmental emergency it is. Until enforcement becomes routine, and transparency replaces secrecy, pollution from oil and gas spills will continue to compound year after year. The findings in this report make clear that meaningful accountability is both possible and urgently needed. The choice facing New Mexico is not whether spills will occur, but whether the state will continue to allow them without consequence.

Absent decisive enforcement and transparency, spill pollution will remain a predictable outcome of New Mexico's oil and gas industry rather than a preventable failure.



METHODOLOGY

This report is based on analysis of publicly available oil and gas spill data reported to the New Mexico Oil Conservation Division (OCD) for calendar year 2025. Primary data sources include the OCD's Incident Search and Spill Search databases, which together provide incident-level and material-level spill records, as well as quarterly OCD spill records for Q1–Q4 2025.⁴² These data were supplemented with WildEarth Guardians' quarterly Oil & Gas Waste Watch reports and associated analyses, which track spill trends and patterns over time. All records were compiled into a consolidated spreadsheet capturing reported spill materials, volumes, causes, operators, counties, and land ownership fields to enable annual aggregation and cross-comparison across data sources.⁴³

This analysis reflects several inherent limitations in the available spill data and regulatory reporting systems. Spill records are self-reported by oil and gas operators, and independent verification of reported information is limited. Some records lack complete data on material type, spill volume, cause, or affected land ownership, constraining the ability to fully quantify impacts or assign responsibility in every case.

Reported gaseous spill volumes reflect only documented releases and do not capture the full suite of associated air pollutants, including volatile organic compounds and other hazardous air pollutants that may be released concurrently. In addition, enforcement actions and civil penalties are not systematically linked to individual spill records in publicly available databases, limiting the ability to assess whether penalties deter repeat violations. As a result, reported spill counts and volumes should be understood as a minimum estimate of actual pollution events.

Data Processing and Categorization

For purposes of this analysis, a “spill” is defined as any unauthorized release, discharge, escape, or disposal of oil, gas, produced water, or other substances associated with oil and gas operations, consistent with New Mexico law and OCD reporting rules. A single spill incident may involve multiple released materials, each recorded as a separate entry in the state's spill database.

Spill records were categorized and analyzed across multiple dimensions to assess patterns and impacts over time. Spills were further analyzed using the Oil Conservation Division's standardized cause categories, as well as by operator, county, and land ownership, where these data fields were provided.

Spills were classified as gaseous or liquid based on the reported material. Reported spill volumes were aggregated by quarter and by material type. For liquid spills, both total volume spilled and volume lost (unrecovered) were analyzed where data were provided.

Spill Databases and Data Structure

Sorting state oil and gas spill data to calculate accurate totals is more complex than it may appear. Spill records cannot be reliably analyzed using a single search field because spill incidents often involve multiple materials and are categorized inconsistently across reporting fields. For example, searching 2025 data for “produced water release” under incident type yields 914 results, while searching the same dataset for “produced water” under material yields 925 results, reflecting differences in reporting structure rather than actual differences in pollution events.

Spill records are publicly available through two separate OCD databases, each serving a distinct function: The Incident Search lists spill events by time and location and may include multiple materials released during a single incident. The Spill Search lists each material released during a spill as a separate entry, along with the reported volume of that material.

For example, spill Incident Number nAPP2534942335 appears once in the Incident Search for a November 27, 2025 spill at Occidental Permian's South Hobbs Unit CTB. But this same spill appears twice in the Spill Search: once for 81 MCF of carbon dioxide and once for 20 MCF of natural gas (methane) released during the same incident. As a result, Incident Search data are best suited for counting spill events, while Spill Search data are necessary to calculate total volumes of individual pollutants.

In 2025, OCD began migrating all spill material and volume data into the Incident Search database in an effort to consolidate reporting into a single platform.⁴⁴ However, spill volumes reported in the new Incident Search do not always match volumes originally reported in the Spill Search. Due to these discrepancies, this report relies on the original Spill Search records to calculate total volumes of spilled materials and the quantity of spills per material for 2025.

Treatment of Missing and Incomplete Data

Spill analysis is complicated by reporting categories such as “other,” “release other,” “unknown,” and blank fields, which obscure both the nature and extent of pollution.⁴⁵ Rather than excluding these records, the authors included and explicitly identified them as data gaps, recognizing that excluding uncertain records would further understate pollution and bias results.

Spill counts in this report were calculated using a consistent sorting sequence designed to maximize accuracy while preserving transparency. Records were first sorted by unit of volume, then by material, and only then by incident type. This methodology was reviewed by staff at the Oil Conservation Division and reflects the most reliable approach available given the structure of the state's databases.

ENDNOTES

- 1 New Mexico Oil Conservation Division Spill Search, queried January 5, 2026 for all spills reported between January 1 and December 31, 2025: <https://wwwapps.emnrd.nm.gov/ocd/ocdpermitting/data/spills/Spills.aspx>.
- 2 America's Biggest Oil Field Is Turning Into A Pressure Cooker, Wall Street Journal, Dec. 25, 2025, <https://www.msn.com/en-us/money/markets/america-s-biggest-oil-field-is-turning-into-a-pressure-cooker/ar-AA1T34Y1>.
- 3 New Mexico Water Quality Control Commission, WQCC 23-84 (Proposed Rule 20.6.8 NMAC), initiated by petition filed December 27, 2023, and resolved after extensive evidentiary hearings and briefing with the Commission's May 14, 2025 adoption of a rule prohibiting the discharge of treated produced water to surface waters (effective July 12, 2025). In its final order, the Commission expressly found that existing scientific evidence was insufficient to demonstrate protection of public health, groundwater, or surface waters, while allowing only limited, tightly controlled pilot projects in fully contained environments. Docket materials and final orders are available through the New Mexico Environment Department WQCC docket archive, <https://www.env.nm.gov/opf/docketed-matters/>.
- 4 Within weeks of the May 2025 Water Quality Control Commission decision to prohibit the discharge of treated produced water to rivers, aquifers, and crops, industry representatives petitioned the Commission to initiate a new rulemaking asserting that "new science" justified expanded reuse and potential discharge pathways, despite the continued absence of peer-reviewed evidence demonstrating safety for surface waters or downstream uses. This subsequent proceeding generated significant controversy, including widespread public opposition and reports that executive branch officials urged commissioners to advance the rulemaking despite unresolved scientific and legal concerns. In November 2025, the Commission voted to vacate its prior decision to proceed with the subsequent rulemaking, halting further action at that time, even as industry stakeholders continued to pursue regulatory pathways to offload and monetize produced water. See Santa Fe New Mexican, Governor's Office leaned on Cabinet heads to get fracking waste regulation change "over the finish line", Aug. 12, 2025, https://www.santafenewmexican.com/news/local_news/governors-office-leaned-on-cabinet-heads-to-get-fracking-waste-regulation-change-over-the-finish/article_74c64d36-035b-4699-9719-1de1e882571d.html; Source New Mexico, New Mexico governor puts finger on scale in oilfield wastewater vote, Sept. 22, 2025, <https://sourcenm.com/2025/09/22/new-mexico-governor-puts-finger-on-scale-in-oilfield-wastewater-vote/>.
- 5 Annie E. Casey Foundation, 2025 KIDS COUNT Data Book available at <https://www.aecf.org/resources/2025-kids-count-data-book>, referenced from Source NM, National report again ranks New Mexico last in child well-being, June 9, 2025, <https://sourcenm.com/2025/06/09/national-report-again-ranks-new-mexico-last-in-child-well-being/>.
- 6 World Population Review, Poverty Rate by State 2026, <https://worldpopulationreview.com/state-rankings/poverty-rate-by-state>.
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- 13 Each spill is the release of a separate pollutant, and multiple pollutants can be spilled during a single event. The state provides public access to spill data via a Spill Search and an Incident Search. The Spill Search used for this report lists all pollutants released during an incident or event as individual spills, which better quantifies overall potential impact.
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- 19 NMSA 1978, § 70-2-33.2, Chemical disclosure and trade-secret provisions for oil and gas operations. In 2023, WildEarth Guardians petitioned the New Mexico Oil Conservation Division to prohibit per- and polyfluoroalkyl substances (PFAS) and undisclosed chemicals in all downhole oil and gas operations. The Oil Conservation Division Final Rule on PFAS and Chemical Disclosure amended 19.15.36 NMAC to prohibit the use of PFAS in hydraulic fracturing operations, but failed to prohibit PFAS in drilling and other downhole operations or require disclosure of PFAS and other

chemicals used in drilling and hydraulic fracturing fluids. Case No. 23580, available at <https://ocdimage.emnrd.nm.gov/Imaging/CaseFileView.aspx?CaseNo=23580>.

20 State of New Mexico Oil Conservation Division Operator Data, Production Reports 2022-2024, accessed online January 27, 2026, <https://wwwapps.emnrd.nm.gov/OCD/OCDPermitting/Reporting/Production/OperatorAnnualProduction.aspx>.

21 New Mexico Oil Conservation Division Spill Search, queried January 5, 2026 for all spills reported between January 1 and December 31, 2025: <https://wwwapps.emnrd.nm.gov/ocd/ocdpermitting/data/spills/Spills.aspx>.

22 Flare and vent releases unrecovered or “zero” in the spill data.

23 Climate equivalency calculation: NM oil and gas operators reported releasing 9,219,554 thousand cubic feet (MCF) of gaseous pollutants in 2025, predominantly methane (CH₄), according to the NM Oil Conservation Division Spill and Incident Databases. One thousand cubic feet of methane has a mass of approximately 20.3 kilograms, or 0.0203 metric tons, based on U.S. EIA physical property data. Using the U.S. EPA 100-year global warming potential (GWP) of 28 for methane, each MCF released is equivalent to 0.57 metric tons of carbon dioxide-equivalent (CO_{2e}) (0.0203 × 28 = 0.5684). Multiplying this factor by the total reported gas releases yields approximately 5.24 million metric tons of CO_{2e} (9,219,554 MCF × 0.5684 tCO_{2e}/MCF). The U.S. EPA estimates that an average gasoline-powered passenger vehicle emits 4.6 metric tons of CO₂ per year, resulting in a climate impact equivalent to approximately 1.1 million passenger vehicles driven for one year (5,240,000 ÷ 4.6 ≈ 1,139,000). Sources: U.S. EIA, Natural Gas Monthly, https://www.eia.gov/naturalgas/monthly/pdf/ngm_all.pdf; U.S. EPA, Understanding Global Warming Potentials, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>; U.S. EPA, Greenhouse Gas Emissions from a Typical Passenger Vehicle, <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>.

24 All liquid spill volumes reported in BBL (barrels) were converted to GAL (gallons). 1 barrel = 42 gallons.

25 Standard oilfield water tanker capacity assumed at 5,000 gallons. 9,446,051 ÷ 5,000 ≈ 1,889 tanker trucks spilled and 3,515,880 gallons ÷ 5,000 gallons per truck = 703.18 trucks lost to the environment.

26 Convoy length assumes ~60 feet per truck in a tight bumper-to-bumper lineup: 1,900 × 60 ÷ 5,280 = 21.6 miles (≈22 miles).

27 Stanford University School of Sustainability, “Methane and Climate Change,” November 2, 2021, available online at <https://sustainability.stanford.edu/news/methane-and-climate-change-o>.

28 U.S. Environmental Protection Agency, Summary of Input on Oil and Gas Extraction Wastewater Management Practices Under the Clean Water Act, EPA-821-S19-001, May 2020, <https://www.epa.gov/sites/default/files/2020-05/documents/oil-gas-final-report-2020.pdf>.

29 Cloelle Danforth et al., An integrative method for identification and prioritization of constituents of concern in produced water from onshore oil and gas extraction, Environment International, Volume 134, January 2020, 105280, <https://doi.org/10.1016/j.envint.2019.105280>.

30 Impacts to water are noted in spill reporting within two fields: 1) “waterways affected” and 2) “ground water impacted” both of which are assigned a “yes” or “no” in the dataset.

31 Gaseous air pollutants are categorized as the following materials in the spill data: carbon dioxide, natural gas (methane) flared, natural gas (methane) vented, other, and “unknown”. Liquid pollutants are categorized as the following in the spill data: chemicals, condensate, crude oil, diesel, drilling fluid/mud, gasoline, glycol, lube oil, motor oil, natural gas liquids, other, produced water, sulfuric acid, and “unknown”.

32 Rankings are based on operator self-reported spill data submitted to the Oil Conservation Division and reflect reported spill counts, not production volume or facility count. The following operators have multiple legal names within the spill data and have

been combined as follows: COG includes COG Operating and COG Production; Avant Operating includes Avant Operating I and Avant Operating II; OXY includes OXY USA and Occidental Permian; Cotera Energy includes Cotera Energy Operating, Cotera Energy Operating E, and Cotera Energy Operating F.

33 OCD civil penalty authority reinstated NMSA 1978, § 70-2-31(B); see February 25, 2020 press release, “Rule authorizing Oil Conservation Division to assess civil penalties for Oil and Gas Act violations is now in effect” accessed online January 17, 2025, https://www.emnrd.nm.gov/wp-content/uploads/sites/6/OCDPenaltiesRuleFinalizedFebruary252020_000.pdf.

34 Civil penalty limits and escalation criteria 19.15.5.10(D) NMAC.

35 New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Commission Spill Rule Hearing and Rule Release, July 8, 2021, quoting EMNRD Cabinet Secretary Sarah Cottrell Propst: “Finalization of the release rules are another example of this administration’s commitment to collaboration and protecting the environment... Now that the updated release rules are in effect, the OCD will have additional tools to prevent and remediate spills that occur in the oil and gas field,” <https://www.emnrd.nm.gov/officeofsecretary/wp-content/uploads/sites/2/OCDSpillRuleHearingRuleRelease070821.pdf>.

36 WildEarth Guardians, Oil & Gas Waste Watch Reports, Q1–Q3 2025 analyzing publicly available spill data at <https://wildearthguardians.org/climate-health/oil-gas-waste/>; public information request and review of publicly available OCD enforcement actions and press releases (2021–2025); OCD compliance activity available at <https://www.emnrd.nm.gov/ocd/compliance/>.

37 New Mexico Legislative Finance Committee Policy Spotlight: Orphaned Wells, New Mexico State Legislature, June 24, 2025: https://www.nmlegis.gov/Entity/LFC/Documents/Program_Evaluation_Reports/LFC%20Policy%20Spotlight%20-%20Orphaned%20Wells%20-%20Final.pdf.

38 Oil and Gas Act and spill reporting and response rules NMSA 1978, § 70-2-12(B); 19.15.29 NMAC.

39 Soil cleanup requirements for oil and gas releases 19.15.30 NMAC.

40 Water Quality Control Commission standards NMSA 1978, § 74-6-4; 20.6.4 NMAC; 20.6.2 NMAC.

41 Alternative abatement standards 19.15.30.9 NMAC.

42 New Mexico Oil Conservation Division (OCD), Incident Search database, Energy, Minerals and Natural Resources Department, available at <https://wwwapps.emnrd.nm.gov/ocd/ocdpermitting/data/incidents/Incidents.aspx> and New Mexico Oil Conservation Division (OCD), Spill Search database, Energy, Minerals and Natural Resources Department, available at <https://wwwapps.emnrd.nm.gov/ocd/ocdpermitting/data/spills/spills.aspx>.

43 WildEarth Guardians, 2025 Oil and Gas Spill Dataset, consolidated spreadsheet of OCD spill records, on file with authors and available upon request.

44 Email from OCD Deputy Director Brandon Powell, 9/15/25, stating “We have been updating the Incidents search in an effort to gather all the data in a single search. As such, we have added the volumes to that search.”

45 “Other” is a category that does not define the cause, therefore the cause is unknown as listed in the Spill and Incident Searches. A precise cause may be listed in individual spill records on file with the Oil Conservation Division.

ENDORSEMENTS

