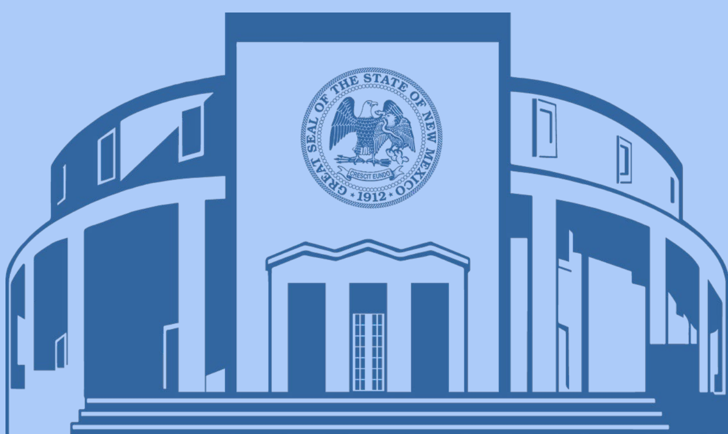
New Mexico Legislative Finance Committee
Policy Spotlight

Policy Spotlight: Orphaned Wells



June 24, 2025

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Summary

New Mexico faces significant and growing financial liabilities for oil and gas well cleanup.

New Mexico has more than 60 thousand oil and gas wells that will eventually need to be plugged. Properly plugging and decommissioning those wells at the end of their productive lives is important to protect health and safety, the environment, and future resource development.

While operators plug most wells in New Mexico, the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department (EMNRD) can intervene to plug wells that operators leave inactive and unplugged without authorization. In the past 20 years, OCD has plugged approximately 1,000 of those "orphaned" wells, or 5 percent of all wells plugged in the state. However, the number of wells the division is authorized to plug has consistently outpaced its plugging efforts.

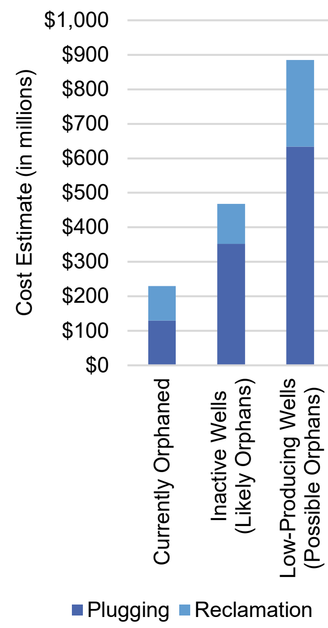
Currently, OCD has plugging authority for roughly 700 wells on state and private ("fee") lands. The state likely will need to plug an additional 1,400 inactive wells for which OCD has not yet pursued plugging authority. On top of that, there are more than 3,000 wells on state or private land producing extremely small quantities of oil and gas whose expected cleanup costs far exceed their predicted future revenues, increasing their risk of being orphaned.

At recent state-contracted rates, plugging, remediating and reclaiming currently orphaned wells and their associated infrastructure will likely take close to a decade and cost more than $208 million. Plugging and reclaiming the other 1,400 inactive wells on state and private land could cost more than $468 million. Should additional extremely low-producing wells be orphaned by their operators, the costs for plugging and reclaiming them could approach $1 billion. Altogether, the state's current and near-future liability for well plugging and site remediation is estimated at $700 million to $1.6 billion.

Recent federal grants have increased OCD's plugging capacity, but the division is still unable to plug wells at a rate that would allow it to clear its existing orphaned well list in a timely fashion, even without accounting for additional wells that are likely to become orphaned. The division has also struggled to control the costs of plugging and reclamation. Given that, it would be prudent for the state to reduce its future liability for orphaned wells, which could be accomplished through a variety of mechanisms, including revising its financial assurance system to incentivize operators to plug wells before they become fully inactive.

Properly plugging and decommissioning wells at the end of their productive lives is important to protect health and safety, the environment, and future resource development.

Chart 1. Liability Estimates for Plugging and Reclamation



*Note: Only wells on state or private lands; categories are mutually exclusive; plugging based on actual depth, $43.85/foot, gas wells costing 9 percent more than oil wells; reclamation at $83 thousand per well site.

Source: LFC

Project Objectives

- Assess the current scope of the orphaned well problem in New Mexico, including the environmental, economic, and health and safety impacts.
- Evaluate the adequacy of the state's current regulatory framework for preventing wells from becoming orphaned, and the efficacy of its current efforts to plug and abandon orphaned wells.
- Estimate the state's potential future liability for orphaned wells and accompanying infrastructure.

Key Findings

- Current orphaned wells will cost the state more than $200 million; future liability very likely exceeds $700 million.
- Reforms that prioritize operator-led cleanup can limit the state's financial exposure.

Key Recommendations

The Legislature should consider:

- Amending statute to define "orphaned" and "abandoned" wells, aligning the definitions with their common use in the oil and gas industry and clarifying that "orphaned" wells are oil and gas wells for which the state has pursued and received plugging authority;
- Amending Section 70-2-14 NMSA 1978 to specify that wells producing below certain thresholds set in rule require additional financial assurance;
- Amending Section 70-2-14 NMSA 1978 to allow an operator to meet its financial assurance obligations by fully funding a third-party trust or escrow up to OCD's site- or operator-specific estimated plugging and remediation costs; and
- Amending statute to clarify OCD's authority to review and disallow the transfer of wells should the division determine, through processes outlined in rule, the purchaser is unlikely to be able to fulfill its asset retirement obligations.

The Energy, Minerals and Natural Resources Department should:

- Promulgate rules defining "low-producing" wells (such as wells producing less than 750 BOE annually or ~ 2 BOE per day);
- Promulgate rules to expand the definition of "inactive" wells to include consistently ultra-low producing wells (such as wells that produce less than 180 BOE annually or ~0.5 BOE per day for more than three years);
- Promulgate rules specifying that low-producing wells require individual well financial assurance, posted within two months of

notice, and clarifying that their transfer is contingent on regulatory approval;

- Publish a list of orphaned wells monthly, including both wells the state has already plugged and those it is planning to plug and the costs associated with their plugging and reclamation, to ensure transparent tracking of state expenditures on orphaned wells; and
- Ensure the presence of a “company man” for all state-contracted well plugging who is responsible for filing daily reports on the activities undertaken by the contractor, the materials used, and the estimated plugging cost.

Background

New Mexico has been an oil and gas producing state for more than a century. During that time, companies have drilled at least 121 thousand oil and gas wells in the state, mostly in the northwest (San Juan Basin) and southeast (Permian Basin). Wells must be plugged at the end of their productive lives to protect the environment, health and safety, and future resource production. For wells still producing any volume of oil or gas, the state typically leaves it to operators to decide when the well should be plugged—in recent years, the average well produced roughly two barrels of oil equivalent a day in the year before it was plugged. However, if a well becomes fully inactive for more than a year, the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department (EMNRD) can require an operator to plug the well or pursue authority to plug it itself to mitigate potential risks. Since the 1970s, OCD has largely paid for state-contracted plugging using money from the oil and gas reclamation fund, which receives a portion of the oil conservation tax. Since 2022, the state has also received $55.5 million in multiyear federal grants to address unplugged orphaned wells on state and private lands.

New Mexico has long recognized the importance of plugging wells at their end of their lives, but there is no consensus on when that is.

Oil and gas wells, by design, tap into subsurface reservoirs that are often more than a mile deep. When active production ceases, the wells can become pathways for hazardous substances to escape, including gases like methane and hydrogen sulfide and fluids like produced water and residual hydrocarbons. Those leaking gases and fluids can contaminate groundwater, endanger nearby homes, and impede future development of oil and gas resources. Modern plugging involves using cement to seal off oil, gas, and water-bearing formations to prevent leaks to the surface or adjacent strata, while site remediation and reclamation involve removing contaminated soil and disposing of surface infrastructure. Since the 1930s, New Mexico has required operators to plug wells at the end of their productive life.

Plugging wells mitigates the risk of a variety of hazards, including groundwater contamination. In the early 20th century, most states started requiring companies to plug oil and gas wells that were no longer producing or otherwise inactive with the goal of oil conservation because unplugged wells can lead to pressure drops or water intrusions that impede oil recovery. However, over time, regulators also recognized the importance of plugging for conservation of other resources, including groundwater. Improperly sealed wells can act as a conduit for fluids and gases to migrate into underground aquifers. A 2011 study by the Groundwater Protection Council, an organization whose members are state groundwater regulators, found inactive and unplugged wells were responsible for 22 percent of oil-

Terms and Definitions

Many terms used in the oil and gas industry are inconsistently defined. For example, "abandoned well" means different things in different parts of New Mexico statute. For this report, the following definitions apply, unless otherwise specified:

Orphaned well
A well for which the state has received plugging authority, either through a settlement agreement, order, or intergovernmental agreement.

Abandoned well
A well that has been properly plugged, either by the state or its operator.

Inactive well
A well that has not produced or injected for at least 15 months.

Plugging
Placing cement plugs at specific depths inside the wellbore to prevent migration of fluids and gas.

Remediation
Removal or treatment of contaminated soil and groundwater.

Reclamation
Removing infrastructure and returning the land to a condition as close to its original state as possible.

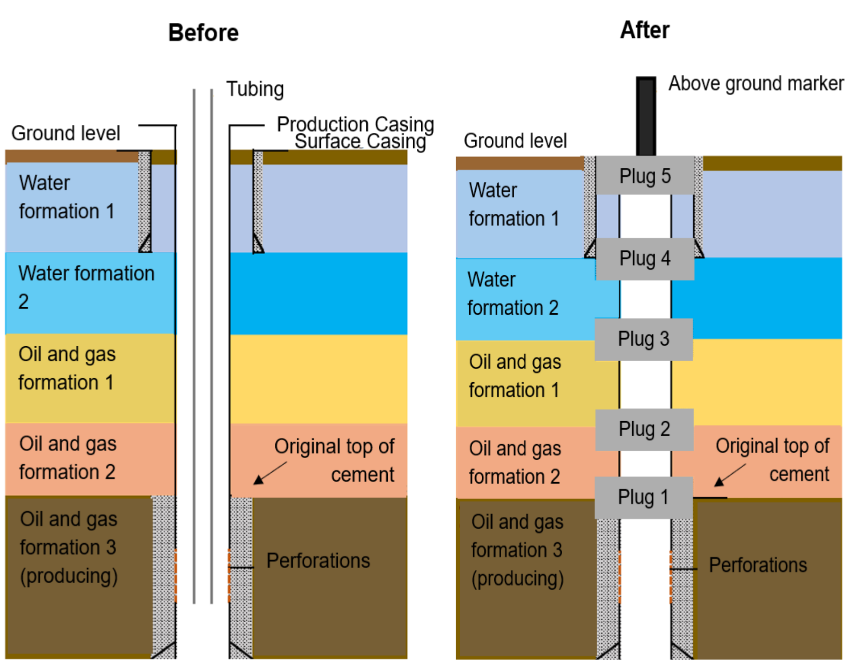
Produced water
Water that is brought to the surface alongside the oil and gas produced from a well. Produced water is also called "saltwater" because it typically contains high levels of salts, hydrocarbons, and other contaminants.

Barrel of oil equivalent (BOE)
A standardized unit that combines oil and gas into a single measure; one barrel of crude oil or 6,000 cubic feet of natural gas (6 mcf) equals one BOE

and gas-related groundwater contamination incidents in Ohio and 14 percent in Texas over a 16-year study period. Improperly plugged or unplugged wells have also been implicated in surface contamination incidents, including recently near the Texas-New Mexico border, where the wells have served as conduits for large leaks of produced water and hydrocarbons. Unplugged or improperly plugged wells can also leak gases, including hydrogen sulfide, which is toxic and highly corrosive, and methane, which is both a potent greenhouse gas and explosive. The federal Environmental Protection Agency estimates annual methane emissions from the nation's inactive and unplugged oil and gas wells are comparable to adding an additional 2 million gas-powered cars to the road. Although rare, methane leaks from oil and gas wells have also caused buildings to explode.

OCD regulations for plugging require placing cement at various depths inside the wellbore. Cement is the primary material used in oil and gas wells to prevent fluid and gas migration. When a well is constructed, companies anchor the steel casing that lines the well in place by filling sections of the space between the casing and the surrounding rock formation with cement. Similarly, when a well is plugged, cement is used to both seal off the producing formation and any hydrocarbon- and water-bearing formations above it. OCD may also require other types of mechanical barriers to be set inside the wellbore. The location of plugged wells must be marked with a 4-inch-wide, 4-foot-tall steel post, unless OCD grants a waiver to place the marker below ground.

Figure 1. Well Plugging



Source: OCD

Rising Incidence of State-Contracted Emergency Well Plugging in Texas

In November 2024, Texas' oil and gas regulator, the Texas Railroad Commission (RRC), requested an additional $100 million appropriation for FY26-27 for well plugging, saying, "Emergent issues have developed that have made [the initial $234 million request] insufficient to protect groundwater and the environment." While the request did not cite any specific incidents, RRC has reported responding to a number of well emergencies in the region of west Texas bordering New Mexico in recent years. For example, in December 2023, an unplugged well on a ranch in west Texas began leaking produced water at 14,000 gallons an hour. The water eventually covered more than 300 acres and pooled to as deep as a foot. Testing found the water contained 10 times the EPA's allowable amount of benzene, a chemical found in crude oil that is a known carcinogen. With no existing operator associated with the well, RRC paid $2.5 million to plug the well and clean up the spill.

After a well is plugged, OCD may require remediation and reclamation of the well site. During active production, wells may leak oil, produced water, or drilling fluids, either from the well itself or from associated pits and tanks. When spills occur, operators are required to remediate the site promptly. However, a second round of remediation is often necessary at the end of a well's life to ensure the site is clean before closure. Remediation focuses on removing polluted soil and, if necessary, addressing impacts to surface water or groundwater. When remediation is necessary, OCD regulations require the top 4 feet of soil be free of contamination, usually achieved through excavation and replacement of the affected soil. Reclamation is usually characterized as restoring the land to its prior physical and ecological condition. Prior to well closure, OCD requires operators to level the site, remove equipment and debris, and close pits and tanks. OCD does not have a requirement for the operator to restore native vegetation or remove roads. The State Land Office (SLO) has its own requirements for reclaiming well sites on state trust land, which include erosion prevention, removal of infrastructure and roads, and revegetation.

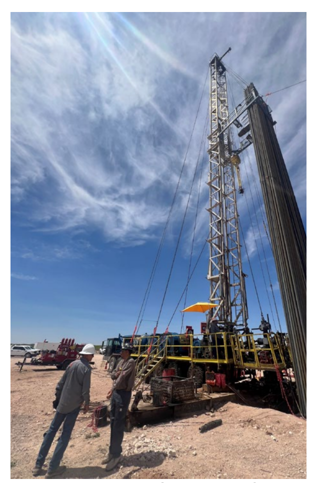
Figure 2. Remediation and Reclamation

Remediation involves cleaning up surface and groundwater contamination, as at the Chaves County site on the left. Reclamation involves leveling the site and removing any equipment, as at the Eddy County site on the right.

Source: LFC files

Roughly half of wells drilled in New Mexico have already been plugged, although not always to modern standards. Of the roughly 121 thousand wells drilled in New Mexico, OCD records compiled by the energy analytics firm Enverus show at least 54 thousand have been plugged. Sixty-four percent of those wells have a plugging date, indicating there is an administrative record associated with their abandonment. The remaining wells in "plugged and abandoned" status have either blank or placeholder plugging dates. According to OCD, placeholder dates may mean they were plugged prior to modern recordkeeping or they remain unplugged. For wells plugged prior to the 1990s, the plugs may not meet modern plugging standards. While most modern plugging techniques were well-understood by the 1990s, the American Petroleum Institute, which publishes technical standards for the industry, did not release a manual of recommended practices for wellbore plugging and abandonment until 2021.

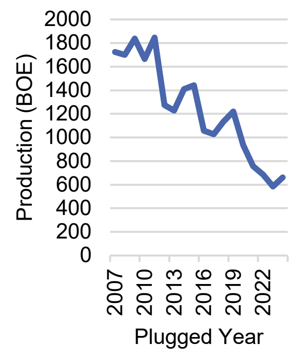
Figure 3. Modern Plugging Rig



Source: LFC Files

For wells producing any volume of oil or gas, OCD has historically left it to the discretion of operators to decide when to plug and reclaim the well. While state statute authorizes OCD to "require dry or abandoned wells to be plugged" to prevent oil, gas, or water from migrating between underground formations, neither "dry" nor "abandoned" is defined. In regulation, OCD requires operators to plug a well that is "no longer useable for beneficial purposes; or a period of one year in which a well has been continuously inactive." "Beneficial purpose" is not defined, leaving operators with considerable discretion to decide when a well producing in any quantity has reached the end of its useful life. Operators may weigh different variables in their decision-making, including oil and gas prices, produced-water disposal costs, the potential for reworking the well to increase production, and the opportunity to drill new wells nearby, which often requires plugging older wells. In recent years, the average well produced roughly two barrels of oil equivalent (BOE) a day in the year before it was plugged, a decline from the mid-2000s. When wells stop producing altogether for an extended period, they become "inactive," and must be either plugged, approved for temporary abandonment, or returned to production within a year.

Chart 2. Average Production in Year Prior to Plugging
n = 13,134



Source: Enverus

Since the 1970s, the state has stepped in to plug oil and gas wells when the operator does not.

When a well becomes inactive and is not plugged by its operator, OCD can pursue authority to plug the well itself. Once it receives that authority, OCD contracts with a plugging company. The division pays those contractors using funds from several sources, including forfeited financial assurances, the oil and gas reclamation fund, and, recently, federal grant funding through the Infrastructure, Investment and Jobs Act (IIJA). Since FY19, OCD's contractual services spending has grown more than 2,000 percent, primarily as a result of plugging and reclamation of orphaned wells and their associated infrastructure. Most of that money has come from federal grants.

Plugging and reclamation account for a growing majority of OCD's spending. OCD has broad authority to regulate oil and gas activity in New Mexico. Its statutory responsibilities include conducting inspections, overseeing drilling operations, and ensuring wells are properly plugged at the end of their productive life. State law also requires OCD to collect financial assurance from operators before drilling begins, to help insulate the state from future plugging and reclamation liability. As New Mexico has grown into the second-largest oil-producing state in the country, behind only Texas, OCD has also expanded, in both budget and personnel, although it remains relatively small compared to regulators in other oil- and gas-producing states. OCD regularly reports challenges with recruitment and retention, which has contributed to the division consistently underspending its budget. In recent years, plugging and reclamation of orphaned wells and their associated infrastructure have become a major part of OCD's budget and responsibilities; contractual services spending, which

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is primarily for addressing orphaned wells, has far exceeded any other spending category in the division's budget in recent years.

Table 1. OCD Sources and Uses
(in thousands)

	FY19	FY20	FY21	FY22	FY23	FY24	FY25 (budgeted)	FY26 (allocated)
Sources								
General Fund Transfers	$5,020.9	$5,835.3	$6,203.1	$6,451.1	$7,163.1	$8,836.6	$10,374.6	$10,439.3
Other Transfers	$0.0	$0.0	$3.5	$88.1	$348.8	$394.9	$0.0	$0.0
Federal Revenues	$673.8	$510.7	$214.7	$325.7	$10,093.6	$15,913.9	$25,930.2	$30,861.5
Other Revenues	$3,040.8	$4,523.6	$5,333.2	$19,384.6	$30,353.4	$24,698.8	$21,475	$25,192.8
Fund Balance	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$722.1	$0.0
Total Sources	$8,735.5	$10,869.6	$11,754.5	$26,249.5	$47,958.9	$49,844.2	$58,501.9	$66,493.6
Uses								
Personal Services and Employee Benefits	$4,305.3	$4,303.7	$4,891.2	$5,291.0	$6,548.1	$7,173.7	$9759.9	$9,759.9
Contractual Services	**$1,711.6**	**$1,415.3**	**$3,136.8**	**$10,607.9**	**$13,219.0**	**$28,546.7**	**$44,990.9**	**$52,983.9**
Other	$716.5	$1,244.5	$911.3	$1,503.3	$2,228.4	$2,368.6	$3,451.4	$3,450.1
Other Financing Uses	$119.9	$132.0	$123.9	$91.8	$0.0	$144.8	$299.7	$299.7
Total Uses	$6,853.3	$7,095.5	$9,063.2	$17,494.0	$21,995.5	$38,233.8	$58,501.9	$66,493.6

Source: LFC files

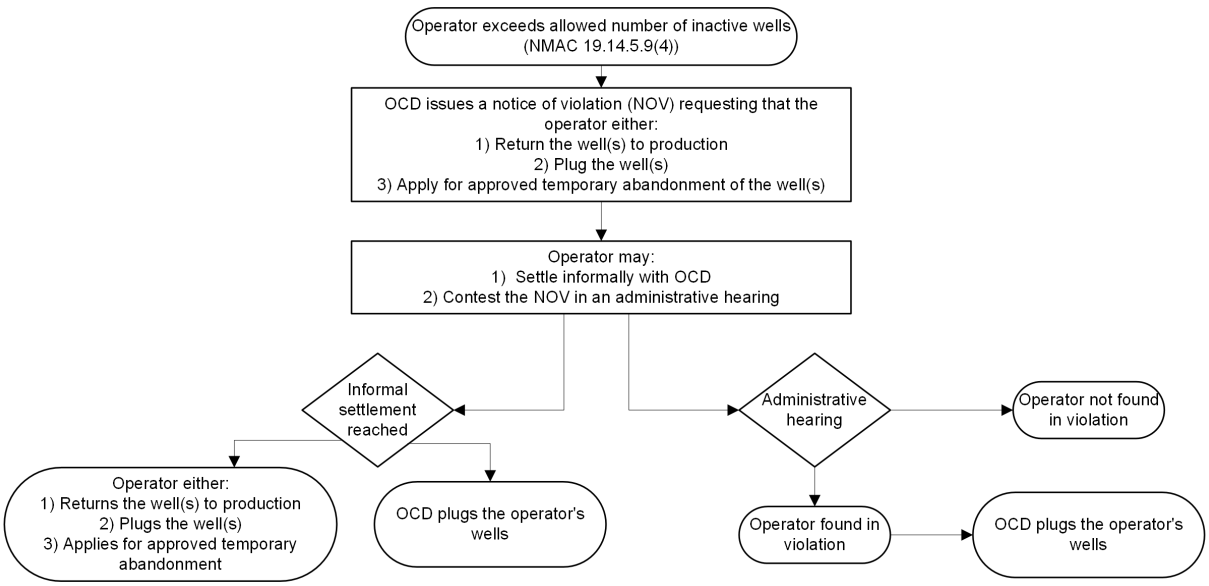
OCD typically pursues plugging authority for a well only when the operator is unresponsive to enforcement action. OCD can issue a notice of violation (NOV) to any operator that has more inactive wells than they are allowed under NMAC 19.15.5.9 A(4). Inactive wells are any production in 15 months and which are not plugged or approved for tem NOV, OCD offers operators the option to informally resolve the situation vi (“agreed compliance order”) prior to a formal administrative law hearing. O an informal agreement with OCD may contest the NOV in an administrative much like a civil trial. In practice, many operators simply do not respond to i a default judgment in OCD’s favor at hearing. Following the hearing, if the c violation of the law, OCD’s director may issue an order directing the operato days or have them plugged by the state (Figure 4). OCD can also plug wells government and tribal governments as requested, using either state funding, 1978, or through intergovernmental cost-sharing agreements.

Table 2. Number of Allowed Inactive Wells

Size of Operation	Number of Wells
100 wells or less	Two or fifty percent, whichever is less
101 to 500 wells	Five or less
501 to 1000 wells	Seven or less
More than 1000 wells	10 or less

Source: NMAC 19.15.5.9

Figure 4. How Wells are "Orphaned" in New Mexico

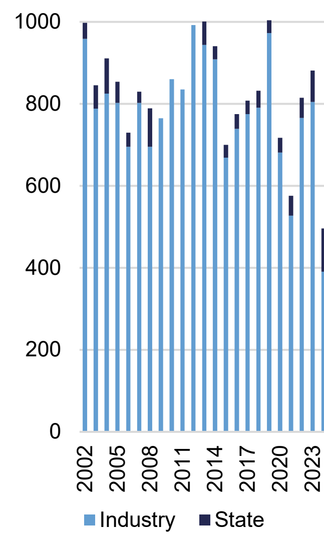


Source: LFC

OCD has not kept detailed records of state-contracted plugging, but the division has plugged at least 967 wells since 2002, or approximately 5 percent of all wells plugged in New Mexico during the same period. Historically, OCD has not kept robust records of the wells it has plugged, making it difficult to evaluate trends in state-contracted well plugging over time. However, the division began reporting the number of orphaned wells plugged during a fiscal year as part of its budget performance measures starting in 2002. According to those records, OCD has plugged at least 967 wells since then, although the actual number is likely higher because reporting was not required for fiscal years 2009-2012. That equates to approximately 51 wells per year and 5 percent of all wells plugged in the state since 2002. However, OCD has always had a plugging backlog, meaning the percentage of state-plugged wells would be higher if OCD were able to plug all wells it had the authority to plug in any given year. In past performance reports to LFC, OCD has cited a number of reasons for delays in plugging, including contractor availability, funding shortfalls, weather conditions, well conditions, and delays in procurement contracting (see Appendix A).

Statute requires operators to provide financial assurance to OCD before drilling to insulate the state from well plugging and reclamation liability, but the maximum allowable amounts do not cover actual costs. Financial assurance requirements for oil and gas operations in New Mexico are set partly in statute and partly in rule. Section 70-2-14 NMSA 1978 requires operators to post financial assurance before they can drill or

Chart 3. Wells Plugged by Year
FY02-FY24



Note: OCD was not required to report to the LFC on state-contracted well plugging between FY09 and FY12.

Source: OCD, LFC Report Cards

produce a well, in an amount "sufficient to reasonably pay the cost of plugging the wells covered." However, the statute caps total financial assurance at $250 thousand per operator for all active wells, even though plugging a single well can often exceed $100 thousand, and most operators in the state have more than five wells. The statute also requires higher bonding amounts for wells in "temporarily abandoned status," although that term is not defined. In practice, for the purposes of financial assurance, OCD considers wells "temporarily abandoned" when they have reported no production for more than two years or when operators apply for official permission to shut-in a well temporarily. In rule, OCD sets the maximum financial assurance for temporarily abandoned wells at $1 million, which reflects their higher risk of being orphaned. According to a study examining 40 years of oil production in California, the chance a dormant well will resume production is 50-50 after just 10 months of dormancy and 25 percent after five years of dormancy. (See Appendix B for other states' minimum and maximum financial assurance amounts).

Even if OCD plugs an operator's well or wells, its financial assurance remains intact unless the division actively pursues forfeiture. Operators can use one of several financial instruments to fulfill the state's financial assurance requirements. Surety bonds, typically issued by specialized surety companies, are the most commonly used type of financial assurance. They are paid for with annual premiums and secured by varying amounts of collateral; typical premium rates are 1 to 5 percent of the total bond amount annually. Regulations state OCD will not approve the transfer of a well to a new operator until appropriate financial assurance is in place. Once a new operator provides the required financial assurance, the previous operator can request release of its own bond or policy. When OCD plugs an operator's wells, it can seek forfeiture of the financial assurance. In the case of a surety bond, OCD must file a claim with the surety company that is the third-party guarantor. The surety will then initiate an investigation to determine the validity of both the bond and the claim. Investigations can be lengthy and may involve site visits and requesting evidence from OCD. At the end of the process, if the surety company finds the claim is valid, it will try to get the operator to pay and, only failing that, pay the claim itself. If the operator is bankrupt or the surety disputes the validity of the bond, the process can be complicated and involve litigation. In most cases, the funds recovered through forfeiture fall short of the actual cleanup cost. Although OCD is authorized by statute to sue operators for the remaining balance, it has not done so.

Table 3. Estimated Annual Premiums for Surety Bonds

Premium Rate	100+ Active Wells	25+ Temporarily Abandoned Wells
2%	$5,000	$20,000
4%	$10,000	$40,000

Source: LFC files

Financial Assurance Tiers for Wells on Private and State Lands

Active wells
- One well: $25 thousand plus $2 per foot depth.
- One to 10 wells: $50 thousand.
- 11 to 50 wells: $75 thousand.
- 51 to 100 wells: $125 thousand.
- More than 100 wells: $250 thousand.

Temporarily abandoned wells
- One well: $25 thousand plus $2 per foot depth.
- One to five wells: $150 thousand.
- Six to 10 wells: $300 thousand.
- 11 to 25 wells: $500 thousand.
- More than 25 wells: $1 million.

Source: NMAC 19.15.8.9

Allowable Types of Financial Assurance

Surety bond
A three-party agreement in which a surety company guarantees the operator will fulfill its plugging and reclamation obligations.

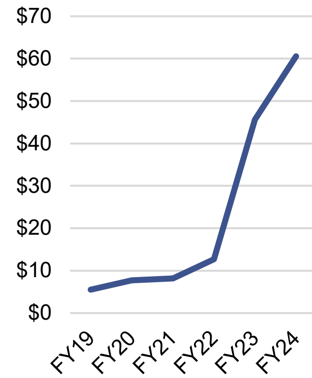
Cash bond
A cash deposit held by the state to guarantee the operator fulfills its obligations.

Irrevocable letter of credit
A financial guarantee issued by a bank, ensuring payment to the state under specified conditions and with appropriate documentation.

Insurance policy
A two-party contract in which an operator pays a premium in exchange for an insurer guaranteeing a defined well cleanup benefit.

Historically, OCD has used the oil and gas reclamation fund to pay for plugging orphaned wells; as of April 2025, the fund's balance was $66.7 million. The Legislature established the oil and gas reclamation fund in 1977 as a nonreverting fund "for use by the oil conservation division in carrying out the provisions of the Oil and Gas Act." Among the currently enumerated purposes of the fund is ensuring the proper plugging and reclamation of "abandoned oil and gas wells and associated facilities" (Section 70-2-38 NMSA 1978). While the statute does not define "abandoned," the fund has historically been used primarily for plugging and reclamation of wells and associated infrastructure without a locatable or financially viable operator. At the time of its creation, the fund received 0.01 percent of oil and gas conservation tax revenues. Today, the reclamation fund receives 10.5 percent of conservation tax proceeds when the price of West Texas Intermediate crude oil is less than $70 and 19.7 percent when it is above $70. Those distributions represent the highest percentages of the conservation tax the reclamation fund has received since the fund was created (see Appendix C). The remainder of the oil and gas conservation tax goes to the general fund. The reclamation fund also receives financial assurances the state has forfeited from oil and gas producers that fail to meet their reclamation obligations, but those are a minor contributor. The fund's balance grew 998 percent between the end of FY19 and the end of FY24, to $65 million, because of high oil and gas prices and production. Despite those record balances, the state has made minimal expenditures from the fund in the last two years, instead using federal grants to pay for plugging orphaned wells.

Chart 4. Oil Reclamation Fund Balance
(in millions)



Source: LFC cash balance

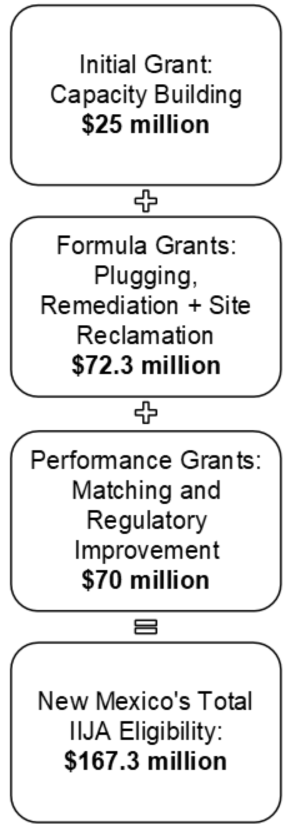
Table 4. Reclamation Fund Sources and Uses
(in thousands)

	FY19	FY20	FY21	FY22	FY23
Beginning Cash Balance July	**$4,226.4**	**$6,322.7**	**$7,777.7**	**$9,073.2**	**$26,995.0**
Oil and Gas Conservation Tax Revenue	$3,529.5	$3,340.3	$4,656.3	$22,222.6	$26,933.7
Bond Forfeitures, Salvage, and Reimbursement Recoveries	$88.5	$0.00	$0.00	$161.3	$0.00
Total Revenue	$3,617.9	$3,340.3	$4,656.3	$22,383.9	$26,933.7
Total Expenses Directly from Fund	$1,521.6	$1,885.4	$3,361.3	$4,462.1	$3,030.7
Ending Cash Balance June	**$6,322.7**	**$7,777.7**	**$9,072.7**	**$26,995.0**	**$50,898.1**

Source: OCD

Since 2022, New Mexico has received $55.5 million in federal grants to identify and plug orphaned oil and gas wells and is eligible for up to $111.8 million more. The federal Infrastructure Investment and Jobs Act, (IIJA) or bipartisan infrastructure law, signed into law in 2021, allocated more than $4 billion toward identifying, plugging, and remediating orphaned wells on state, federal, and tribal lands. The law specifies that for the purposes of wells on state and private lands, the term orphaned "has the meaning given the term by the applicable state." Under IIJA, states became eligible for three types of grants: an initial grant, formula grants, and performance grants. The initial grant was intended to strengthen states' existing well-plugging programs. New Mexico received an initial grant of $25 million. The formula grants provide additional financial assistance for plugging and reclamation on state and private lands. New Mexico is eligible for up to $72.3 million in formula grants; it received $25 million in 2024. Finally, performance grants are intended to reward states for meeting specific targets; matching performance grants of up to $30 million are available to cover the cost of any spending on orphaned well plugging in a single fiscal year that exceeds historic state averages, while regulatory improvement performance grants provide up to $40 million to states that improve their standards and procedures around well-plugging and strengthen their regulatory frameworks to avoid future orphaned well liability. New Mexico received a $5.5 million performance matching grant in January 2025 based on the average of its spending on well plugging between 2010 and 2019. A federal review of grants briefly paused funding in early 2025, but it has since resumed.

Figure 5. New Mexico's IIJA Funding Eligibility



Source: Orphaned Well Program Office

OCD spent $46.4 million between FY19 and FY24 on plugging and reclamation of 360 wells and their associated infrastructure.

With federal funding to plug and remediate orphaned wells, OCD has recently increased its yearly plugging rate from 30 to 50 wells a year to over 100 in FY24. Historically, OCD has not consistently or systematically tracked the costs incurred by the state for plugging and reclamation, complicating the assessment of long-term trends in spending on orphaned wells. However, at a high level, OCD has spent more in the last five years on plugging and reclamation than it did in the previous 10. As spending has increased, the costs for plugging and remediation have also risen dramatically.

Plugging costs are highly site-specific but depth, type of well, and other variables typically affect costs. Numerous studies have found the cost of plugging can vary widely between different well sites. However, a 2021 study of more than 19 thousand wells across several states found certain factors to be predictive of increased costs, including well depth, well age, and the elevation of the well site. Additionally, the study found gas wells were, on average, 9 percent more expensive to plug than oil wells because of additional time and equipment often needed to stop the flow of natural gas during plugging operations. In testing those findings on recent well plugging costs in New Mexico, the relationships between plugging costs and depth and plugging costs and well type hold true; deeper wells were more expensive to plug and gas wells were more expensive than oil wells. (In FY24, the average gas well cost 101 percent more to plug than the average oil well, but the sample size was only 10 wells). Wells at higher elevations, however, were not more expensive in FY24 than lower elevations, and older wells were not significantly more expensive than more

Scan the QR code for an interactive map of wells plugged by the state recently drilled wells. New Mexico's current financial assurance regulations account for the increased cost of depth in requirements for single well bonds, but not all-well or blanket bonds, and do not differentiate between oil and gas wells.

The average per-well cost of state-contracted plugging has risen nearly 450 percent since FY19 and the average per-foot cost has risen 270 percent, more than eight times the rate of overall oilfield inflation. OCD does not systematically track the cost of well plugging, but LFC analysis of available invoices from FY19 onward shows the per-well cost of state-contracted plugging rose 443 percent between FY19 to FY24, from an average of $30 thousand to $163 thousand. In FY24, costs ranged from $31 thousand to $778 thousand. Because deeper wells, which take more time and require more cement, are typically more expensive to plug, many cost comparisons use cost-per-foot instead of a per-well average. Since FY19, per-foot costs for state-contracted plugging have risen roughly 270 percent. In FY24, the average per-foot cost of state-contracted plugging in New Mexico was $43.85. The Texas Railroad Commission (RRC) has reported comparable costs for state-contracted plugging in RRC District 8, a region that borders New Mexico. However, RRC attributes those high costs primarily to complex emergency plugging incidents in District 8. While New Mexico has had a handful of emergency plugging incidents, its costs for nonemergency plugging are similarly high (see Appendix D for more on Texas' plugging costs).

Table 6. OCD Reclamation and Remediation Costs for Orphaned Tank Batteries
FY23-25

Cato San Andres Tank Battery #6	$ 623,024.02
Double L Queen Tank Battery	$ 5,151,041.47
Hal J Rasmussen Tank Battery	$ 7,607,260.24
Total	**$13,381,325.73**

*Note, all totals are as of May 1, 2025

Source: SHARE

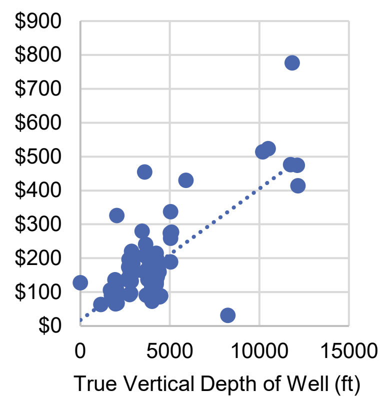
While OCD spent more overall on well plugging between FY19 and FY24, per-project costs were highest for remediation and reclamation of infrastructure associated with oil and gas production, not well plugging itself. In FY23, OCD began remediation and reclamation work on three tank batteries—groups of tanks typically used to collect, separate, and store crude oil and produced water—in Lea and Chaves countries. The tank batteries were previously owned and operated by Canyon E&P Company, Cano Petro of New Mexico, and Hal J Rasmussen Operating, and all three were selected for remediation because of suspected or confirmed leaks of petroleum hydrocarbons. Two of the three projects are ongoing, but the most expensive project to date has been the Hal J Rasmussen site, known as the Reed Estate #001 tank battery. A site assessment conducted prior to remediation efforts found soil with

Table 5. FY24 Average Cost to Plug by Well Type

Well Type	# of wells	Average Cost
Overall Average	106	$163,000
Oil	81	$150,634
Gas	10	$303,063
Injection	13	$120,634
Salt Water Disposal	2	$259,965

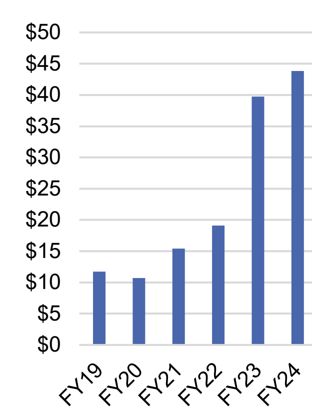
Source: OCD, SHARE

Chart 5. FY24 Cost of Plugging by Depth of Well
(in thousands)



Source: OCD, SHARE

Chart 6. Average Per-Foot Cost for State-Contracted Plugging
FY19-24



Source: LFC analysis of OCD and SHARE data hydrocarbon levels 10 times the state limit and chloride levels double the state limit. However, the most recent leak at the site was more than a decade ago and there is no evidence spills at the site have contaminated groundwater or a nearby playa (seasonal lake). Similarly, a contamination delineation assessment of the Double L Queen Tank battery (Canyon E&P) found evidence of hydrocarbon and chloride contamination above state thresholds from past leaks, but no evidence the spills had impacted groundwater resources or caused any additional health or safety issues. At the third site, known as the Cato San Andres tank battery #6 (Cano Petro), OCD documents do not indicate that similar soil sampling or groundwater assessment have occurred to date, but photographs submitted to the division by the contractor responsible for cleanup show pools of standing oil at the site. In a 2021 report for the New Mexico State Land Office, Vertex Resources estimated the decommissioning and reclamation costs of a storage tank site at $9.5 million, based principally on an assumption of a large site surface area and the need to remove substantial volumes of contaminated soil. Invoices from the tank battery sites show that removal of contaminated soil is by far the largest line-item expense.

Figure 6. Orphaned Tank Batteries

Double L Queen tank battery in Chaves county

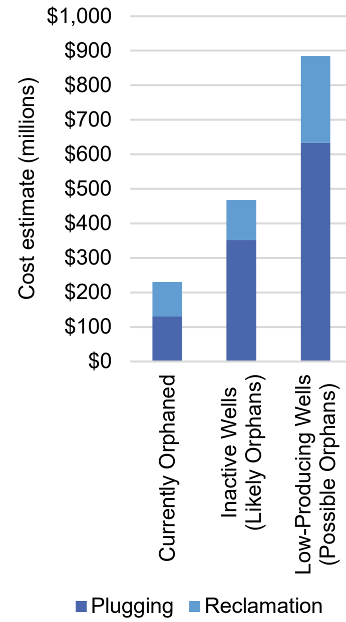
Cato San Andres tank battery #6 in Chaves county

Source: Envirotech/Frontier Development

Current Orphaned Wells Will Cost the State More Than $200 Million; Future Liability Very Likely Exceeds $700 Million

New Mexico does not define "orphaned well" in statute or rule, resulting in different estimates of both the number of orphaned wells and the resulting state liability, depending on the context and source. For this report, orphaned wells are those for which OCD has already pursued and received plugging authority, either through a settlement agreement or administrative hearings, because those represent the most immediate and certain costs. However, in addition to wells the state already has legal authority to plug, thousands of inactive and low-producing wells are at risk of being orphaned, potentially increasing the state's liability by many orders of magnitude. OCD considers a well "inactive" if it has not reported production in 15 months. OCD does not currently have the authority to plug approximately 1,400 inactive wells on state or private land that it considers likely to be orphaned. In addition to those inactive wells, thousands of wells produce extremely low volumes of oil and gas—less than a barrel of oil equivalent per day. For many of those wells, the expected cost of cleanup far exceeds predicted future revenues, increasing their risk of being orphaned. Altogether, the state's current and near-future liability for well plugging and site remediation is estimated to be between $700 million and $1.6 billion.

Chart 7. Liability Estimates for Plugging and Reclamation



*Note: Only wells on state or private lands; categories are mutually exclusive; plugging based on actual depth, $43.85/foot, gas wells costing 9 percent more than oil wells; reclamation at $83 thousand per well site.

Source: LFC analysis

Plugging and reclaiming the well sites and associated infrastructure OCD currently has responsibility for will likely cost between $200 million and $400 million.

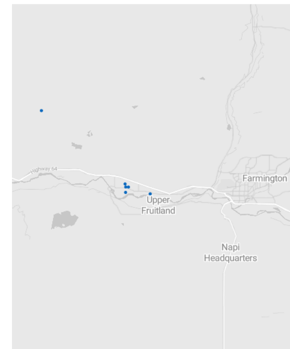
Based on internal OCD data, the division is currently responsible for plugging close to 1,000 orphaned wells, including roughly 700 on state or private land. At recent rates, plugging those wells will take close to a decade, not including well site remediation and reclamation. OCD is also responsible for remediation and reclamation of an additional 500 well sites and 18 infrastructure sites, including a number of tank batteries. In total, plugging, remediation and reclamation of all currently orphaned wells and infrastructure on state and private land is estimated to cost a minimum of $208 million, and likely more.

Scan the QR code for an interactive map of current, likely, and possible orphaned wells

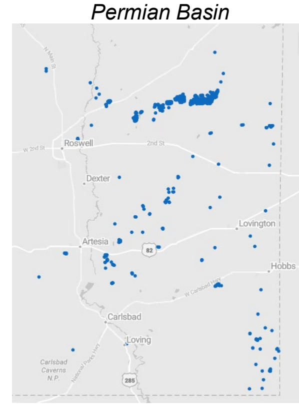
The term "orphaned well" is not defined in either statute or rule, complicating efforts to estimate the state's liability. While orphaned wells are commonly understood in the oil and gas industry to mean wells that have no viable operator and, therefore, have become the responsibility of the state or federal government, New Mexico does not define the term anywhere in statute or rule, and OCD does not use the term consistently. Public estimates of the number of orphaned wells in New Mexico vary widely, depending on how the term is defined. In some contexts, OCD cites around 700 orphaned wells; in others, it references 1,700 or more than 3,000. The disparity results from whether OCD includes only wells the state has pursued and received permission to plug or also those it does not currently have legal authority to plug but believes it will have to plug in the future. It also depends on whether the count refers only to state and private (fee) wells or also includes federal and tribal wells. While limiting the definition to only wells OCD currently has plugging authority for runs the risk of obscuring the magnitude of the state's liability, it is important to distinguish between certain liability and expected liability. For that reason, this report considers those categories separately. Also, while OCD contracts for well plugging on state, private, tribal, and federal land under different circumstances, state funds are primarily used for plugging wells on state and private land[1], so those wells are the focus of this analysis.

Figure 7. Maps of Orphaned Wells in New Mexico

San Juan Basin



Permian Basin



OCD does not publish a list of wells the state has plugged or is planning to plug and does not track them consistently in internal documents. As a result of requirements associated with federal IIJA grant funding, OCD has recently begun compiling an internal list of wells the state has plugged or plans to plug, along with associated infrastructure requiring cleanup. That list represents the most comprehensive effort to understand the scope of state-contracted well plugging. However, the list is not publicly available and is frequently inconsistent with publicly available data. However, because it is the only available data source that tracks wells for which OCD has received plugging authority, LFC staff used the list to determine the number of currently orphaned wells in New Mexico and refined the number by removing incorrectly labeled data. Wells were included if they did not have a plugged date and if they were located on state or private land.

At current rates, plugging the 702 wells the state is currently responsible for will likely cost more than $130 million and take close to a decade. According to OCD's internal list, OCD currently has plugging authority for 702 wells that have yet to be plugged on state and private land. Based on the average per-foot cost for state-contracted well plugging in

[1] Per *Section 70-2-37 NMSA* 1978, OCD does have authority to plug wells on federal land using the reclamation fund; however, most orphaned wells on federal land are plugged using federal money. Additionally, OCD does not have authority to plug wells on tribal land without a request from the corresponding tribal government. Therefore, this analysis of state liability only includes wells with state or private surface ownership; it excludes orphaned, inactive, and low-producing wells with federal surface ownership and private or state mineral ownership, which are rare.

FY24 ($43.85) it will cost OCD over $130 million just to plug those wells. That figure is based on actual well depths and an estimate that gas wells cost 9 percent more to plug than oil wells, although, as noted above, recent actual costs for plugging gas wells have been 101 percent higher than oil wells. If that trend holds, the total cost could be closer to $141 million for those 702 wells. Saltwater disposal wells could also be more expensive to plug based on previous OCD spending, and there are currently 11 of those wells on OCD's plugging list. However, the state has plugged too few in recent years to draw clear conclusions. If the state's per-foot plugging costs could be brought closer to those of other states, like Texas's FY24 average of $15.60 statewide, or back to OCD's average of $19.10 in FY22, plugging currently orphaned wells could be closer to $46 million to $57 million. The state holds $5.6 million in financial assurance associated with currently orphaned wells or their operators, meaning most of the funding for plugging the wells is likely to come from federal IIJA grants or the reclamation fund. If FY24 plugging rates of approximately 100 wells per year are maintained, it would take OCD seven years to plug its current orphan well population. However, these estimates do not include the added time and cost of site remediation.

Table 7. Orphaned Well Plugging Cost Estimates

Estimate	Per-foot Cost	Oil and Other Wells (in millions)	Gas Wells (9% increase) (in millions)	Total Cost (in millions)
NM FY24 Average	$43.85	$118.7	$12.1	$130.8
NM FY24 Median	$40.30	$109.1	$11.1	$120.2
NM FY22 Average	$19.10	$51.7	$5.3	$57.0
Texas Statewide FY24 Average	$15.60	$42.2	$4.3	$46.5

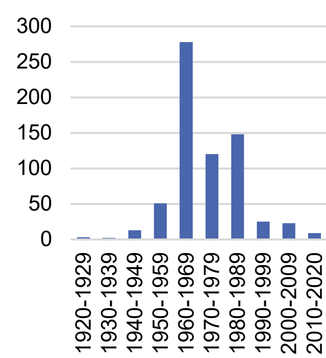
Source: OCD, SHARE, Enverus

In addition to plugging, OCD is currently responsible for remediation and reclamation of roughly 1,200 well sites; the estimated cost is $48 million to $100 million. In addition to the 702 unplugged wells, 499 wells plugged by the state between 2013 and 2024 are awaiting environmental remediation and reclamation. OCD records show the division has only remediated and reclaimed five of the wells it has plugged since 2013. That work cost a total of $205 thousand, including performance bond premiums paid by contractors but reimbursed by OCD The average per-site cost was approximately $40 thousand. All those projects were completed in FY24 for wells plugged in FY18. At $40 thousand per site, remediation of all roughly 1,200 well sites the state currently has authority for would cost an estimated $48 million. OCD has inspected 121 well sites to date and has estimated the cost of remediation and reclamation for those sites at $2.8 million, or an average of $23 thousand per site. However, based on past averages and other studies, that estimate is likely low. The 2021 Vertex Resources study for the State Land Office estimated well site remediation and reclamation at $83 thousand per-site, on average, which would put the total at $100 million, not including cleanup of infrastructure associated with the well sites, like tank batteries.

Ridgeway Arizona Settlement Agreement

Among the orphaned wells OCD is currently plugging are a number of wells owned by Ridgeway Arizona Oil Corporation, an active operator. In 2023, OCD reached a settlement agreement with Ridgeway Arizona to plug 299 of the company's wells, Under the terms of the agreement, the state is paying upfront to plug the wells, with Ridgeway Arizona reimbursing the state "at a rate of $2.00 per gross barrel of oil sold by Operator," with a minimum payment of $30 thousand per month. According to OCD contracts, the state paid $1.3 million to plug six of Ridgeway's inactive wells in FY24, for an average cost of $210 thousand per well. If future costs are similar, the total for the remaining inactive Ridgeway wells could exceed $60 million. Paying $30 thousand per month, it would take Ridgeway Arizona 170 years to make the state whole in that scenario.

Chart 8. Orphaned Wells by Year Drilled



Note: Does not include orphaned wells missing a drilling date (30 out of the 700)

Source: OCD

OCD is also responsible for decommissioning, remediation, and reclamation of 18 infrastructure sites; the estimated cost is $30 million to $140 million. The infrastructure sites include both tank batteries and a waterflood facility, which are facilities that treat, store, and pump (usually produced) water for injection into oil and gas wells to increase reservoir pressure and boost oil recovery. As noted above, the cost for remediation and reclamation of tank batteries has varied widely in the past. The three already-commenced projects have collectively cost the state $13.4 million since FY23, and two are ongoing. Two of the tank battery sites listed for future reclamation are considered "highest" priority by OCD, although no public documents indicate how the division arrived at that assessment. OCD has not yet had to reclaim a waterflood facility, and its public database lacks information about the facility, making it difficult to estimate the potential costs associated with its decommissioning and reclamation. Given that the only completed tank battery project cost OCD $5.2 million and a nearing-completion project has already cost $7.6 million, a very conservative estimate for the remaining 15 tank batteries would be $30 million, at $2 million per site. On the high end, using the $9.5 million estimate from the Vertex Resources report, the costs could be more than $140 million.

OCD expects to plug and reclaim most wells on its inactive well list, which would cost close to $500 million.

OCD rules require it to keep a publicly available "inactive well list" that is updated daily. The list records wells that have reported no production or injection for 15 months, a period encompassing both the 12 months of inactivity that renders a well out of compliance with the Oil and Gas Act and a 90-day grace period for the operator to remedy the problem and report production. Inactive wells become orphaned wells when OCD issues a notice of violation (NOV), and the operator fails to bring its inactive wells into compliance. While virtually all wells on the inactive list are eligible for enforcement action, OCD has historically prioritized issuing NOVs to operators with large numbers of inactive wells. However, the division considers the entire inactive well list likely orphans. In its application for federal IIJA funding, OCD estimated New Mexico has 1,700 orphaned wells, a number encompassing all inactive wells on state and private land, including wells for which OCD has not yet pursued plugging authority.

Table 8. April 2025 Inactive Well Count by Surface Owner

Surface Owner	Inactive Wells
State	749
Private/ Fee	1307
Federal	955
Tribal	336

Source: OCD Inactive well list

Twenty-nine percent of operators are out of compliance with the Oil and Gas Act because they have too many inactive wells. Under administrative code, an operator is allowed to have a certain number of wells that are nonproducing and unplugged for more than a year while remaining in compliance with the Oil and Gas Act, depending on the size of its overall well portfolio. About 60 percent of the 576 oil and gas companies operating in the state have at least one well that has not produced anything in the past 15 months; 29 percent of all operators are out of compliance with the Oil and Gas Act because they hold too many inactive wells. Of those out of compliance, 121 companies have no wells that have produced any oil or gas in the last 15 months; they collectively hold 1,034 inactive, unplugged wells. About 70 percent of those operators could be considered very small, with five wells or less.

Table 9. Years Since Last Production for Inactive Wells

Years since last production	Number of inactive wells
1 to 5	928
6 to 10	283
11 to 20	140
21 to 40	47
More than 40	3

Source: OCD

Table 10. Operators Out of Compliance Due to Inactive Well Counts

Size of Operation	# of inactive wells to be out of compliance	# of operators out of compliance
100 wells or less	Two or fifty percent, whichever is more	139
101 to 500 wells	Six or more	20
501 to 1,000 wells	Eight or more	7
More than 1,000 wells	11 or more	1

Note: As of March 2025.

Source: OCD Inactive Well List

Currently, the state does not have plugging authority for 1,400 wells on state or private land that appear on the inactive well list; they could cost the state $468 million to plug and reclaim. The inactive well list is updated daily and is not archived, making it difficult to track trends in the data over time, but past presentations and reports from OCD indicate the overall number of inactive wells has been increasing. A 2008 LFC report card for EMNRD indicates roughly 2,000 wells were inactive at the time. In 2021, OCD reported the state had over 3,000 inactive wells, similar to the number of inactive wells on the list when it was exported for analysis in this report in April 2025. Of those, roughly 2,000 are on state and private land and 1,400 are not currently orphaned. Plugging those 1,400 inactive wells would cost $352 million at the FY24 per-foot average of $43.85, assuming gas wells cost 9 percent more. However, if gas-well costs follow recent trends, the total would be closer to $416 million. Site remediation would cost an additional $116 million based on Vertex's per-site estimate of $83 thousand. OCD currently holds $66 million in financial assurance associated with the operators of those wells, although not all of that would likely be available for plugging and reclamation. At the rate OCD plugged orphaned wells in FY24, about 100 wells, it would take the division over 30 years to plug all the wells on the inactive well list. About 14 percent of the remaining wells on the inactive well list have not produced or injected in the last decade.

Table 11. Estimated Costs to Plug Remaining Inactive Wells
(in millions)

Per- foot Estimate	Total Cost (9% more for gas wells)	Total Cost (101% more for gas wells)
NM FY24 Average ($43.85)	$352.5	$416.4
NM FY24 Median ($40.30)	$323.9	$382.7
NM FY22 Average ($19.10)	$153.5	$181.4
Texas Statewide FY24 Average ($15.60)	$125.4	$148.1

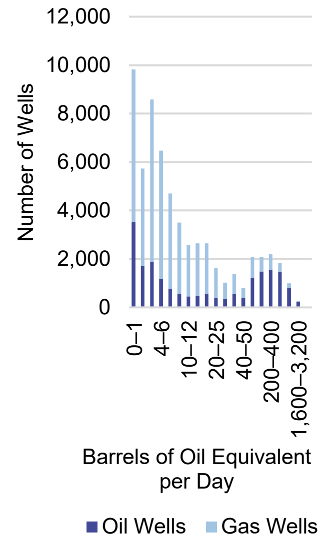
Source: OCD Inactive Well List, SHARE, Enverus

In addition to fully inactive wells, thousands of extremely low-producing wells have minimal revenues and hundreds of millions of dollars in outstanding cleanup liabilities.

New Mexico oil and gas production has climbed precipitously in recent years, driven by a small subset of very high-volume unconventional wells in the Permian Basin. Meanwhile, a growing majority of wells in the state are "stripper" wells, nearing the end of their productive lives. While low-producing wells can generate significant revenues for both operators and the state, wells below certain production thresholds are unlikely to generate sufficient revenues in their remaining lifespan to be able to fund their own plugging and reclamation, putting those wells at greater risk of being orphaned.

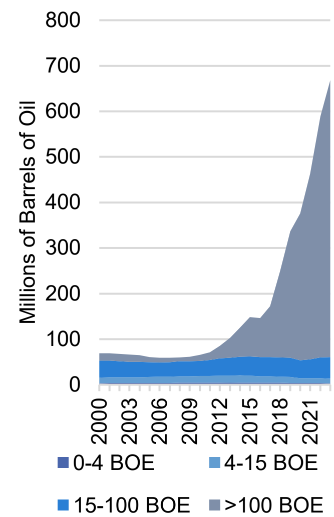
Wells producing extremely low volumes pose a financial risk to the state because they may not generate sufficient revenues to fund their own end-of-life plugging and abandonment. Stripper wells are defined in Section 7-29B-3 NMSA 1978 as an oil well producing less than 10 barrels of oil a day, a gas well that produces less than 60 thousand cubic feet of gas a day or an oil and gas well that produces less than 10 barrels of oil equivalent (BOE) per day. The federal government uses the term to refer to wells that produce less than 15 BOE a day. According to production data from the energy analytics firm Enverus compiled by the federal Energy Information Administration, 64 percent of active wells in New Mexico produced 10 BOE a day or less in 2023. Those 38,817 stripper wells accounted for 1 percent of the state's oil production and 7 percent of its natural gas production in 2023 and generated roughly $890 million in revenue based on average commodity prices. However, most of those revenues are attributable to wells producing at the higher end of the range, with just $48.8 million, or an average of $5 thousand per well attributable to the 9,824 wells that produced 1 BOE a day or less in 2023. Revenues for those ultra-low producing wells likely vary widely, depending on the oil/gas ratio of the well (oil-heavy wells are more profitable), pipeline availability, and location, among other things. However, even at the high end, those wells are unlikely to be generating sufficient revenues to finance their own end-of-life plugging and abandonment. While companies with diversified well portfolios may be able to fund plugging and abandonment out of revenues from other wells, companies with concentrated portfolios of ultra-low-producing wells may struggle to meet their end-of-life asset retirement obligations.

Chart 9. New Mexico Oil and Gas Wells by Production Volume, 2023



Source: EIA (Enverus)

Chart 10. New Mexico Oil Production by Well Production Volume, 2000-2023

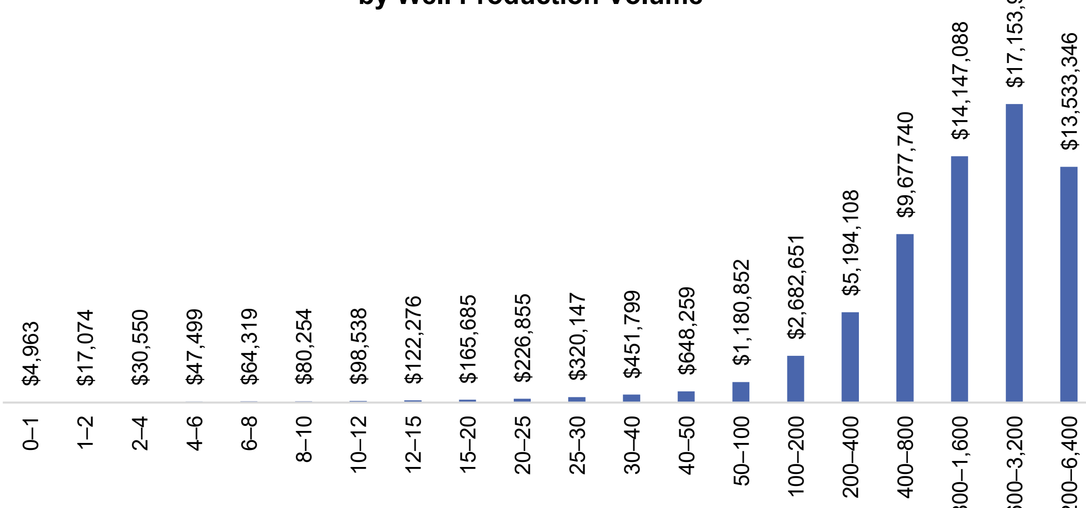


Source: EIA (Enverus)

There is no specific threshold at which a well becomes uneconomic, but production of less than 2 BOE a day may be an appropriate threshold for additional regulatory scrutiny. Determining the specific point when a well becomes uneconomic—i.e., when a well's liability surpasses the value of its potential future production—is challenging for several reasons, but principally because of fluctuating prices for oil and gas. For example, a well producing 2 BOE per day might be profitable at $100 per barrel but uneconomic at $50 per barrel. However, as noted previously, in New Mexico, the average well plugged in recent years produced approximately 2 BOE per day in the year prior to abandonment. Because most wells are plugged by the industry, that suggests operators may find it uneconomic to maintain production from wells producing less than 2 BOE a day—roughly 750 BOE a year. In Colorado, wells producing less than two barrels of oil or 10 mcf of gas per day are considered "low-producing" and are subject to additional scrutiny because of their risk of being orphaned. New Mexico should consider adopting a similar standard. In 2023, 15,558 wells produced less than 750 BOE. Of those, 9,016 produced less than 750 BOE a year from 2021 to 2023 and are not currently on the state's orphaned or inactive lists, including 4,969 on state or private land. Given when industry plugs wells and Colorado's regulations, that group of persistently low-producing wells likely represents those most at risk of being orphaned in the future.

In Colorado, wells producing less than two barrels of oil or 10 mcf of gas per day are considered "low-producing" and are subject to additional scrutiny because of their risk of being orphaned.

Chart 11. Estimated 2023 Average Per-Well Revenue in New Mexico, by Well Production Volume

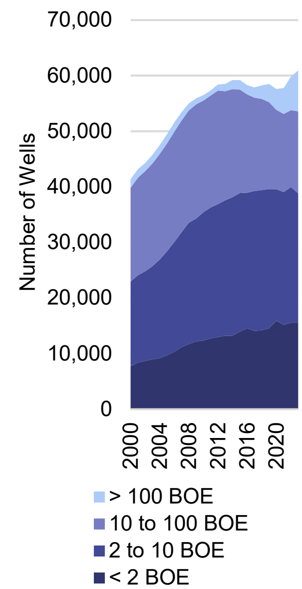


*Note: Estimates are based on EIA's 2023 average WTI price of $77.58/barrel and Henry Hub spot price of $2.53/MMBtu. EIA classified wells based on peak production, without accounting for well downtime, so for categories with a small sample size (11 wells produced 3,200 boe +/day), well downtime has a large effect on overall production volumes, and per-well revenue estimates.

Source: LFC analysis of EIA (Enverus) data.

The roughly 3,000 wells on state and private land in New Mexico that have produced less than 1 BOE per day over multiple years are likely at the end of their lives. Wells may temporarily dip into ultra-low production levels for a variety of reasons. However, wells that consistently produce less than 365 barrels of oil equivalent a year (1 BOE a day) are likely at the end of their productive lives, given the average production of wells in the year before they are plugged. More than 5,000 oil and gas wells in New Mexico fall into that category based on annual production data for 2021, 2022, and 2023. (This analysis excludes enhanced oil recovery injection wells and saltwater disposal wells, which also require plugging at the end of their lives.) While some of those wells are currently on the inactive list, a majority are not. Of the wells not on the inactive list, 3,024 are located on state or private land, meaning they could become the responsibility of the state if their operators fail to plug them. Seventy percent of those wells are oil wells while 30 percent are gas wells, and they are of widely varying vintages, with some of the wells drilled more than a century ago, according to OCD records, and others drilled as recently as 2020. Most were drilled between 1950 and 2010. The vast majority of the wells—87 percent—are owned by private companies whose financial health is difficult for regulators to assess. New Mexico should consider updating its definition of "inactive" to include wells producing fractions of a barrel a day for multiple years, to minimize the incentive for operators to delay plugging of wells.

Chart 12. New Mexico Oil and Gas Wells by Production Volume 2000-2023



Source: EIA (Enverus) data

Potential liability for extremely low-producing wells greatly exceeds potential tax contributions. While wells can continue producing in very low quantities for extended periods of time, the financial risk those wells pose to the state far exceeds potential tax revenues. At an 8 percent effective tax rate on oil and gas, the 3,024 wells producing 365 BOE a year would generate a maximum of $6 million in tax revenue annually with West Texas Intermediate crude oil at $70 per barrel. The 1,828 wells producing 180 BOE would generate a maximum of $1.8 million in tax revenue annually under the same scenario. At current state-contracted plugging and reclamation costs, using actual depth and assuming gas wells cost 9 percent more to plug than oil wells, plugging and reclaiming those wells would cost $531 million to $885 million.

Table 12. Estimated Plugging Costs for Wells Producing <365 BOE Annually Between 2021 and 2023

	Number of Wells	Estimated Plugging Cost
< 90 BOE	1,135	$235,000,000
<180 BOE	1,828	$379,000,000
<365 BOE	3,024	$634,000,000

*Note: Only currently active wells on state or fee land; categories are inclusive; plugging estimate based on actual depth, $43.85/foot, and gas wells costing 9% more than oil wells

Source: LFC Analysis of OCD data

Recommendations

The Legislature should consider:

- Amending statute to define "orphaned" and "abandoned" wells, aligning the definitions with their common use in the oil and gas industry and clarifying that "orphaned" wells are oil and gas wells for which the state has pursued and received plugging authority.

The Energy, Minerals and Natural Resources Department should:

- Archive and publish a quarterly inactive well list to enable longitudinal analysis and better cost estimating.
- Create a system that formally reminds operators of stripper wells of state statute and rule requiring them to plug and properly abandon their wells;
- Promulgate rules defining "low-producing" wells (such as wells producing less than 750 BOE annually or ~ 2 BOE per day); and
- Promulgate rules to expand the definition of "inactive well" to include consistently ultra-low producing wells (such as wells that produce less than 180 BOE annually or ~0.5 BOE per day for more than three years).

Reforms That Prioritize Operator-Led Cleanup can Limit the State's Financial Exposure

Requiring financial assurance is currently the state's primary tool to discourage operators from orphaning wells, but in practice, it is insufficient. Even when OCD can successfully forfeit an operator's financial assurance, the amount recovered is typically far below the actual costs of plugging and reclamation. The gap between actual plugging costs and the required financial assurance weakens the incentive for operators to plug their own wells, especially older, low-value wells where cleanup costs are high. As a result, operators are more likely to walk away from those wells, leaving OCD to manage the most complex and least desirable sites. Managing those projects has proven difficult: OCD was not designed to act as a large-scale plugging contractor and has struggled to control costs and ensure consistent quality. To reduce future liabilities and discourage a reliance on state-contracted plugging, the Legislature should consider regulatory mechanisms beyond financial assurance that would better align incentives and keep well closure in the hands of the industry, which is generally better equipped to do the work efficiently and cost-effectively.

OCD struggles to control both the cost and quality of state-contracted plugging.

As noted in earlier in this report, per-foot and per-well costs for state-contracted plugging have increased sharply in recent years. There are a number of possible explanations for that increase. Oil field inflation has increased industry costs across the board. Also, with increased funding, OCD has taken on a backlog of plugging and remediation work that involves more complicated and expensive wells and associated infrastructure. However, OCD's lack of systematic cost-tracking mechanisms and its procurement process have also likely contributed to the rapid increase in New Mexico's per-foot plugging costs, which are higher on average than neighboring states. Since FY19, OCD has managed well plugging and reclamation through four separate statewide price agreements (SPAs), each amended multiple times. Instead of issuing contracts for individual projects, OCD uses SPAs as rate sheets, allowing contractors to bill for work based on pre-approved unit prices. That approach has resulted in limited price competition and inconsistent cost control, with multiple projects requiring change orders exceeding $1 million. Plugging designs and costs have also varied widely across sites with similar characteristics, suggesting gaps in both quality oversight and financial accountability.

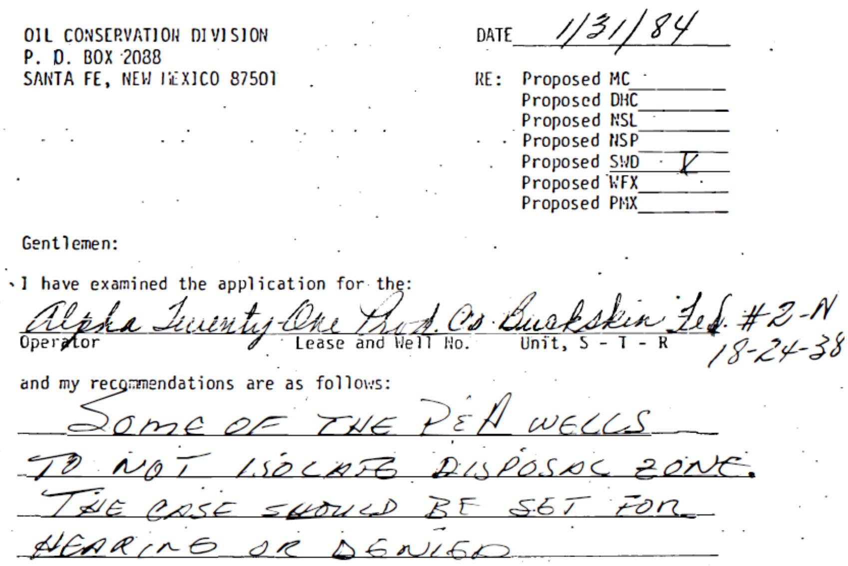
OCD Contracting Procedure for Standard Well Plugging Operation:

1. OCD requests and receives a plugging price estimate from a vendor on the statewide price agreement.
2. OCD issues a purchase order (PO) to the vendor.
3. The vendor designs a plugging plan and wellbore diagram based on available information.
4. The vendor submits a sundry notice to OCD for review and approval.
5. OCD reviews the sundry and may add additional conditions of approval, depending on the well.
6. The vendor plugs the well and submits a plugging and abandonment report for the OCD well file.
7. The vendor invoices OCD with line items for each per-unit charge, by day.

Source: OCD

Records associated with orphaned wells may be missing or incomplete, making it more difficult to anticipate problems that might arise during plugging. Operators are required to file paperwork with OCD about various well operations, including drilling, well completions, and well conversions. Many of those records are digital or have been digitized and are available as PDFs on OCD's website. However, those public well files usually contain far less detail than the files available to operators themselves when they purchase a well. Older wells also often have incomplete OCD well files, resulting in situations where OCD's plugging contractors encounter unanticipated problems as they commence plugging. Those problems can result in orphaned wells being more expensive and dangerous to plug than wells plugged by the industry.

Figure 9: Incomplete Well File


OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 1/31/84

RE: Proposed MC____
Proposed DHC____
Proposed NSL____
Proposed NSP____
Proposed SWD ✓
Proposed WFX____
Proposed PMX____

Gentlemen:

I have examined the application for the:

Alpha Twenty-One Prod. Co. Buckskin Fed. #2-N 18-24-38
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

SOME OF THE P&A WELLS DO NOT ISOLATE DISPOSAL ZONE. THE CASE SHOULD BE SET FOR HEARING OR DENIED

The OCD file for the Buckskin Federal #002 well contains a document from 1984 indicating OCD had concerns at the time about converting the well to a saltwater disposal well. The file does not contain information about how those concerns were resolved, but it was ultimately converted. Plugging the well cost the state $5.2 million.

Source: OCD

OCD does not have a comprehensive monitoring system for regularly assessing the relative risk of a well. As a condition of the federal IIJA grants, OCD is required to measure the amount of methane a well is emitting pre- and post-plugging, the state's first attempt at monitoring leaks from orphaned wells. While methane is just one type of potential leak, it can indicate larger problems with the well that may not be otherwise easily detectable, making it a powerful diagnostic tool. To date, OCD has sampled 172 wells pre-plugging, most of which have since been plugged. Thirty-eight percent of the wells had no detectable methane leakage, and another 35 percent were leaking in very low quantities. However, 27 percent were leaking more than the IIJA reporting threshold of 1 gram per hour. Leaking wells are supposed to be considered the top plugging priority in OCD's prioritization framework, which combines field observations with other

Figure 8. Corroded Production Tubing

When pluggers pulled the production tubing from this well prior to plugging, they found it was full of holes, likely caused by either prolonged contact with saltwater or hydrogen sulfide. Holes can cause the tubing to part or split as it is removed from the hole, which then necessitates expensive fishing operations.

Source: LFC files

Table 13. Pre-Plugging Methane Emissions

Emissions Rate (g/hr)	Count of Wells
0	66
< 1	60
1-100	37
100-1,000	4
1,000 +	5

Source: OCD

data to assign wells a plugging priority (see Appendix E for more on the scoring system). OCD has scored 271 or 39 percent of the 702 currently orphaned wells. Despite measured methane leaks at some of those sites, OCD has not assigned any of the currently orphaned wells to its top priority category. Also, OCD's priority rankings are time-sensitive, meaning low-priority wells may become high priority in the future. Factors like whether a well is inside a municipal boundary and the type of well are unlikely to change over time, but development can encroach on wells, and inactive and unmaintained wells are more likely to develop integrity issues that could lead to leaks or other problems. Roughly 80 percent of the 702 currently orphaned wells have not produced oil or gas in the last five years. Given that OCD has been able to plug roughly 100 wells a year in recent years, the lowest-priority wells on its list may not be plugged for close to a decade. Unmaintained and unplugged wells are more likely to develop integrity issues, which not only can pose an environmental and safety hazard but has the potential to make the wells more expensive and difficult to eventually plug. To reduce the risk of currently low-priority wells becoming safety or environmental emergencies, OCD should develop a system for consistently monitoring orphaned wells awaiting plugging.

Table 14. Statewide Purchase Agreements for Plugging and Reclamation

SPA	Start Date	End Date	Amendments	Spending Authorized Through SPA
60-521-16-05813	12/1/2016	12/1/2020	4	$4,971,170
10-00000-20-00038	10/1/2020	10/1/2022	2	$6,707,646
10-52100-21-06041	6/1/2021	6/1/2023	1	$3,049,040
30-00000-22-00001	2/1/2023	(ongoing)	9	$48,438,853

Source: LFC Analysis of SHARE data

Frequent changes to the statewide price agreements obscure pricing and make it difficult to pinpoint specific cost drivers. A statewide purchase price agreement (SPA) is a contract with one or more vendors to provide specific goods or services at a predetermined price for a set period. In theory, SPAs can allow the state to leverage its purchase power for discounts on bulk goods or services, but past LFC evaluations have found agencies often use them to make direct purchases that might be provided more economically through separate contracts. However, agencies often favor SPAs because they allow for faster procurement, without the need for individual bids. . OCD has used SPAs, administered for agencies by the State Purchasing Division of the General Services Department (GSD), for all of its plugging and remediation work in recent years, and the division says this allows it to respond quickly to emergency plugging situations. However, the division's use of SPAs reduces pricing transparency and cost control. Because of frequent changes to the invoiceable line items covered by the SPAs, it is extremely difficult to track changes to the costs of goods and services over time. For example, cement retainers and cast iron bridge plugs—both used to help place cement plugs in the wellbore—have been categorized differently across the last four SPAs. Some agreements list them separately, others group them together, and the latest agreement includes different bid options based on whether they are set via tubing or wireline. However, where comparable, costs for the same goods and services have in many cases doubled or even tripled since FY19. Analyzing a single contractor's invoices from 2023 shows that prices for identical line items increased by more than 20 percent between March and November of that year, at a time when the producer price index for oilfield services, a measure of inflation, was declining. For example, the cost of a "supervisor/cementer" rose from $500 per day to $750 per day, "backhoe services with operator" increased from $100 per hour to $150 per hour, and the price for a "wireline unit on location" jumped from $500 to $2,000.

Figure 10. Vendor Costs for Specific Line Items within the Statewide Purchase Price Agreement

			[illegible]	[illegible]
			(AO)	$1,730.00
			(AS)	$5,100.00
61		**Each**	**Wireline set CIBP, 7.625", includes setting tool rental**	
			(AB)	$3,500.00
			(AE)	$2,850.00
			(AL)	$5,000.00
			(AO)	$2,345.00
			(AS)	$5,600.00
62		**Each**	**Tubing set CIBP, 7.625", includes setting tool rental**	
			(AB)	$3,800.00
			(AE)	$5,250.00
			(AL)	$5,000.00
			(AO)	$1,925.00

Source: GSD

Without internal cost estimates or requirements to select the lowest bid, OCD may be paying more for plugging and reclamation than necessary. In the latest statewide purchase agreement, GSD requested vendor "bids" or rate proposals on 156 items and services related to the plugging, remediation and restoration of orphaned oil and gas wells and facilities. That process is similar to what Colorado requests as part of its "main service agreement" and Texas as part of its "request for qualifications." The items and services in the SPA range from the per-item cost of sacks of Class B cement to the discount a vendor will offer if it provides items not covered by the SPA. Companies were not required to submit bids on all items, but only on the items and services they intended to provide. A total of 31 vendors were awarded under the agreement, ranging from oilfield service companies to environmental consulting firms. According to the terms of the SPA, awarded vendors effectively form a "pre-approved" vendor list.

OCD is not required to contract for the lowest rate proposed under the agreement but can choose the contractor it believes is best suited to a particular job. Texas and Colorado follow similar models, but both states then issue separate, detailed contracts for specific plugging projects. Colorado's contract includes a per-unit, line-item breakdown of the estimated cost. In Texas, the Railroad Commission can negotiate the details of the contract. Before issuing a purchase order, OCD does not negotiate or develop its own internal price estimates for plugging and remediation work but instead relies on the approved vendors to submit estimates. Plugging costs frequently exceed estimates, with 236 recently plugged wells costing $10.4 million more than originally budgeted. While some of those cost overruns may be unavoidable, requiring more detailed information from contractors upfront and having more structured processes for internally estimating costs could save the state hundreds of thousands of dollars if they help reduce project totals by even a fraction of a percent.

OCD has approved multiple change orders exceeding $1 million on projects contracted through the statewide purchase price agreement. Change orders are used to adjust the total authorized by a purchase order to accommodate alterations in scope, timeline, or cost. It is considered procurement best practice to limit change orders and for any change order involving significant increases or decreases to include supporting documentation and an estimate of the projected total cost. OCD frequently issues multiple change orders for plugging and reclamation projects, and often the justification for the change order is "additional work was required." In many cases, the division also issues change orders after receiving invoices for total amounts higher than the initial purchase order, which, while not prohibited, is considered a poor procurement practice.

Ballooning Costs as a Result of Plugging Problems

The most expensive well OCD plugged in FY24 was the BRC Madera #001 well (API 30-015-22372), a gas well drilled in 1977. The well is between an RV park and a residential neighborhood on the south side of Carlsbad and prior to plugging was leaking significant quantities of methane. OCD's contractor began plugging the well on August 23, 2023. According to a plugging summary filed with OCD, the contractor encountered a number of issues during plugging, including problems with cementing that resulted in the company having to drill out cement plugs it had previously set before replacing them, extending the time and equipment needed to completely plug the well. While the original cost estimate was $250 thousand, it ultimately cost $778 thousand to plug the well.

Table 15. Change Orders for Plugging the Buckskin Federal #002 Well (API: 30-025-27024)

Date	Event	Plugging	Bond Premiums	NM GRT	Total Authorized
7/5/2024	Purchase Order Issued for Plugging 2 Wells (Buckskin #001 and #002)	$ 372,031.37	$ 18,601.57	$ 20,508.23	$ 411,141.17
Undated	Change Order Issued	$ 1,183,069.91	$ (6,267.33)	$ 61,802.00	$ 1,649,745.75
1/29/2025	Change Order Issued	$ 1,157,000.00		$ 83,159.38	$ 2,889,905.13
2/21/2025	Change Order Issued	$ 2,750,000.00		$ 342,617.63	$ 5,982,522.76

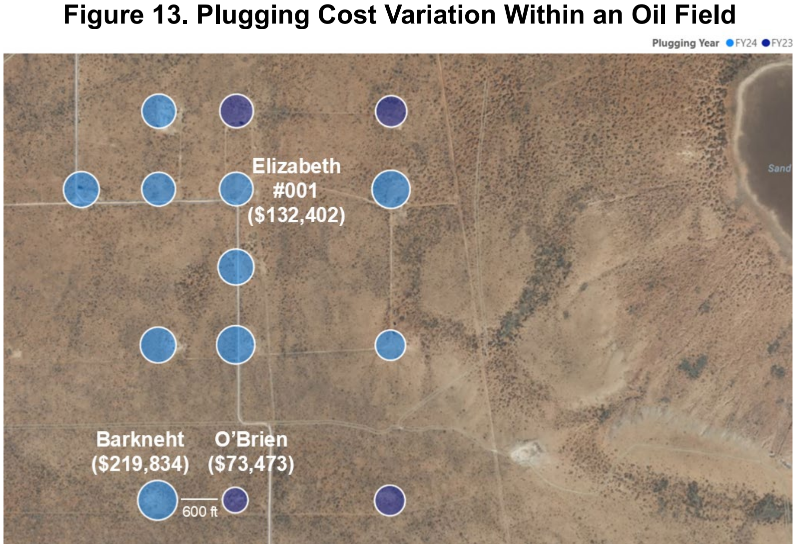
*Note: The values associated with NM GRT in the latter two change orders do not correspond to a line item in the original purchase order but are assumed to be for NM GRT. The total is listed incorrectly in the 02/21/2025 change order but is correct in the table.

Source: SHARE

OCD has paid at least $1.3 million between FY23 and FY25 to reimburse contractors for performance bond premiums but has no guidelines for nonperformance. The purpose of a performance bond is to ensure that only qualified, financially stable contractors take on public projects and that the contractor fulfills the obligations outlined in their contract. The terms of the most recent state purchase price agreement governing plugging and reclamation work specify that companies are required to obtain performance bonds covering 50 percent of the project total for any project estimated to cost more than $25 thousand. The agreement also specifies that the state will pay "the premium cost for the performance bond without markup." Section 13-4-18 NMSA 1978 requires contractors to provide performance bonding for public works construction contracts valued at $25 thousand or more. Public works contracts are defined as "a contract for construction, construction management, architectural, landscape architectural, engineering, surveying or interior design services." While performance bonds can theoretically help insulate the state from liability associated with incomplete or poorly executed work, OCD has no record of ever pulling a contractor's performance bond and does not specify under what circumstances it would do so in the statewide purchase price agreement. Nevertheless, according to invoices, OCD has paid at least $1.3 million in bond premiums between FY23 and FY25. Some states do not require performance bonding for plugging and reclamation projects. The Colorado Department of Natural Resources only requires performance bonds for federally funded projects but not state projects; the Texas Railroad Commission's contract management guide notes that performance bonds are "discouraged unless there is a compelling need or statutory requirement."

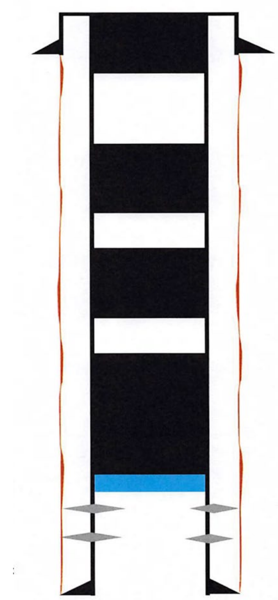
Plugging costs and designs vary widely between sites with similar characteristics, suggesting inadequate quality and financial controls. Examining a set of 12 oil wells plugged between March and November 2023 within a half-mile radius by the same contractor, total plugging costs ranged from $73 thousand to $220 thousand (Figure 13). The wells are largely identical in their depth, design and age. For example, the lowest and highest cost wells are 600 feet apart and were drilled in the same year, to the same depth (Table 15). While the final plugging design is also almost identical (Figure 11 and Figure 12), the OCD plugging report for the Barkneht well indicates the contractor had trouble with cementing

Figure 13. Plugging Cost Variation Within an Oil Field



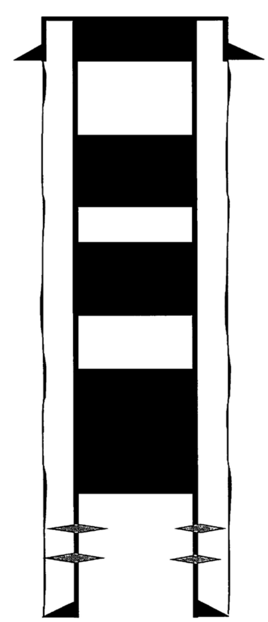
Source: OCD, SHARE

Figure 11. Plugged Wellbore Diagram: Barkneht #001 $219,834



Source: OCD

Figure 12. Plugged Wellbore Diagram: O'Brien Lightcap 7 #001 $73,473



Source: OCD

equipment that resulted in needing to drill out a previously-set plug, and that it had to pump much more cement to cover the same vertical distance because of cement loss to the surrounding rock formation. The contractor ran a cement bond log—a tool used to determine how well cement is bonded to the casing and surrounding formation—prior to plugging the Barkneht well, but not the O'Brien, and used a device called a cement retainer below the first plug on the Barkneht, but not on the O'Brien. OCD attributes the differences in plugging costs and procedures to differences in the conditions encountered downhole, as well as staff turnover. While downhole conditions do vary across wells, differences of the magnitude observed in this small group of wells suggest OCD has inadequate financial and quality controls.

Table 16. Adjacent Well Plugging Comparison

Well Name	O'Brien Lightcap	Barkneht
API	30-005-60815	30-005-60817
Date Drilled	12/2/1980	12/15/1980
Well Depth	2860	2861
Well Type	Oil	Oil
Date Plugged	3/18/2023	10/12/2023
Plugs Placed	4	4
Days to Plug	5	9
Purchase Order Estimated Cost	$78,974.00	$150,000.00
Actual Plugging Cost	$ 73,472.95	$ 219,834.41

Source: OCD, SHARE

Having a designated agency representative on site for state-contracted plugging, as is done by the industry and other states, could result in significant cost savings and would ensure plugging standards are followed. It is common practice for the industry to have a representative on site during well-plugging operations, often called a "company man." The representative might either be a direct employee of the company or a contracted third party, but the job is to be an on-site supervisor, sending frequent updates to the operator on actions taken to plug the well, materials used, and any issues that arise. The practice ensures all plugging standards are followed and that billing is accurate. Eight states require a representative of the regulator to be on site for well plugging, including Texas and Colorado, but New Mexico does not. While different states have different reasons for requiring a representative of the regulator on site during plugging operations, the practice has both potential quality and cost-saving benefits. Improperly plugged wells may leak, requiring re-plugging, which is time-consuming and expensive, so it is in the state's interest to ensure wells are plugged properly the first time. There is also the potential for cost savings from more accurate invoicing. At the anticipated total cost for plugging all wells currently under OCD's purview, a 1 percent cost savings would translate to $1.3 million, which would cover the cost of OCD hiring a third-party contractor to be the division's representative at state-contracted plugging operations.

OCD Plugging Oversight

Although many staff at OCD play some role in the state's well-plugging efforts, only one person currently provides dedicated oversight of state-contracted plugging. That petroleum engineer in the engineering special projects group reviews contractor-provided plugging plans and diagrams and communicates with the plugging contractors over the phone about problems that arise, as well as any modifications to the plugging plan. However, the engineer is not in the field and must rely on accurate reporting from the contractors. Field oversight is handled by a rotating group of inspectors, who visit plugging sites as their broader duties allow but who are typically not present for any extended period of time at a site. Using IIJA funding, OCD is currently attempting to hire a new staff member whose sole focus would be on-the-ground oversight of plugging operations, but the division has struggled with recruitment and retention (see Appendix F for OCD's organization structure).

Despite recent increases, financial assurance posted by operators is typically insufficient to cover the costs of plugging and remediating orphaned well sites.

In 2015, the Legislature amended statute to create separate financial assurance requirements for "temporarily abandoned" wells, and in 2018, it increased the maximum amount of financial assurance that can be required for active wells from $50 thousand to $250 thousand. The result has been operators posting an additional $53 million for temporarily abandoned wells and increased overall financial assurance. However, the financial assurance posted by some operators remains as low as $105 per well, with only one operator in the state having more per-well financial assurance than the current average cost of state-contracted plugging.

Operators have posted a total of $117 million in financial assurance with OCD, but that translates to less than $1,000 per well for some operators. OCD records show the division currently holds unreleased financial assurance from 1,580 operators totaling $117 million. There are currently 576 operators in New Mexico with unplugged wells. Of the financial assurance that has not been released by OCD, $17 million is associated with operators that OCD records show no longer have any unplugged wells in the state. The largest amount held by OCD for a single operator with active wells is $1.5 million, or $20 thousand per well. The median financial assurance held by OCD for an individual operator with active wells is $75 thousand, or an average of $7,000 per well. However, some operators have much lower per-well financial assurance; more than three dozen operators have less than $1,000 per well in posted assurance, and the company with the least has just $105 per well. Because financial assurance is tied to specific operators, the per-well financial assurance amount is much more significant than the statewide total; OCD can only access funds from the individual operator whose wells it has plugged.

According to OCD records, the state has successfully redeemed a total of $870 thousand in financial assurances since 2000, which represents just a fraction of the costs of state-contracted well plugging over the same time period. As noted previously, OCD does not have a comprehensive record of the wells it has plugged historically, making it difficult to evaluate how much financial assurance should have been available to OCD for plugging. However, according to OCD records, the state has successfully "redeemed" $869,863 in financial assurance since 2000 from 15 different operators backed by 10 banks or sureties. OCD has not successfully redeemed any financial assurance since 2018; available data does not indicate whether the division has pursued forfeiture in the interim. Of the financial assurance that has been forfeited since 2000 (the furthest extent of OCD records), roughly a third ($304 thousand) came from a single operator, Canyon E&P, which orphaned 227 wells in 2015 (see sidebar). There are 34 operators on OCD's orphaned well list with wells on state or private land that are being or have been plugged by the division.

Canyon E&P: Insufficient and Unforfeited Financial Assurance

Canyon E&P, a foreign limited liability company, purchased many of its 227 wells in 2010 from an operator going through bankruptcy proceedings with the stated intent of using waterflooding to restore production from the wells, which had been depleted of conventional oil resources. However, the waterflooding never commenced and Canyon E&P also went bankrupt.

In 2015, OCD issued the company a notice of violation (NOV), noting that none of the company's wells had reported production for two years and many of its wells had not produced for much longer, putting the company out of compliance with the Oil and Gas Act. After an administrative law hearing, the OCD director issued an order compelling Canyon E&P to plug the wells within 30 days, or barring that, giving OCD the authority to plug them itself. OCD began plugging the wells shortly thereafter, in the first quarter of fiscal year 2016.

At the time OCD began plugging Canyon E&P's wells, the state held **$957 thousand** in financial assurance from the operator. It has successfully forfeited **$304 thousand**, while **$644 thousand** is listed as unredeemed, without a release date. While OCD does not have records that would allow for analysis of the total amount spent by the state on plugging Canyon E&P's wells, since FY18, it has been at least **$10 million**.

A decade later, the division has fully plugged and remediated 25 of Canyon E&P's wells, plugged but not remediated an additional 171, and **32 remain unplugged and unremediated.** Those unplugged wells have been sitting idle for at least 11 years, and in some cases as long as 30 years.

Together, those operators have $5.8 million in unredeemed financial assurance, but the totals for individual operators vary widely, from $16 thousand to more than $1 million. The administrative burden of pursuing small amounts of financial assurance could be seen as outweighing the value, but not pursuing forfeiture may communicate that there are no consequences for orphaning wells.

While statute authorizes OCD to sue operators for indemnification of costs associated with state-contracted plugging, the division has no record of ever having done so. Section 70-14 NMSA 1978 allows OCD to sue operators to recover plugging costs paid out of the reclamation fund. However, there is no record of OCD ever bringing suit against an operator to recover costs incurred by the state through the plugging of its wells. The State Land Office (SLO) brought suit against an operator in 2016 for recovery of damages associated with spills and unpaid fees. In 2020, a judge ruled in SLO's favor and ordered the operator to pay $2.4 million, with interest. In 2023, the company filed for Chapter 11 bankruptcy and in 2024, for Chapter 7. Despite the judgement, the state has not recovered any money beyond the operator's original financial assurance.

Regulators in other states and countries reduce their liability for plugging and remediating orphaned wells through various mechanisms.

Current financial incentives are poorly aligned to encourage operators to properly plug and abandon their wells because requirements for financial assurance per well are less than the typical plugging cost, and OCD does not consistently seek forfeiture of financial assurance. Regulators in other states and countries have attempted to address that misalignment of incentives through a variety of mechanisms, including increasing financial assurance requirements, assigning liability to prior operators or interest holders, and preventing the transfer of wells to operators that cannot demonstrate they have the financial resources to plug them. More direct approaches include requiring operators to set aside future cleanup money in site- or operator-specific trust or escrow accounts and to plug a certain percentage of their inactive wells regularly. Many of these policy approaches have only been implemented in recent years, making it too early to fully assess their long-term effectiveness, and each comes with tradeoffs in terms of administrative burden, enforceability, and industry impact. EMNRD is currently beginning a rulemaking process based on a third-party petition that would make changes to the financial assurance requirements, among other things. While many of the changes align with the recommendations of this report, they are constrained by the current statutory framework and, as a result, have the potential to simply replicate its existing problems. In New Mexico, the goal should be to structure policies that motivate operators to plug wells before they become OCD's responsibility, leveraging the industry's capacity to do the work faster and likely at a lower cost.

Table 17. Policy Options for Reducing Orphan Well Liability

Policy	Description	Arguments For	Arguments Against	Implementing Jurisdictions
Increased financial assurance	Increase required financial assurance amounts to reflect actual plugging costs, including requiring single well financial assurance for inactive and low producing wells.	Increases the money available to the state for orphaned well plugging; matches an operator or well's risk profile to its required financial assurance.	Bonds or letters of credit can be difficult to obtain and cost operators money that goes towards neither production nor plugging; it can be difficult for the state to forfeit surety bonds.	Colorado Proposed NM rules
Trailing liability	The regulator can hold prior operators, lease holders, or working interest owners responsible for well plugging and remediation if the current operator is unable to pay.	Allows the state to hold operators that profited from the well responsible for cleanup; encourages self-policing among operators and may minimize the transfer of wells to risky operators.	Trailing liability can be difficult to enforce and can result in costly legal battles.	California Louisiana Department of the Interior
Licensing	The regulator can assess various aspects of a company (past compliance, financial standing, plugging liability, well portfolio, etc.) to determine if a company should operate in the state and/or if it can buy wells from other operators.	Prevents operators that do not have the capital to plug wells, have many inactive wells, or are facing large plugging liabilities from obtaining more wells that could become the responsibility of the state.	Depending on the level of detail requested from operators, the administrative burden could be significant.	Alberta <Canada> Texas
Site- or operator-specific trusts	Operators are required to pay into a trust or escrow account up to a site- or operator-specific estimated cleanup cost. The payments can be structured to build over time at defined rates or be tethered to production, so those profiting the most pay the most.	Ensures the state has enough money to plug and remediate wells should they be orphaned and puts all the money spent by the operators on FA towards cleanup. Disincentivizes orphaning because liability is effectively pre-paid.	Between estimating the necessary assurance and tracking many hundreds or thousands of accounts, the administrative burden could be significant. This option also ties up operator capital.	Louisiana Colorado

Source: LFC files

In 2022, Colorado adopted new rules requiring additional financial assurance with the goal of aligning an operator's risk profile with its required financial assurance. In 2019, the Colorado General Assembly passed Senate Bill 19-181, which restructured the Oil and Gas Conservation Commission into the Energy and Carbon Management Commission (ECMC) and directed it to adopt rules ensuring every operator is financially capable of meeting statutory obligations, including plugging, remediation, and reclamation (C.R.S. § 34-60-106(13)). The resulting rules, which went into effect in 2022, require all operators to submit a financial assurance plan, reviewed annually by ECMC. In its rulemaking, the commission determined lower production is a proxy for higher orphaning risk, and as a result, the required financial assurance plans are tethered to an operator's average annual production and its corporate structure (e.g., public or private). Operators with lower average production are assigned to plans that require greater financial assurance. Operators on those plans must also make defined annual contributions to a third-party trust fund until their full financial assurance obligation is met. Operators receive credit toward their financial assurance requirements for wells they plug and abandon. As of June 2024, more than one-third of operators had not submitted a financial assurance plan, and another 10 percent had submitted plans that were deemed insufficient. The rules have also been criticized for offering too many compliance pathways, increasing ECMC's administrative burden and potentially creating loopholes. However, it remains to be seen whether they ultimately achieve the goal of reducing the number of orphaned wells in the state.

Similar to Colorado, proposed New Mexico rules would require operators to submit a plugging and abandonment plan prior to purchasing wells and for OCD to collect more financial assurance from operators with lower production. The rulemaking proposal, case number 24683 submitted by the Western Environmental Law Center, would make changes to OCD's current rules regarding inactive wells, financial assurance and well plugging. Among the suggestions are requiring operators to submit plugging plans when wells are transferred that demonstrate the purchaser has sufficient resources to plug the wells it is purchasing, requiring single well financial assurance for wells that produce less than 1,000 BOE annually and for less than 180 days, and requiring operators with well portfolios composed of more than 15 percent inactive or low-producing wells to provide single-well financial assurance for all of their wells. The proposal also recommends treating wells that produce less than 90 barrels and for less than 90 days in a year as presumptively of "no beneficial use," meaning they would need to be plugged. This report recommends defining "low-producing" wells and requiring additional financial assurances for them. It further recommends expanding the definition of "inactive" wells to include wells that produce fractions of a barrel of oil equivalent a day. This report also suggests additional mechanisms be made available to fulfill financial assurance requirements that would allow operators to set aside money over time for plugging and reclamation costs. Careful consideration should be afforded in the rulemaking process to ensuring the changes do not result in operators orphaning additional wells.

California uses trailing liability to hold previous operators responsible for properly plugging and abandoning wells if the current operator does not meet its obligations. Since 1996, California administrative code (Cal. PRC. Section 3237) has stated that the current operator of a deserted well is responsible for properly plugging wells and decommissioning production facilities. However, if the regulator determines the current operator does not have the financial resources to fully cover the cost of plugging and cleanup, the immediately preceding operator is responsible for the cost. The regulator can continue to look to previous operators until an operator is found that is determined to have the resources to plug and abandon the well. That includes mineral interest owners that may have leased the working interest in a well to another person. Known as "trailing liability," the rule is meant to disincentivize operators from transferring wells to companies they believe will not have the capital to properly plug and abandon the well, therefore keeping it from being orphaned to the state. The federal Department of the Interior has also had regulations that create trailing liability for offshore oil and gas platform decommissioning since the 1950s. However, it has never used those rules to pursue a prior operator in part because complex corporate structures can limit the ability of regulators to pursue compensation using trailing liability.

While OCD is limited in its ability to hold previous operators responsible for well plugging and reclamation, the State Land Office (SLO) can hold lessees responsible for the cleanup of well sites on state land if the operator cannot afford or refuses to do it themselves. On New Mexico state trust lands, the lessee and the operator of a well are often not the same because the entity that holds the lease from SLO may assign operational responsibilities to another company. In March 2020, SLO created an accountability and enforcement program focused on ensuring leaseholders comply with the terms of their lease agreements, including proper plugging and reclamation. SLO staff began tracking inactive wells and reaching out to lessees to plug and remediate those sites. In several cases, SLO has sued to compel lessees, and a recent New Mexico Court of Appeals decision concluded prior oil and gas lessees can be held responsible for cleanup necessitated by their activities on state trust lands. According to the agency, the program has resulted in the industry plugging 650 wells that may otherwise have been orphaned. At the current per-well average of $163 thousand, that translates to nearly $106 million in potential cost savings for plugging alone. SLO also claims increased enforcement has led to operators and lessees doing a better job of tracking and managing their inactive and marginal wells before the agency gets involved, but it is difficult to validate those claims. OCD records indicate a similar number of wells have been plugged annually in recent years as have been plugged historically, but it is possible those wells would not have been plugged otherwise.

The Alberta (Canada) Energy Regulator can deny the transfer of wells to operators that cannot afford to plug them. The Alberta Energy Regulator (AER) oversees all oil and gas production in Alberta, including licensing of oil and gas operators in the province. AER conducts an annual licensee assessment with the goal of understanding the ability of licensees to meet their regulatory obligations, including plugging and abandoning their wells. Factors considered in determining whether the applicant poses an unreasonable risk and should be denied a license include the compliance history of all actors within the applicant's company (including its directors, officers, and shareholders in the province and elsewhere), compliance history of actors previously associated with the applicant, financial health of the applicant and associated entities, outstanding debts to AER or others, cancelation or reductions in insurance coverage, and any unspecified factor AER considers appropriate in the circumstances. This process applies to the company's initial license to operate as well as whether it is allowed to purchase additional wells from other operators. Texas similarly requires operator assessments, though the information required is far less comprehensive than the financial and operational assessments used in Alberta. If OCD were able to review and deny or approve well transfers from one operator to another based on both companies' compliance history and available capital, the division could potentially prevent the transfer of wells to companies that do not have the financial resources to properly plug and abandon wells, therefore reducing the likelihood of orphaning.

Alberta Licensee Capability Assessment Considerations

- Financial health;
- Estimated total magnitude of liability (active and inactive), including plugging, remediation, and reclamation;
- Remaining lifespan of mineral resources and infrastructure and the extent to which existing operations fund current and future liabilities;
- Management and maintenance of regulated infrastructure and sites, including compliance with operational requirements;
- Rate of closure activities and spending and pace of inactive liability growth; and
- Compliance with administrative regulatory requirements, including the management of debts, fees, and levies.

Source: Alberta Energy Regulator

A site-specific trust account, like those offered in Louisiana and required for certain operators in Colorado, can be used as a supplement or alternative to the current financial assurance system. Bonds, particularly surety bonds, have long been the primary regulatory mechanism for ensuring proper plugging and abandonment of wells. However, changes to the surety bond market have made those more difficult for some operators to obtain. As a result, regulators in some states have created a mechanism for companies to set aside money directly for cleanup through site-specific trusts or escrow accounts, up to an estimated maximum. In Louisiana, operators have the option of fulfilling their financial assurance requirements though a site-specific trust when they transfer a well to another operator. Typically, an operator will do that to avoid being held liable for plugging and remediation costs if the new operator fails to pay (because Louisiana also has trailing liability). The amount required for Louisiana's site-specific trust accounts is determined through an estimate of actual plugging costs, which must be updated when the well is transferred. A 2024 legislative program evaluation recommended Louisiana encourage the use of site-specific trusts by requiring them when new wells are permitted. In Colorado, certain low-producing operators are required to contribute to a sinking fund or third-party trust at a specified rate annually. Those funds are not tied to individual wells but to the operator itself to minimize the administrative burden on regulatory staff. Other models for escrow or trust accounts include tethering contributions to the account to production, with different tiers for the stage of a well's life. Those can be structured to ensure the operator who profits from the most from the well also pay towards the liability, or to require accelerated contributions later in a well's life. One advantage of trusts over sureties is that all the money paid into the account ultimately goes toward plugging and reclamation, not to a bank or insurance company through premiums. If structured properly, the trusts also ensure the state has sufficient financial assurance to cover the costs of plugging and remediating the site should it be orphaned.

Recommendations

The Legislature should consider:

- Amending statute to require the Oil Conservation Division of the Energy, Minerals and Natural Resources Department to annually provide a report to the Legislature detailing all costs associated with state-contracted plugging and remediation, not only costs associated with use of the reclamation fund, including information about average cost-per-foot for plugging and cost-per-acre for remediation;
- Amending Section 70-2-14 NMSA 1978 to specify that wells producing below certain thresholds set in rule require additional financial assurance;
- Amending Section 70-2-14 NMSA 1978 to allow an operator to meet its financial assurance obligations by fully funding a third-

party trust or escrow up to OCD's site- or operator-specific estimated plugging and remediation costs; and
- Amending statute to grant the Oil Conservation Division the authority to review and disallow the transfer of wells should the division determine, through processes outlined in rule, that the purchaser is unlikely to be able to fulfill its asset retirement obligations.

The Energy, Minerals and Natural Resources Department should:
- Promulgate rules specifying that low-producing wells require individual well financial assurance, posted within two months of notice, and clarifying that the transfer is contingent on regulatory approval;
- Publish a list of orphaned wells monthly, including both wells the state has already plugged and those it is planning to plug, including the costs associated with plugging and reclamation, to ensure transparent tracking of state expenditures on orphaned wells;
- Develop internal estimates for the cost of plugging and reclaiming individual wells and associated infrastructure;
- Develop individual contracts for plugging projects, in addition to the statewide purchase price agreement, that specify the scope of work, the estimated cost, the procedures for obtaining a change order and the circumstances under which OCD will pull a contractor's performance bond;
- Reopen its statewide purchase agreement for plugging and remediation work to solicit additional bids from plugging contractors by September 2025;
- Ensure the presence of a "company man" for all state-contracted well plugging who is responsible for filing daily reports on the activities undertaken by the contractor, the materials used, and the estimated plugging cost;
- Develop a risk-based monitoring system to track leaks from wells awaiting plugging, as well as plugged and abandoned wells, and provide annual reports on the number of previously plugged wells that are leaking, what they are leaking, and how much; and
- Complete the prioritization scoring of all currently orphaned wells and complete assessments for new orphaned wells within 90 days of the state assuming plugging authority.

Appendix A. EMNRD Report Card Updates on Orphaned Well Plugging

Fiscal Year	LFC/OCD Comments
2007	"The program area managed 12 site remediation projects in FY07 costing approximately $3 million and exhausting reclamation funds available for this purpose. It should be noted that some of these projects, while expensive, were determined to be critical to reclamation efforts."
2012	"In FY12, the OCD spent only $3 million, or 30 percent, of the oil and gas reclamation fund to plug wells and to conduct site assessments, monitoring and maintenance activities. The agency reports no wells were plugged for the first quarter of FY13 because a vendor on price agreement went out of business and the price agreement expired."
2013	"Well plugging activity increased in FY13, with a cumulative, annual total of 57 wells plugged, decreasing the number of outstanding wells to be plugged by almost 50 percent. Additionally, the program generated $100 thousand in revenue for the oil and gas reclamation fund from the sale of salvage equipment at the plugging sites."
2014	"The program is currently working with a group of contractors to properly plug a significant number of wells resulting from the business failure of the former Xeric Oil and Gas Corp. There are 45 such wells located southwest of Hobbs, ten of which were plugged in the first quarter of FY14."
2015	"The program is currently working with a group of contractors to properly plug a significant number of wells resulting from the business failure of the former Xeric Oil and Gas Corp. The hearing process for two sets of wells was completed and the wells are now approved for plugging. The division has five plugging contractors under contract. All five are currently doing work for other clients and will begin plugging wells for the Oil Conservation Division as soon as possible."
2016	"The agency is on track to meet the annual target for plugging abandoned oil and gas wells. However, agency and LFC projections show a rapidly decreasing oil reclamation fund balance through FY17 due to a long list of wells authorized for plugging – which is expected to grow in the near future due to oil producer bankruptcies – and increased use of the fund to support agency operations. At the same time the fund is being tapped at a higher rate, revenues are projected to decline as the oil and gas industry weathers the downturn. As of May 2016, the cash balance of the oil reclamation fund is $9.3 million, but agency staff reports an unobligated balance of only $395 thousand and projects a reduction in fund revenues. The average cost of plugging a well is $30 thousand to $40 thousand."
2017	"OCD had been waiting on General Services Department approval of a new four year plugging contract, which stopped activity in the second quarter. However, 10 wells were plugged in the third quarter and improved weather conditions should allow the agency to meet the annual target of 30 wells plugged."
2018	Q1: "No wells were plugged in the first quarter, which the OCD attributes to wet weather in the southeast which limited access to well locations. OCDs performance on this measure will also likely be hindered by funding; the oil reclamation fund, which is used to pay for plugging activities, will likely be exhausted by the close of FY20." Q2: "OCD plugged 12 wells in the second quarter and is on pace to meet the target. Performance on this measure may improve as a result of the Legislature increasing general fund appropriations for EMNRD by $3 million to offset use of the reclamation fund. EMNRD anticipates plugging 60 wells in calendar year 2018. The State Land Office estimates there are 600 unplugged, abandoned wells on state trust lands."
2019	"Despite plugging 41 abandoned oil and gas wells in FY18, the agency requested a target of only 27 in FY19, which it met. OCD reports that 208 abandoned or orphaned wells are currently approved for plugging."
2021	Q1: "Due mainly to timing conflicts with OCD's well-plugging contractor, the target for wells plugged was not met in FY20." Q4: "OCD had a new procurement agreement for FY21 that allowed for additional approved well-plugging contractors, which substantially increased the number of wells plugged in FY21 relative to the past three fiscal years. The division was just one well short of meeting its annual target."

Comments Continued

2022	Q2: "Orphan well-plugging was slow in the first two quarters of FY22 and OCD is unlikely to meet its annual target. Program staff report the recent well sites have been in worse than usual condition with defective casing and casing collapses causing additional rig time and cementing to properly remediate the wells. The increased time and materials required, plus the effects of inflation, have significantly increased cost of well-plugging to roughly $70.5 thousand per well." Q3: "OCD has recently been focusing its well-plugging efforts on a large oil field containing old, poorly maintained orphan well sites that require additional time and resources to remediate. Furthermore, program staff report low availability of equipment and crews has also contributed to the slow pace of well-plugging. Wells such as these with defective casing and casing collapses are more expensive and take longer to complete, but pose the greatest risk to groundwater. OCD has spent just over $1 million on plugging costs for 16 wells so far in FY22." Q4: OCD has recently been focusing its well-plugging efforts on a large oil field containing old, poorly maintained orphan well sites that require additional time and resources to remediate. Since 2015, OCD has plugged 234 wells on state and private land. In FY22 OCD has spent $1.6 million in recurring funds, and $1.8 in other state funds on well plugging. OCD secured the services of four rigs and intends to plug more wells using monies from the reclamation fund and a sizeable grant from the federal government. Plugging cost per well have doubled from FY21 to FY22."
2023	"OCD received a $25 million initial federal grant to fund plugging and remediation at 200 well sites over 24 months under the federal Infrastructure Investment and Jobs Act's Orphan Well Program. ENMRD's 2022 annual report estimated more than 1,700 abandoned wells are located on state-owned or private land. The division expects to receive an additional $75 million over the next four years for expenditure through 2030. As required by the grant, the division successfully obligated 90 percent of the initial funding to 145 plugging projects. The Division anticipates plugging the remaining balance of those initial grant funds by September 2023. However, the "wells properly plugged" metric counts only completed plugging projects. The division currently has three contract plugging crews working concurrently and correctly predicted a significant increase in well-plugging activity between the second and third quarters once it completed steps to ramp up the program. OCD has set an internal target of plugging approximately 200 wells by October 2023, well above its target of 50 for the year; however, crew availability remains a challenge."
2024	"Ten wells were plugged during the fourth quarter of FY24, bringing the total for the fiscal year to 105. Five plugging rigs were contracted and are working simultaneously. Plugging activity increased due to funding from the federal Infrastructure Investment and Jobs Act and continued state support from the oil reclamation fund. With still over 2,000 orphaned wells identified in New Mexico, the agency's ability to complete these plugging projects at an increased pace will be critical to protecting public health and safety."
2025	"Nine abandoned and orphaned wells were plugged during the first quarter of FY25. The lower-than-average number was due to new requirements for pre-clearance of well site regarding compliance with the Endangered Species Act and the National Historic Preservation Act. Once new clearance requirements are finalized, well plugging will return to a more consistent rate. The division also, per the request of the Federal Indian Minerals office, has begun plugging on Navajo-allotted land. With still over 2,000 orphaned wells identified in New Mexico, the agency's ability to complete these plugging projects at an increased pace will be critical to protecting public health and safety."

Source: LFC

Appendix B. Other State Financial Assurance Amounts

While most states require oil and gas operators to provide upfront financial assurance for well plugging, the amounts and variables considered vary widely. In 2023, the Ground Water Protection Council published a summary report featuring different states' approaches to financial assurance for oil and gas well plugging and remediation. Among the states, Alaska has the highest blanket or all-well bond maximum at $30 million, while Pennsylvania has the lowest blanket bond at $25 thousand for all wells. New Mexico is one of four states where the maximum blanket bond is capped at $250,000 in statute. Eleven states consider the depth of the proposed well in the amount of financial assurance required, increasing the amount as the well depth increases. However, many of these states, including New Mexico, only consider well depth in the financial assurance amount required for a single well while the blanket bonds for more than one well do not consider depth. Only four states vary their blanket bond amounts depending on the depth of the well: for example, in Kansas there are blanket bond amounts for all wells less than 2,000 feet in depth and higher blanket amounts for wells more than 2,000 feet in depth. Additionally, some states consider factors like location of the well, mineral type, and status of the well.

Financial Assurance Amounts in Select States

State	Minimum	Maximum	Do amounts consider well depth?
Alaska	$400,000	$30,000,000	No
Colorado	$12,000	$6,000,000	No
New York	$2,500	$2,000,000	Yes*
Louisiana	$6,000	$500,000	Yes
New Mexico	**$25,000**	**$250,000**	**Yes**
Texas	$25,000	$250,000	Yes
Michigan	$20,000	$250,000	Yes*
West Virginia	$5,000	$250,000	No
Utah	$1,500	$120,000	Yes*
South Dakota	$50,000	$100,000	No
Mississippi	$20,000	$100,000	Yes
Nebraska	$10,000	$100,000	No
Alabama	$5,000	$100,000	Yes
Arkansas	$3,000	$100,000	No
Illinois	$1,500	$100,000	Yes
Montana	$1,500	$50,000	Yes
Kansas	$7,500	$45,000	Yes*
Indiana	$2,500	$45,000	No
Pennsylvania	$2,500	$25,000	No

Note: New York, Michigan, Utah, and Kansas regulate blanket bond amounts based on the depth of the wells while the other only consider depth in the amount for a single well.

Source: Ground Water Protection Council

Appendix C. History of the Oil and Gas Conservation Tax and the Oil and Gas Reclamation Fund

- Laws 1959, Chapter 53, Section 7: Oil conservation tax created at a rate of 0.14 percent on oil and gas products severed and sold. The revenue went to the oil conservation fund, which was used by the Oil Conservation Commission (OCC) to enforce the Oil and Gas Act (as is currently the function of OCD).

- Laws 1975, Chapter 289, Section 15: The oil conservation tax rate was increased to .18 percent.

- Laws 1977, Chapter 237, Section 5 and 6; Chapter 234, Section 4: The Legislature amended statute so most of the conservation tax revenue still went to the conservation fund, but 0.01 percent was deposited in the newly created oil and gas reclamation fund specifically for the OCC to plug and remediate abandoned well sites. The laws also tied the conservation tax rate to the balance in the reclamation fund; being 0.19 percent when the fund balance was under $1 million, and 0.18 percent when the balance was over $1 million.

- Laws 1989, Chapter 130, Sections 1 and 6: The Legislature changed the allocation of the conservation tax, increasing the share directed to the reclamation fund to 5.3 percent, with 87.7 percent going to the conservation fund, and 7 percent to the general fund.

- Laws 1991, Chapter 9, Section 16: The Legislature repealed the conservation fund, instead sending all conservation tax not sent to the reclamation fund to the general fund; the percent directed to the reclamation fund remained the same, at 5.3 percent.

- Laws 2010, Chapter 98, Sections 1 and 2: The Legislature untethered the conservation tax rate from the balance of the reclamation fund and instead tied it to the price of oil. When the price of West Texas Intermediate is less than $70 per barrel, the tax is 0.19 percent and the reclamation fund receives 10.5 percent of the tax revenue and the remainder goes to the general fund. When the price is over $70 per barrel, the tax is 0.24 percent and the reclamation fund receives 19.7 percent of the revenue.

Appendix D. Texas Plugging Costs

District	Calculated average per-foot cost														
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
01	$3.95	$3.03	$5.98	$10.47	$8.52	$6.85	$6.65	$7.68	$8.21	$7.88	$11.14	$12.31	$11.53	$9.49	$11.15
02	$3.96	$4.84	$4.84(2)	$14.27	$10.74	$10.74(4)	$8.36	$8.36(5)	$8.30	$8.81	$15.70	$13.57	$7.97	$8.48	$11.77
03	$8.36	$6.07	$8.73	$12.13	$8.71	$10.59	$10.96	$5.22	$6.04	$7.51	$13.93	$15.58	$10.40	$30.19	$21.60
04	$4.31	$5.60	$7.72	$13.96	$15.77	$6.49	$6.38	$7.56	$9.42	$9.35	$8.32	$8.16	$8.66	$10.35	$16.37
05	$3.87	$4.35	$6.10	$7.85	$14.45	$10.96	$7.45	$5.28	$5.02	$31.73	$6.40	$8.29	$6.62	$10.20	$9.92
06	$8.99	$7.64	$6.42	$4.90	$5.94	$5.94(4)	$8.30	$11.00	$6.84	$7.69	$7.93	$6.49	$8.81	$15.75	$15.05
6E	$3.74	$5.63	$5.63(2)	$8.45	$7.16	$6.25	$6.11	$5.96	$6.40	$7.63	$6.79	$7.54	$8.34	$12.46	$11.90
7B	$3.90	$5.70	$5.39	$6.48	$6.76	$7.77	$5.93	$6.23	$6.23	$7.19	$11.27	$7.42	$10.09	$9.57	$10.62
7C	$7.34	$12.93	$10.56	$6.29	$4.52	$10.26	$7.53	$7.85	$7.21	$8.09	$9.63	$9.30	$6.43	$11.14	$10.95
08	$8.56	$6.52	$12.31	$12.68	$17.37	$6.80	$11.57	$14.15	$13.28	$10.29	$17.88	$17.23	$27.38	$30.75	$46.48
8A	$4.28	$4.28(1)	$4.28(2)	$4.28(3)	$9.02	$9.02(4)	$6.54	$6.54(5)	$6.54(6)	$10.62	$12.16	$17.54	$12.74	$17.09	$14.27
09	$2.60	$2.73	$3.38	$3.96	$4.21	$4.92	$2.88	$2.97	$3.04	$4.27	$4.37	$4.46	$4.61	$6.39	$5.96
10	$6.25	$5.85	$5.63	$14.50	$7.48	$17.17	$9.05	$6.85	$5.44	$8.13	$9.69	$10.94	$9.81	$16.45	$16.39

Notes: Cost is calculated based on actual costs incurred by the Railroad Commission for plugging wells in the previous fiscal year.

(1) No State Funded plugging operations were completed in District 8A during FY 2011. The per-foot cost from FY 2010 was continued.
(2) No State Funded plugging operations were completed in Districts 02, 6E or 8A during FY 2012. The per-foot cost from FY 2011 was continued.
(3) No State Funded plugging operations were completed in Districts 8A during FY 2013. The per-foot cost from FY 2012 was continued.
(4) No State Funded plugging operations were completed in Districts 02, 06, and 8A during FY 2015. The per-foot cost from FY 2014 was continued.
(5) No State Funded plugging operations were completed in Districts 02 and 8A during FY 2017. The per-foot cost from FY 2016 was continued.
(6) No State Funded plugging operations were completed in Districts 8A during FY 2018. The per-foot cost from FY 2017 was continued.

Appendix E. OCD Well Plugging Prioritization System

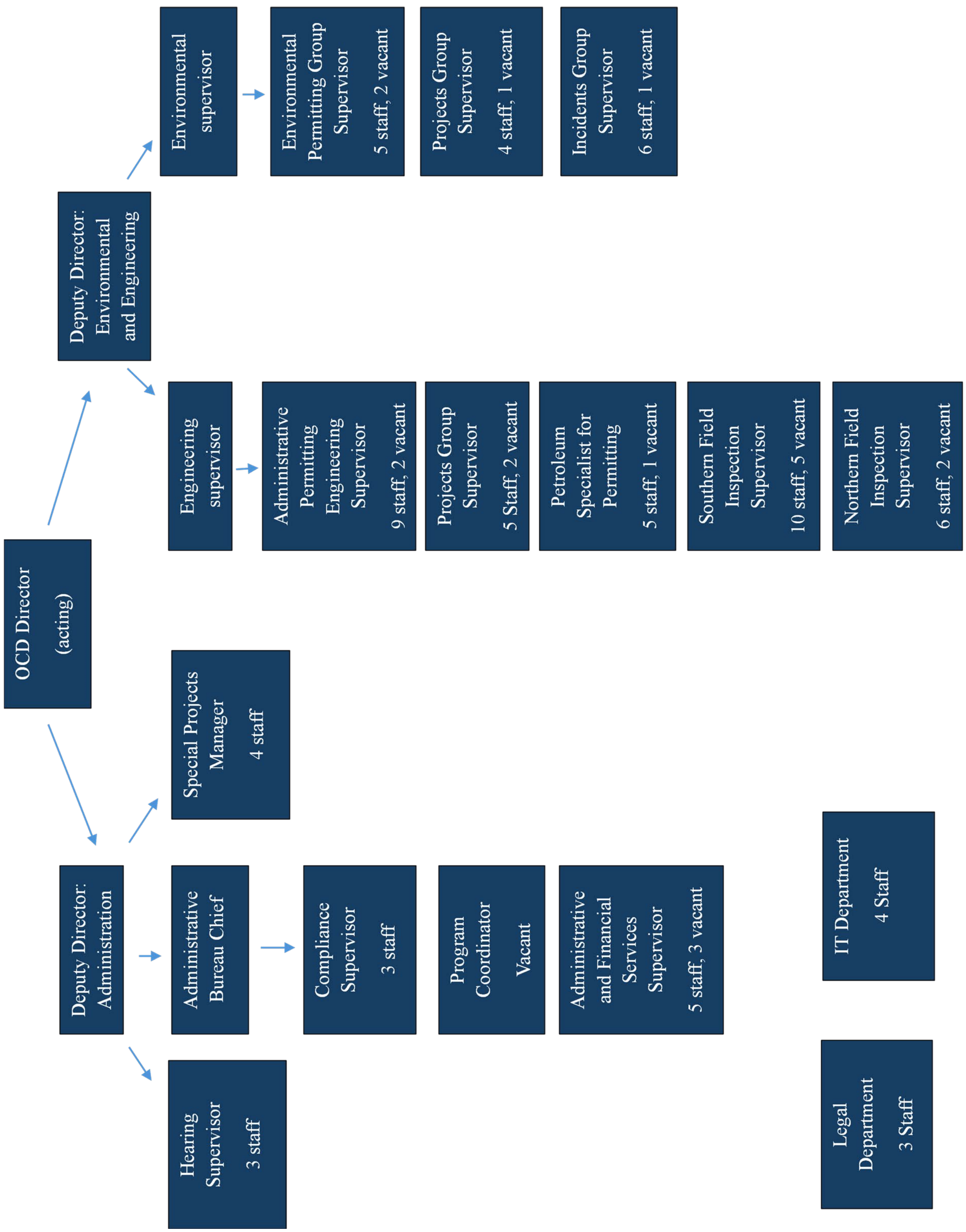
Each well is scored on 21 different criteria, with different weights assigned to each criterion. Wells that are actively leaking are automatically deemed highest priority, but other criteria that may boost a well's overall score include if it is within 300 feet of an occupied structure, if it is within a municipal boundary, if the well is a saltwater disposal well, if it has known defective casing, and if it has no well head control. After wells that are actively leaking, wells with a score over 100 are considered the second-highest priority, scores of 50-100 are third, and wells with a score lower than 50 are the last priority to plug.

OCD Plugging Prioritization Ranking Criteria

Factor	Maximum Weight	Weighting Criteria
Active leaks	Highest priority	
Within 300 ft of an occupied structure	10	Yes/No
Within a municipal boundary	10	Yes/No
Disposal well?	10	Yes/No
Mechanical integrity testing history/ known defective casing	10	Yes/ No; unrepaired failure
No Wellhead control	10	Well with gas or casing above 12" =10, well without gas =7
No surface casing or water protection casing	9	Yes/No
Well has abnormally high pressure	8	Yes/No
Located within an agricultural area	8	Yes/No
Age of well >25 years	7	Yes/No
Bradenhead pressure >10	7	Yes/No
Date of las production or injection >10	7	Yes/No
Within one mile of other orphan wells needing plugging	6	Yes/No
Within 200 ft of a water supply well	5	Yes/No
Proximity to karst geology	5	High karst =5, medium karst =3, low karst =0
Hydrogen sulfide	5	Yes/No
Naturally occurring radioactive material	5	Yes/No
Citizen complaints	5	Yes/No
Areas within ½ mile of injection/disposal	4	Yes/No
Private surface	3	Yes/No
Other	10	TBD, level dependent on issue discovered.

Source: OCD

Appendix F. OCD Organizational Structure



Note: As of March 2025

Source: OCD