



NEW MEXICO
LEGISLATIVE
FINANCE
COMMITTEE

Fiscal Impacts of Oil and Gas Setbacks

Presentation to the Legislative Finance Committee

October 22, 2024

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Fiscal Costs of Health Incidence

- National study¹ identified \$626.4 million - \$1.5 billion in annual health quality costs in New Mexico due to all oil and gas production, even outside of producing regions.
 - Only a portion mitigated by setbacks as Texas production, wind direction, traffic pollution, distant populations, and other variables are important determinants of impact.
 - Study includes the statistical value of a life and other costs of health impacts - direct fiscal costs to the state are less.
- Health data and significant study is needed from the Department of Health to accurately quantify state costs associated with proximity.



Existing Setbacks and Restrictions

- **Federal –**
 - **Limits leases of federal land within incorporated cities, towns and villages for onshore oil and gas**
 - **Carlsbad and Roswell BLM Field Offices: Prohibits surface disturbance within 200 meters of the outer edge of 100-year floodplains**
 - **Statewide: Prohibits ground-disturbing activity that may affect species or critical habitat under the Endangered Species Act until obligations or applicable requirements are completed**

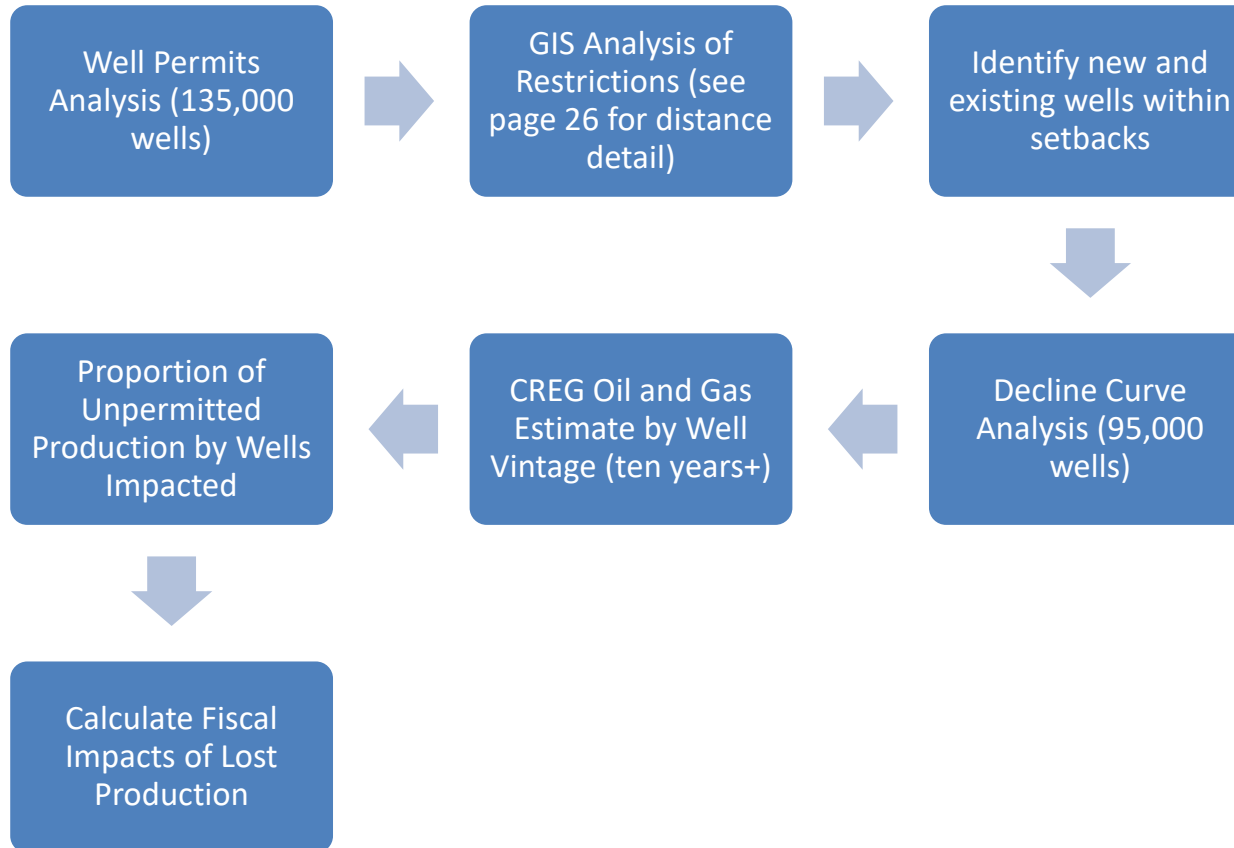


Existing Setbacks and Restrictions

- **County Setbacks**
 - Eddy County – 300 ft setback distance between wells and residences, mercantile establishments, schools, and churches.
- **Municipal Setbacks**
 - Carlsbad – 500 ft between wells, storage tanks, and compressors from commercial and residential buildings.
 - Carlsbad – 40 ft between pipelines and commercial, industrial, or residential buildings.
 - Carlsbad – Well location approved by the city and demonstration of water non-contamination.
 - Hobbs – 300 ft between wells and any building.
 - Hobbs – 750 ft between natural gas processing and buildings, 1,500 ft from municipal freshwater.
 - Aztec – 400 ft between oil and gas facilities and structures, and 100 ft from roads.
 - Aztec – operations are also required to comply with air quality standards and water resource protections.
 - Farmington – 75 ft between wells, tanks, and pipelines and roads, 200 ft to residences, and 300 ft from schools, institutions, and places of assembly.



Methodology



Data Availability and Limitations

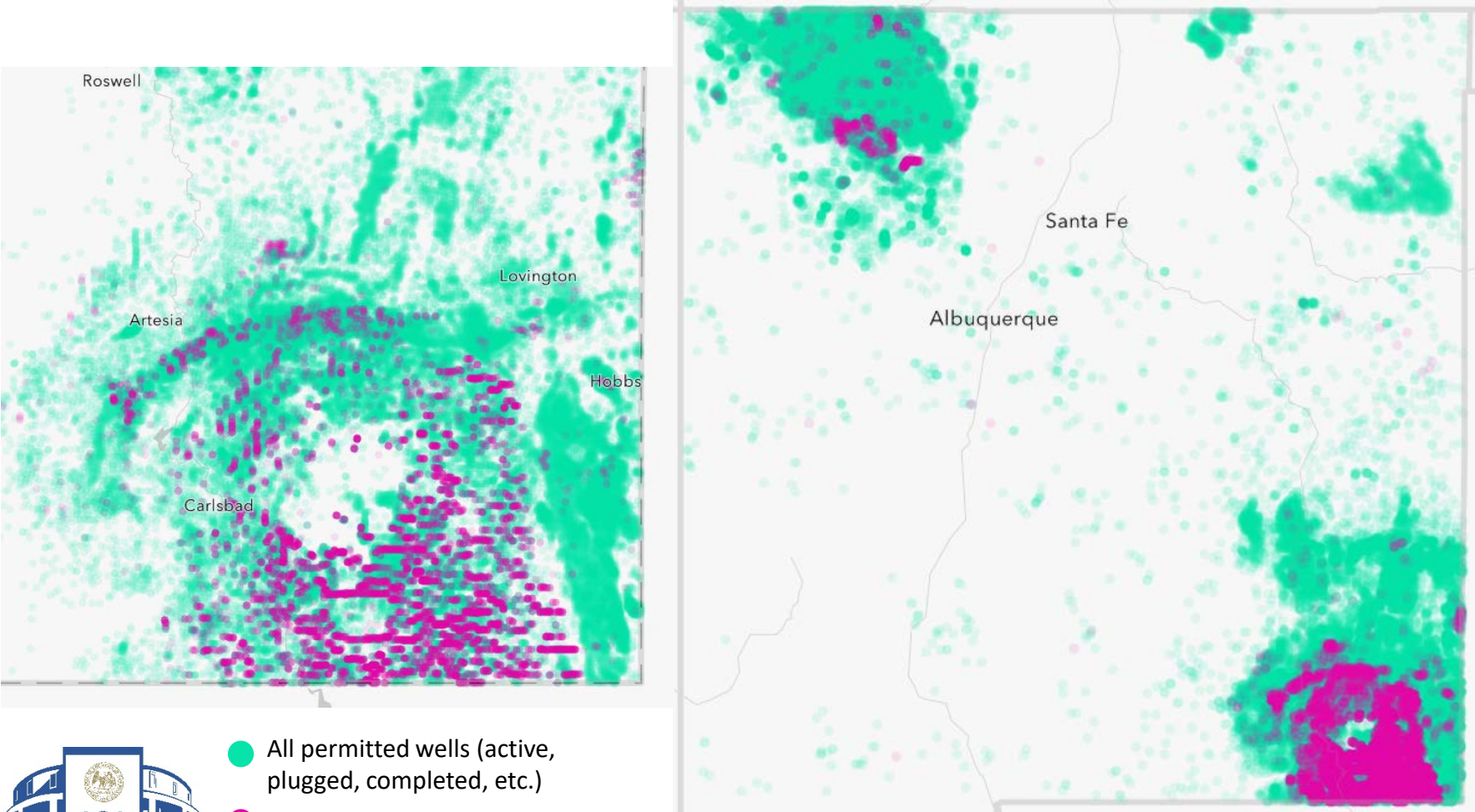
- **NMOCD Permitting Data**
 - Includes all wells – plugged, active, and new (2-4 years of future drilling), but did not include other impacts of production facilities, tank batteries, compressor stations, and gas plants.
- **Water data**
 - ArcGIS USA waters and streams
 - USGS National Hydrography Dataset (NHD)
- **Building footprints from UNM's RGIS**

Better but Unavailable sources:

- **Industry data sets for future production**
- **Environment Department data on waterways and habitat protections as proposed**

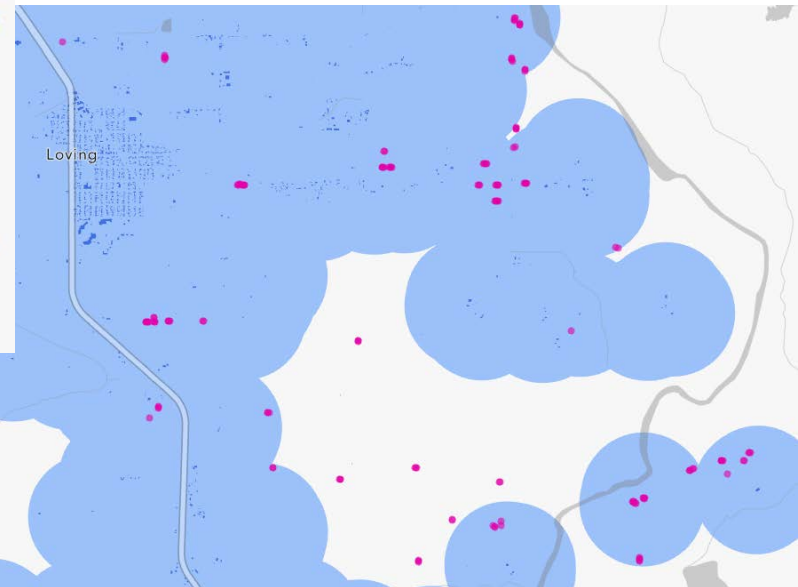
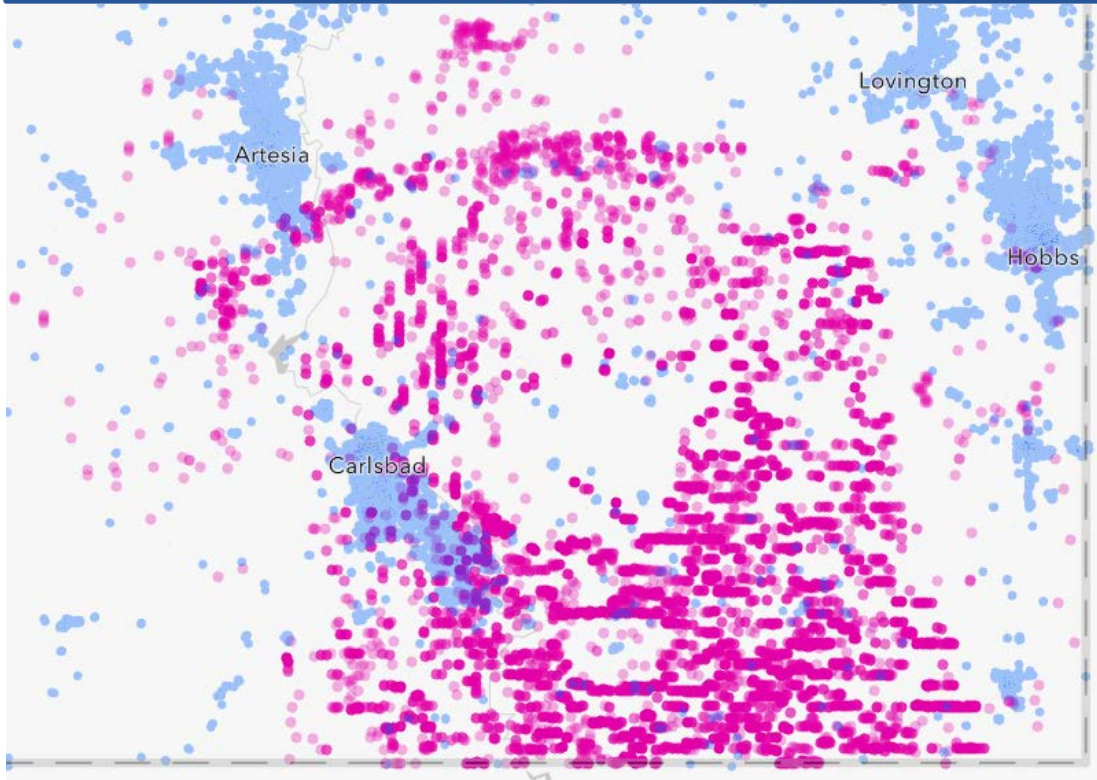




Mapping Permit Location



- All permitted wells (active, plugged, completed, etc.)
- Permitted but undrilled wells

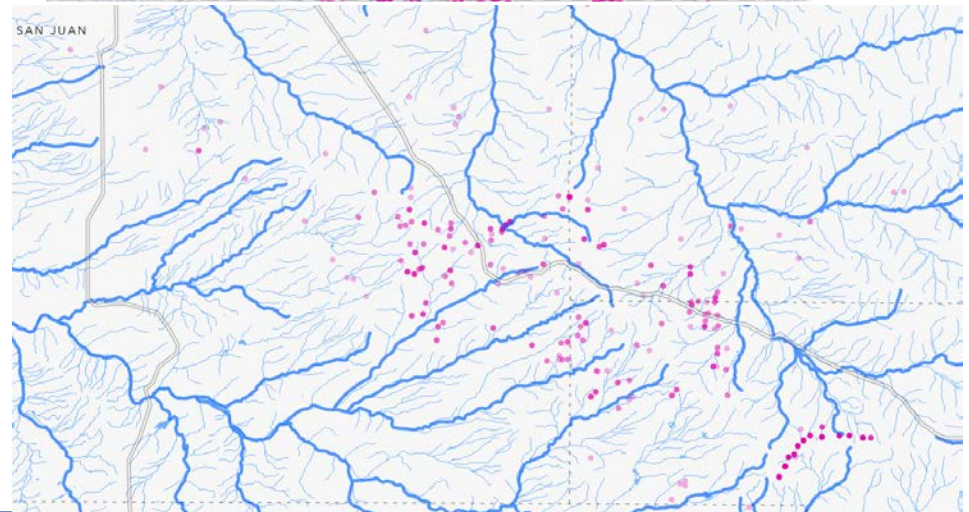
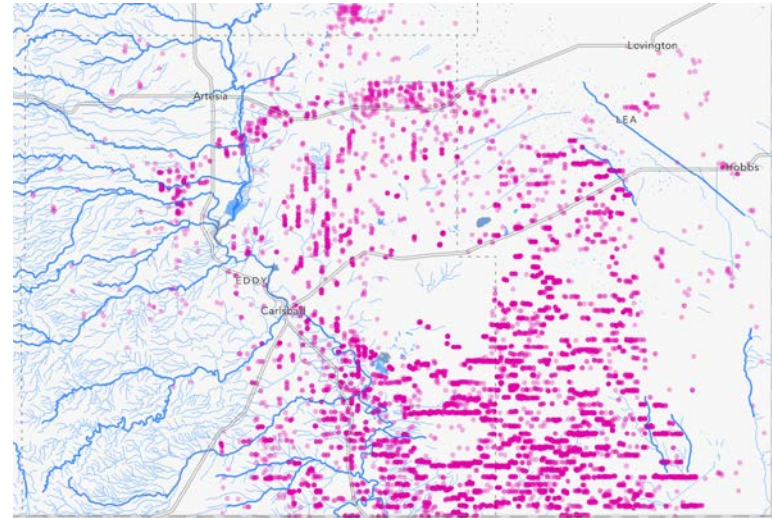
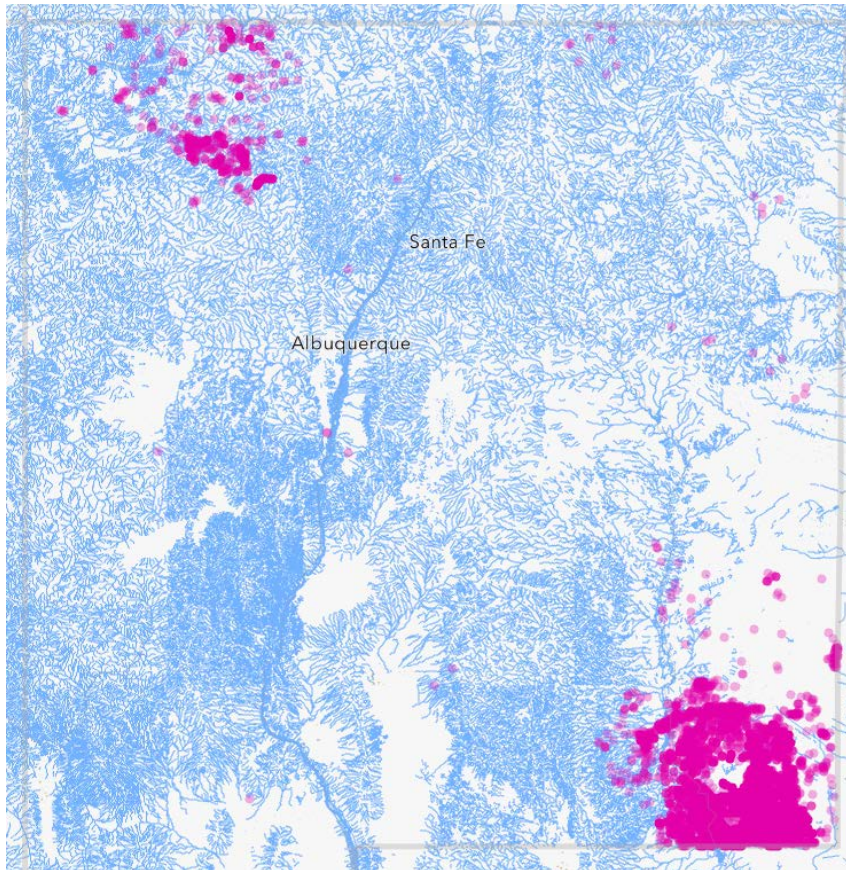
Mapping Structure Setbacks and Permits





-  Setback area (2,250 ft)
-  Permitted but undrilled wells

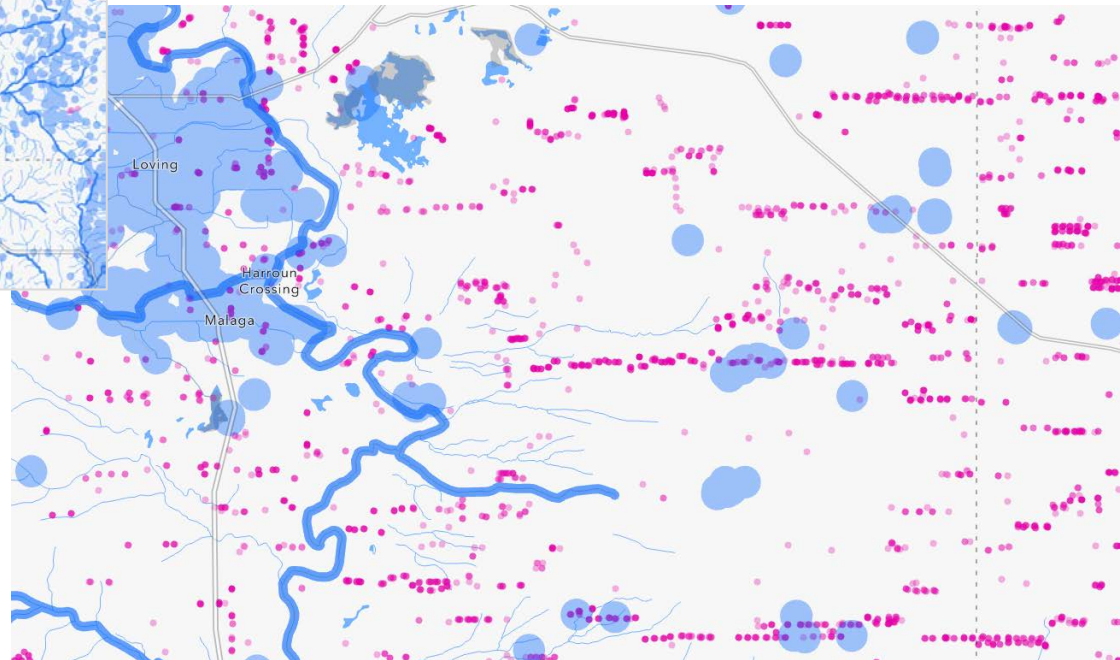
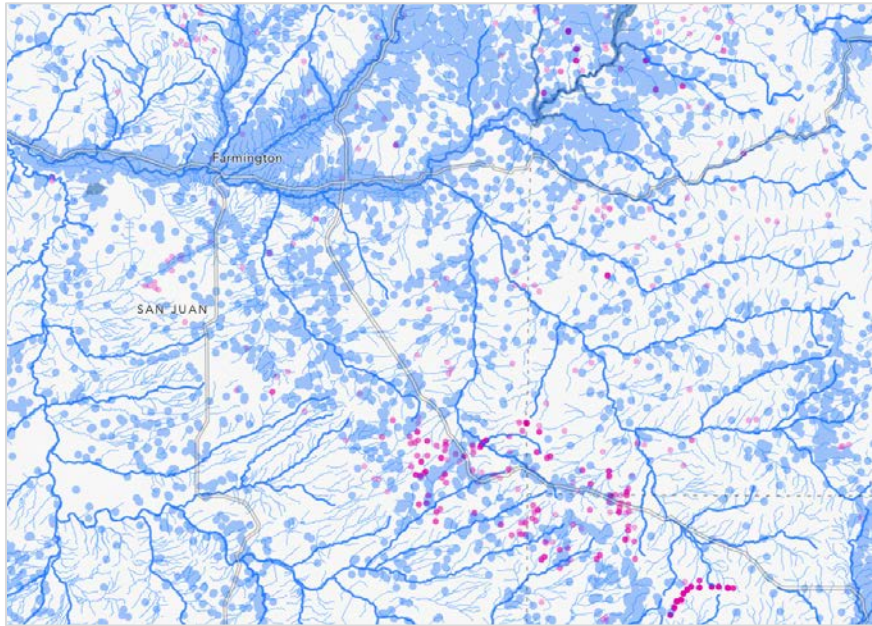




Mapping Water Setbacks and Permits



-  Setback area (300 ft – 600 ft)
-  Permitted but undrilled wells

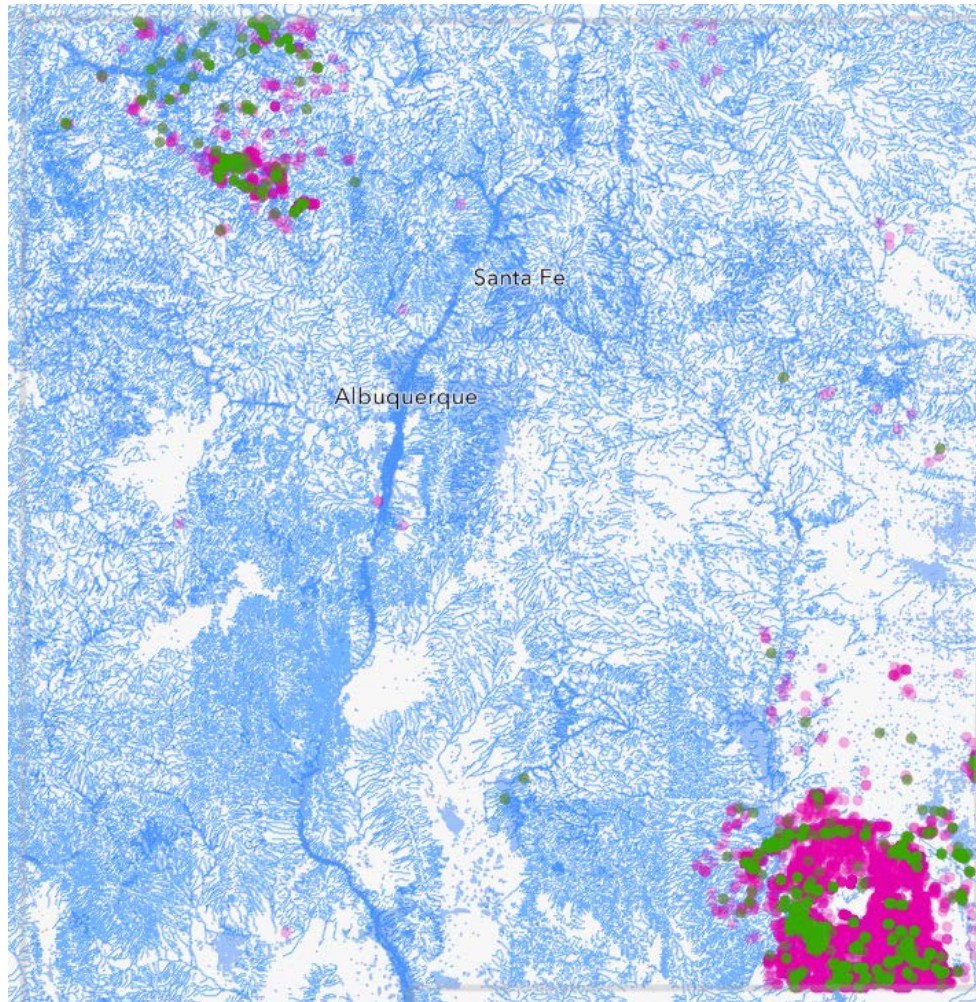
Mapping All Setbacks and Permits



-  Setback area (structures and water)
-  Permitted but undrilled wells



Mapping All Setbacks and Permits



- Setback areas
- Unaffected wells
- Affected wells



Mapping ALL Permitted Well Locations

	OIL	GAS	ALL
All Permitted Wells	78,639	46,974	125,613
In ANY Setback Distance	21,340	20,824	42,164
Flowlines Setback	4,367	7,954	12,321
Major Water Bodies	863	1,078	1,941
Structures	17,540	15,513	33,053
Correctional Facilities	0	8	8
Schools	193	298	491
Major Waterways	966	1,396	2,362
Hospitals	2	1	3
Health Facilities	18	11	29

Source: LFC Analysis



Mapping Active Well Locations

	OIL	GAS	ALL
All ACTIVE Wells	25,634	25,699	51,333
In ANY Setback Distance	8,035	12,128	20,163
Flowlines Setback	1,119	4,429	5,548
Major Water Bodies	286	645	931
Structures	7,064	9,241	16,305
Correctional Facilities	0	4	4
Schools	57	154	211
Major Waterways	220	786	1,006
Hospitals	0	0	0
Health Facilities	7	6	13

Source: LFC Analysis



Mapping Not-Yet-Producing Well Locations

	OIL	GAS	ALL
All Permitted Not Yet Producing Wells	10,520	2,702	13,222
In ANY Setback Distance	1,539	718	2,257
Flowlines Setback	321	142	463
Major Water Bodies	66	10	76
Structures	1,223	594	1,817
Correctional Facilities	0	0	0
Schools	6	0	6
Major Waterways	67	19	86
Hospitals	0	0	0
Health Facilities	0	0	0

Source: LFC Analysis



Shares of New Wells Affected

SHARE OF NEW OIL WELLS AFFECTED	Eddy	Lea	Other	TOTAL
NEW Wells	25%	7%	35%	15%
Federal	22%	6%	36%	14%
State	27%	9%	11%	13%
Tribal	0%	0%	28%	1%
Private	64%	25%	15%	52%
Unlabeled	23%	6%	50%	13%

Source: LFC Analysis

SHARE OF NEW GAS WELLS AFFECTED	Eddy	San Juan	Other	TOTAL
NEW Wells	25%	61%	20%	27%
Federal	21%	63%	22%	23%
State	34%	33%	0%	32%
Tribal	N/A	50%	33%	47%
Private	76%	100%	9%	71%
Unlabeled	25%	100%	0%	24%

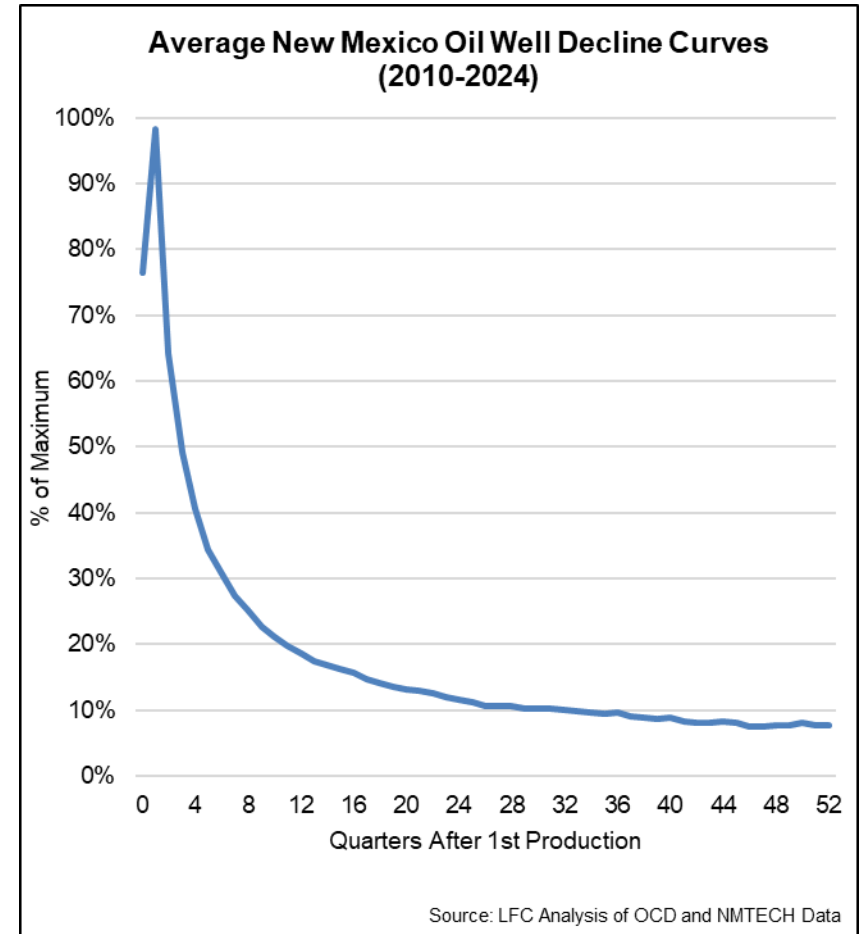
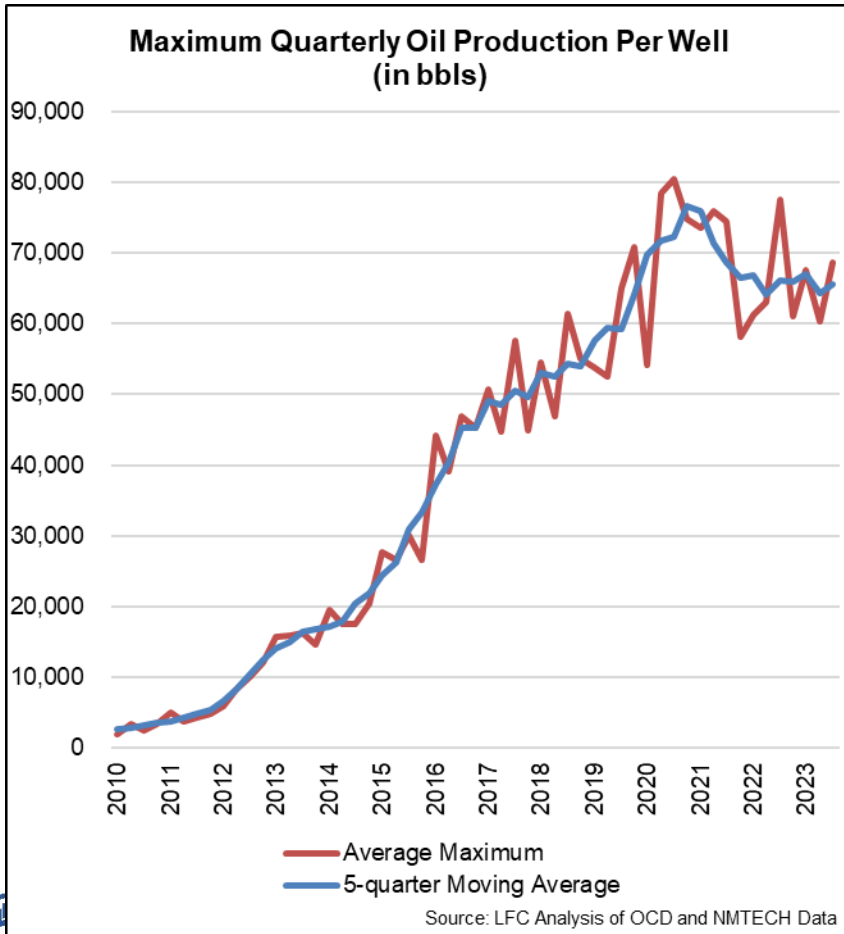
Source: LFC Analysis

Resource Acreage Lost
36%

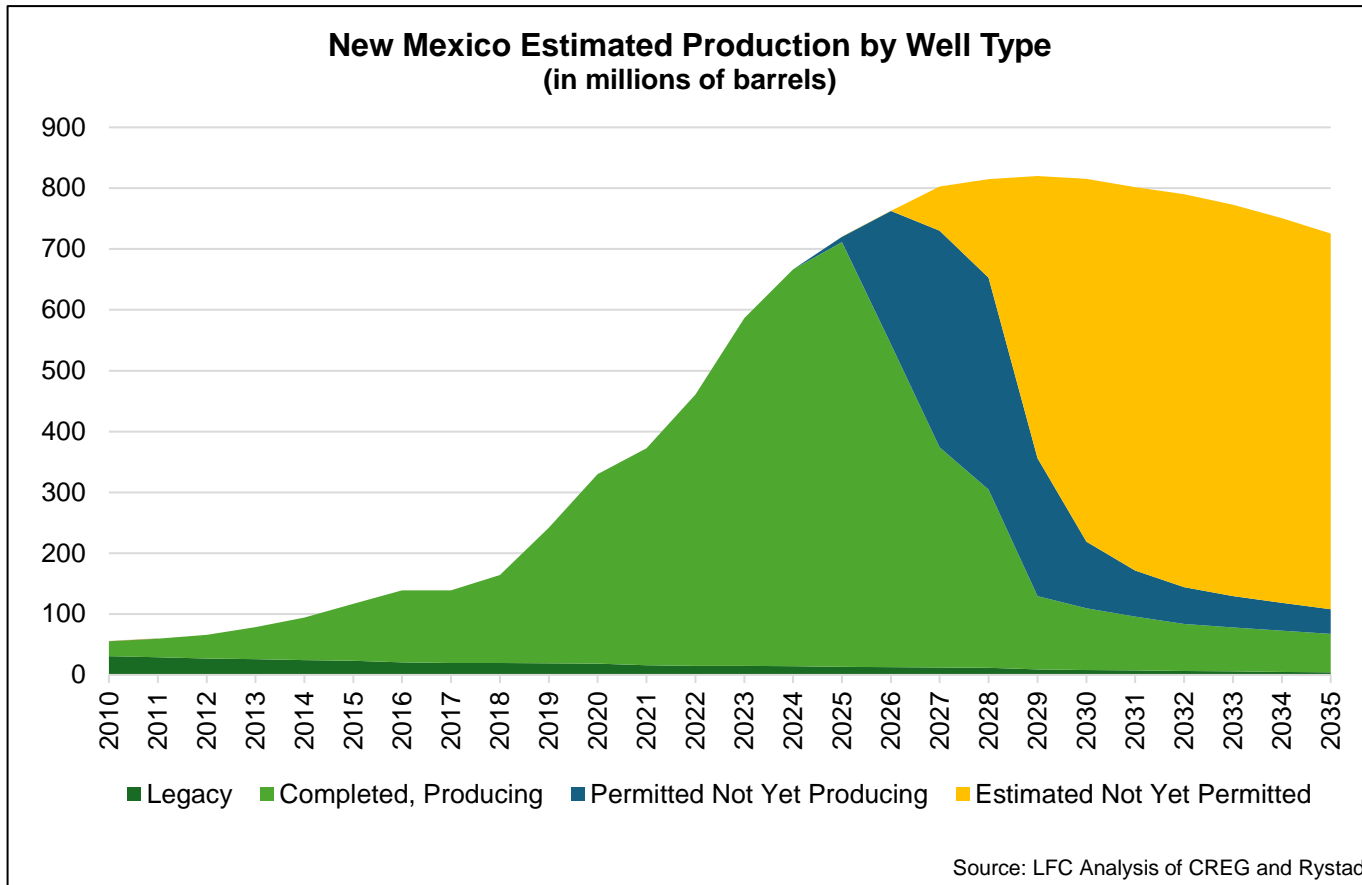
Source: Enverus



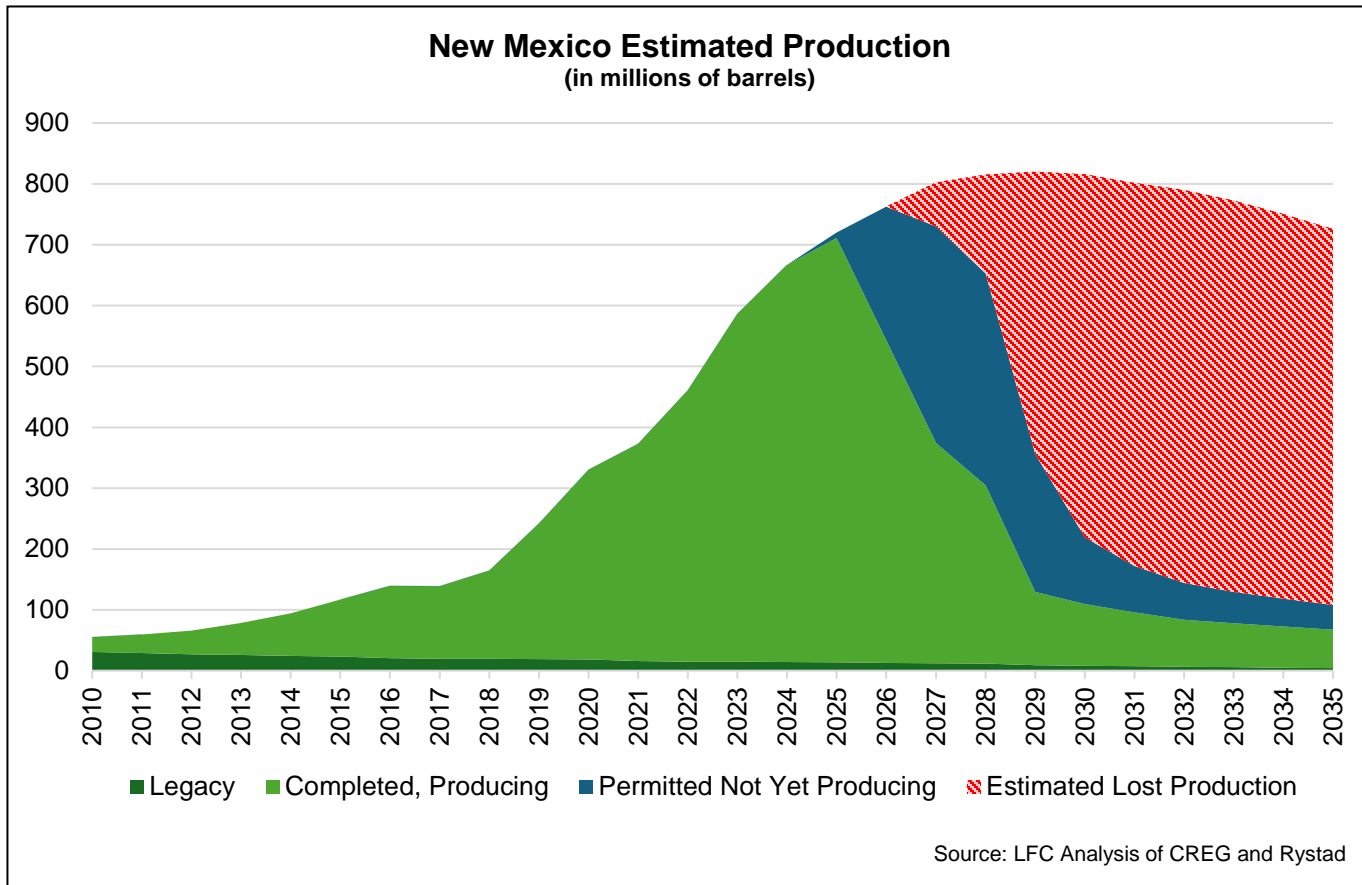
Drilling and Production Analysis



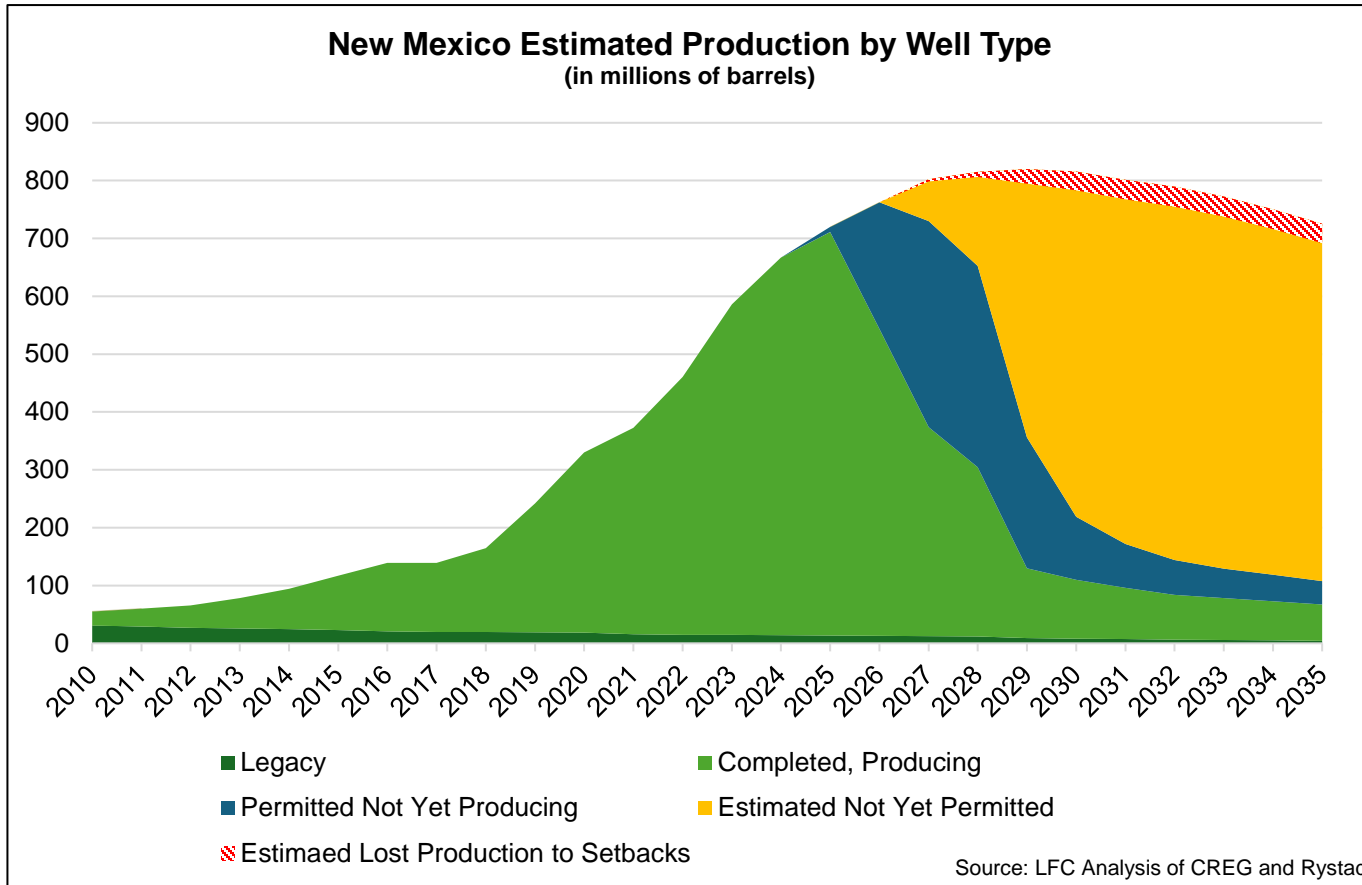
Base Case Oil Production Scenario



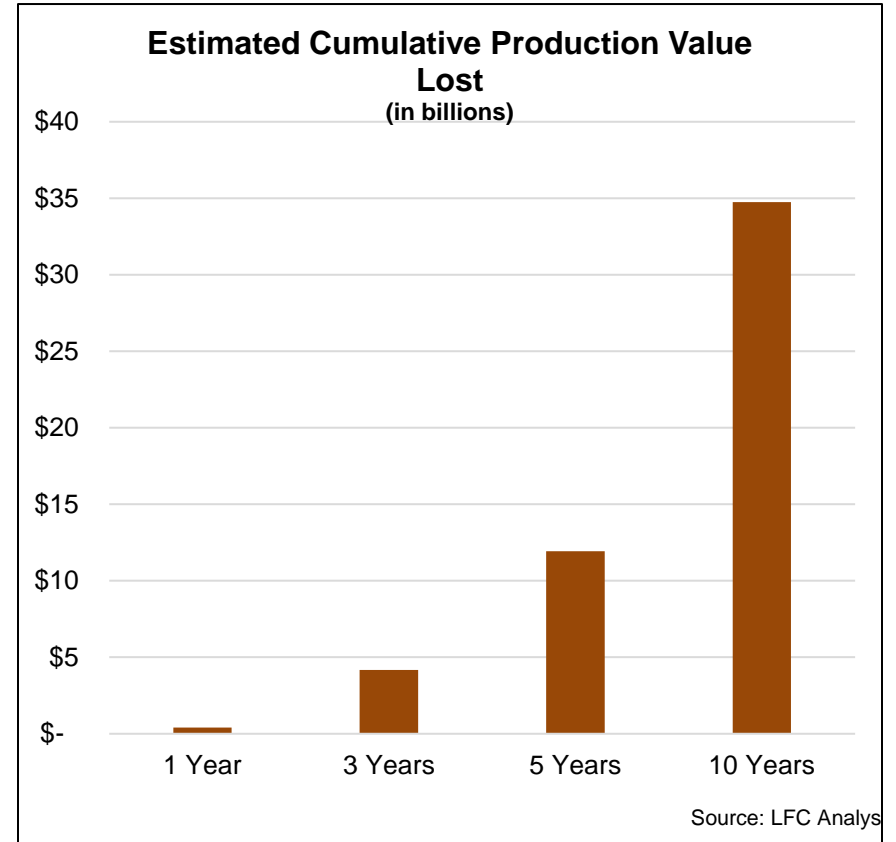
Production Scenario: No New Permits



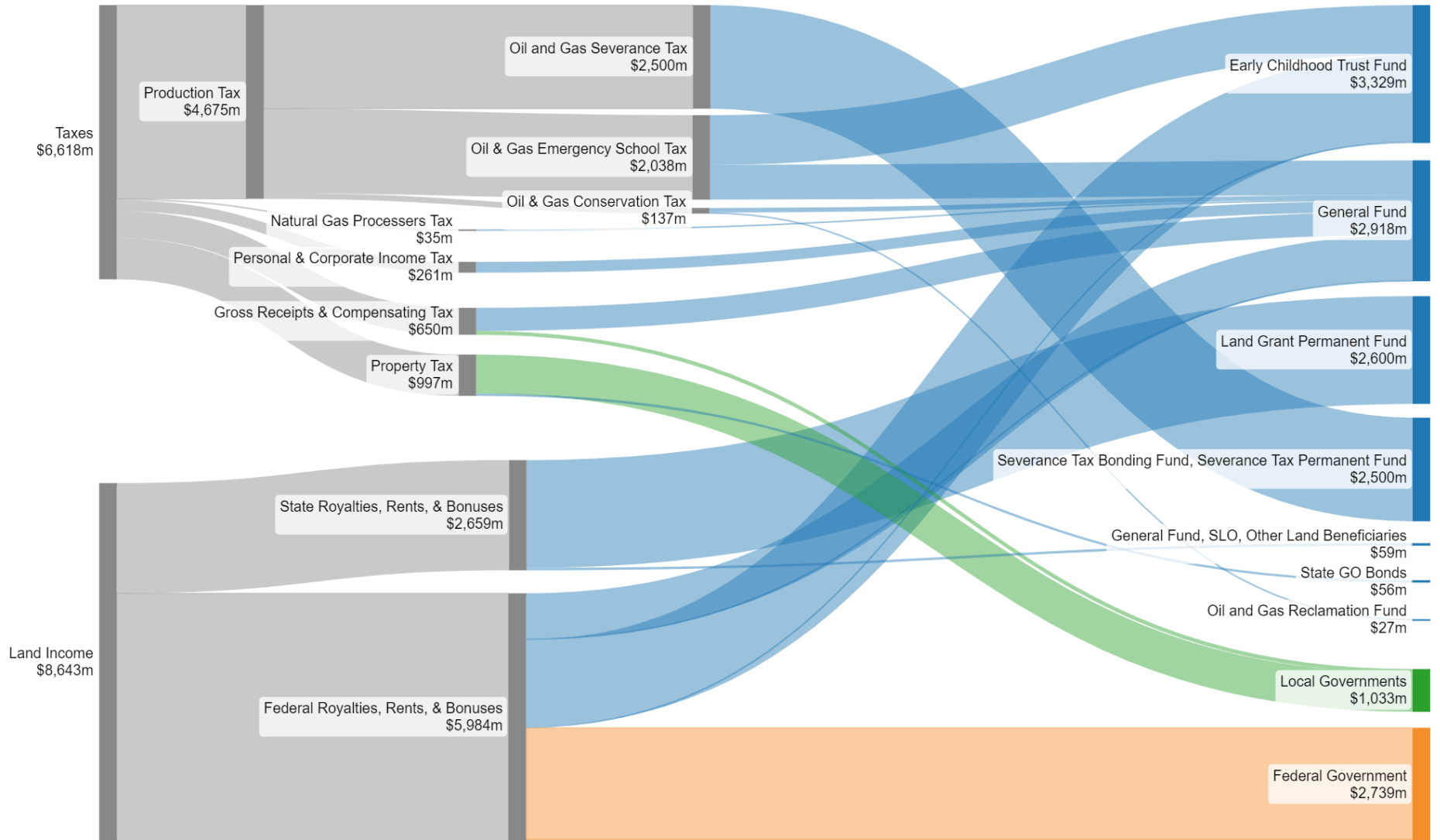
Production Scenario: Setbacks



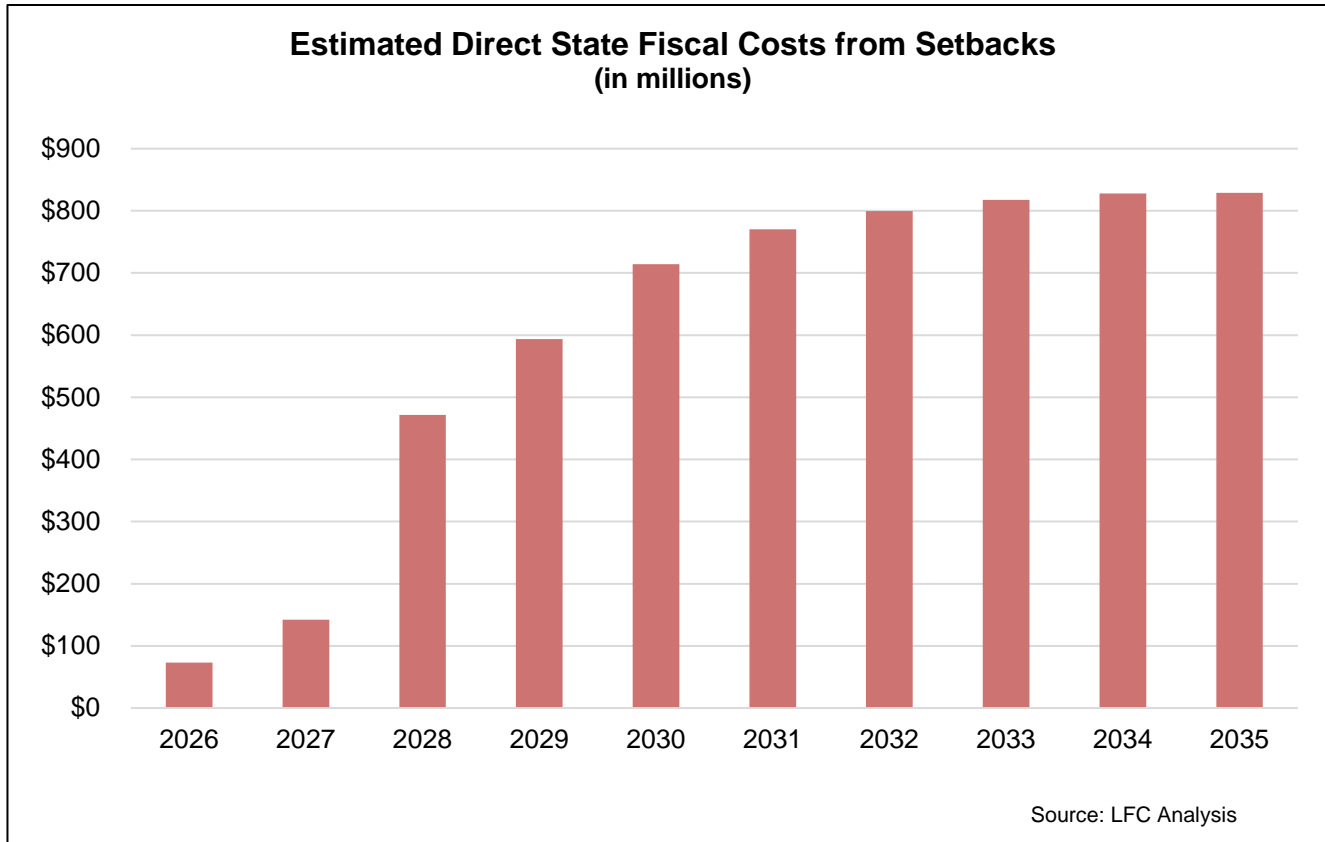
Production Value Lost



FY2023 Oil and Gas Revenue Flow



Estimated Direct Costs for Setbacks



Estimated Direct Costs for Setbacks

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Rec/Nonrecur	Fund
Oil and Gas Severance Tax	(\$12,620.0)	(\$27,890.0)	(\$86,440.0)	(\$110,900.0)	(\$143,530.0)	(\$153,870.0)	(\$158,760.0)	(\$161,180.0)	(\$161,810.0)	(\$160,820.0)	Recurring	Severance Tax Bonding Fund
Severance Tax Bonding Capacity	(\$12,620.0)	(\$27,890.0)	(\$86,440.0)	(\$110,900.0)	(\$143,530.0)	(\$153,870.0)	(\$158,760.0)	(\$161,180.0)	(\$161,810.0)	(\$160,820.0)	Recurring	Capital Outlay
Oil and Gas Emergency School Tax	(\$11,130.0)	(\$22,710.0)	(\$71,450.0)	(\$77,930.0)	(\$91,370.0)	(\$74,820.0)	(\$52,910.0)	(\$30,470.0)	(\$14,850.0)	\$0.0	Recurring	Early Childhood Trust Fund
Oil and Gas Emergency School Tax	(\$250.0)	(\$2,520.0)	(\$7,650.0)	(\$23,390.0)	(\$43,650.0)	(\$70,410.0)	(\$97,180.0)	(\$122,150.0)	(\$138,070.0)	(\$152,350.0)	Recurring	Severance Tax Permanent Fund
Oil and Gas Conservation Tax	(\$130.0)	(\$280.0)	(\$860.0)	(\$1,110.0)	(\$1,430.0)	(\$1,540.0)	(\$1,580.0)	(\$1,610.0)	(\$1,620.0)	(\$1,610.0)	Recurring	Oil Reclamation Fund
Oil and Gas Conservation Tax	(\$510.0)	(\$1,130.0)	(\$3,520.0)	(\$4,510.0)	(\$5,840.0)	(\$6,260.0)	(\$6,460.0)	(\$6,560.0)	(\$6,580.0)	(\$6,540.0)	Recurring	General Fund
Oil and Gas Ad Valorem Production Tax	Dependent on local property tax rates										Recurring	Local Governments/General Obligation Bonds
Oil and Gas Ad Valorem Equipment Tax	Dependent on local property tax rates										Recurring	Local Governments/General Obligation Bonds
State Land Office Rental and Bonus Income*	Indeterminate but negative										Recurring	General Fund
State Land Office Royalty Payments*	(\$9,100.0)	(\$20,490.0)	(\$66,320.0)	(\$84,570.0)	(\$98,080.0)	(\$105,890.0)	(\$109,640.0)	(\$111,690.0)	(\$111,650.0)	(\$111,530.0)	Recurring	Land Grant Permanent Fund
Federal Land Rental and Bonus Income	Indeterminate but negative										Recurring	General Fund
Federal Land Royalty Payments	(\$23,150.0)	(\$47,260.0)	(\$73,050.0)	(\$161,250.0)	(\$137,110.0)	(\$115,720.0)	(\$77,530.0)	(\$39,490.0)	(\$17,810.0)	\$0.0	Recurring	Early Childhood Trust Fund
Federal Land Royalty Payments	(\$490.0)	(\$5,220.0)	(\$90,540.0)	(\$48,430.0)	(\$99,490.0)	(\$137,200.0)	(\$183,050.0)	(\$224,670.0)	(\$247,870.0)	(\$263,490.0)	Recurring	Severance Tax Permanent Fund
Investment Income Distributions from Permanent Funds		(\$2,000.0)	(\$5,300.0)	(\$9,500.0)	(\$16,030.0)	(\$25,060.0)	(\$33,420.0)	(\$41,980.0)	(\$50,740.0)	(\$58,460.0)	Recurring	General Fund
Gross Receipts Tax	(\$5,870.0)	(\$13,180.0)	(\$37,650.0)	(\$48,430.0)	(\$51,120.0)	(\$52,420.0)	(\$52,210.0)	(\$51,320.0)	(\$50,150.0)	(\$48,220.0)	Recurring	General Fund
Personal Income Tax	(\$20,400.0)	(\$20,640.0)	(\$20,970.0)	(\$20,920.0)	(\$24,060.0)	(\$24,400.0)	(\$24,510.0)	(\$24,320.0)	(\$24,340.0)	(\$23,850.0)	Recurring	General Fund
Gross Receipts Tax	(\$450.0)	(\$1,010.0)	(\$2,900.0)	(\$3,730.0)	(\$3,930.0)	(\$4,030.0)	(\$4,020.0)	(\$3,950.0)	(\$3,860.0)	(\$3,710.0)	Recurring	County Governments
Gross Receipts Tax	Indeterminate but negative										Recurring	Municipalities

Not Estimated: Indirect Costs

- Other costs not estimated here, include:
 - Gross receipts taxes generated from ancillary production services including trucking, supplementary equipment, other materials, or induced economic activity from potential lost employment or income, among others.
 - Personal income taxes generated on wages and income that may be lost.
 - Economic and fiscal costs from lost state spending due to reduced revenues (capital outlay, programs, etc.)



Limitations of Estimates

- Cost could be higher because:
 - Oil wells have more associated gas than estimated.
 - Production shifts to more restricted areas.
 - Other impacts not modeled include tank batteries, compressor stations, gas plants, & habitat restrictions.
 - Waterways interpreted to be more restrictive.
 - Proportion of production affected is more than a third of wells affected.
 - Other interactions with surety bonding or emissions changes.
 - Municipal GRT losses not estimated.
 - Commodities prices/volumes are higher than estimated.
- Cost could be lower because:
 - Waterways are interpreted to be less restrictive.
 - Proportion of production affected is less than a third of wells affected.
 - Commodities prices/volumes are lower than estimated.



THANK YOU



Setbacks Evaluated

For the purpose of this analysis, the setbacks analyzed were:

- 2,250 ft setbacks for new production infrastructure for most residential, educational, health or correctional institutions;
- 650 feet from regular or intermittent streams, lakes, ponds, wetlands, or irrigation infrastructure;
- and 300 feet from all other surface water.
- Other additional changes were proposed but separate from setbacks and are not estimated within this analysis.



Appendix of Oil Wells Permitted

	Eddy	LEA	Other	TOTAL
ALL NEW Wells	3,692	6,299	529	10,520
ALL Federal	2,898	4,720	469	8,087
ALL State	323	1,099	18	1,440
ALL Tribal	263	404	29	696
ALL Private	208	76	13	297
ALL Unlabeled	262	404	12	678

In Setbacks	Eddy	Lea	Other	TOTAL
NEW Wells	907	447	185	1,539
Federal	625	304	167	1,096
State	88	101	2	191
Tribal	0	0	8	8
Private	134	19	2	155
Unlabeled	60	23	6	89

SHARE OF NEW WELLS AFFECTED	Eddy	Lea	Other	TOTAL
NEW Wells	25%	7%	35%	15%
Federal	22%	6%	36%	14%
State	27%	9%	11%	13%
Tribal	0%	0%	28%	1%
Private	64%	25%	15%	52%
Unlabeled	23%	6%	50%	13%



Appendix of Gas Wells Permitted

	EDDY	San Juan	Other	TOTAL
ALL NEW Wells	2,371	154	177	2,702
Federal	1,944	117	143	2,204
State	127	3	6	136
Tribal	0	30	6	36
Private	126	3	11	140

In Setbacks	Eddy	San Juan	Other	TOTAL
NEW Wells	589	94	35	718
Federal	406	74	32	512
State	43	1	0	44
Tribal	0	15	2	17
Private	96	3	1	100
Unlabeled	44	1	0	45

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NEW Wells	25%	61%	20%	27%
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