

# Status of DEP's Orphan and Abandoned Well Plugging Initiatives in PA

Office of Oil & Gas Management  
4/22/2025





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Environmental Protection

# Agenda

1. Orphan Wells in Pennsylvania
2. PADEP's Well Plugging Program
3. Current Procurement Process for Plugging Wells
4. Infrastructure Investment and Jobs Act (IIJA)
5. Future Procurement Processes and Tasks



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Orphan wells in Pennsylvania

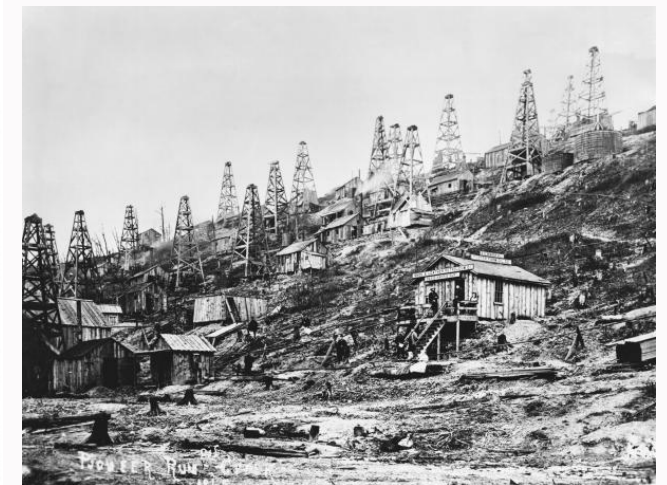
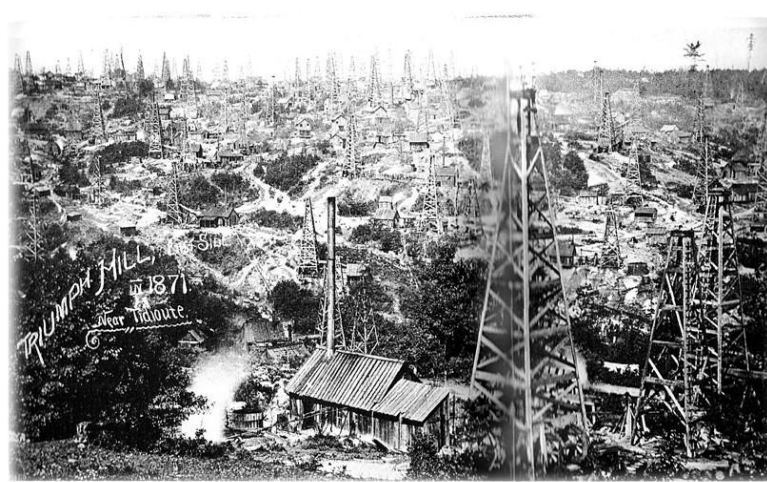
# Orphan Wells in Pennsylvania



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# Orphan Wells in Pennsylvania

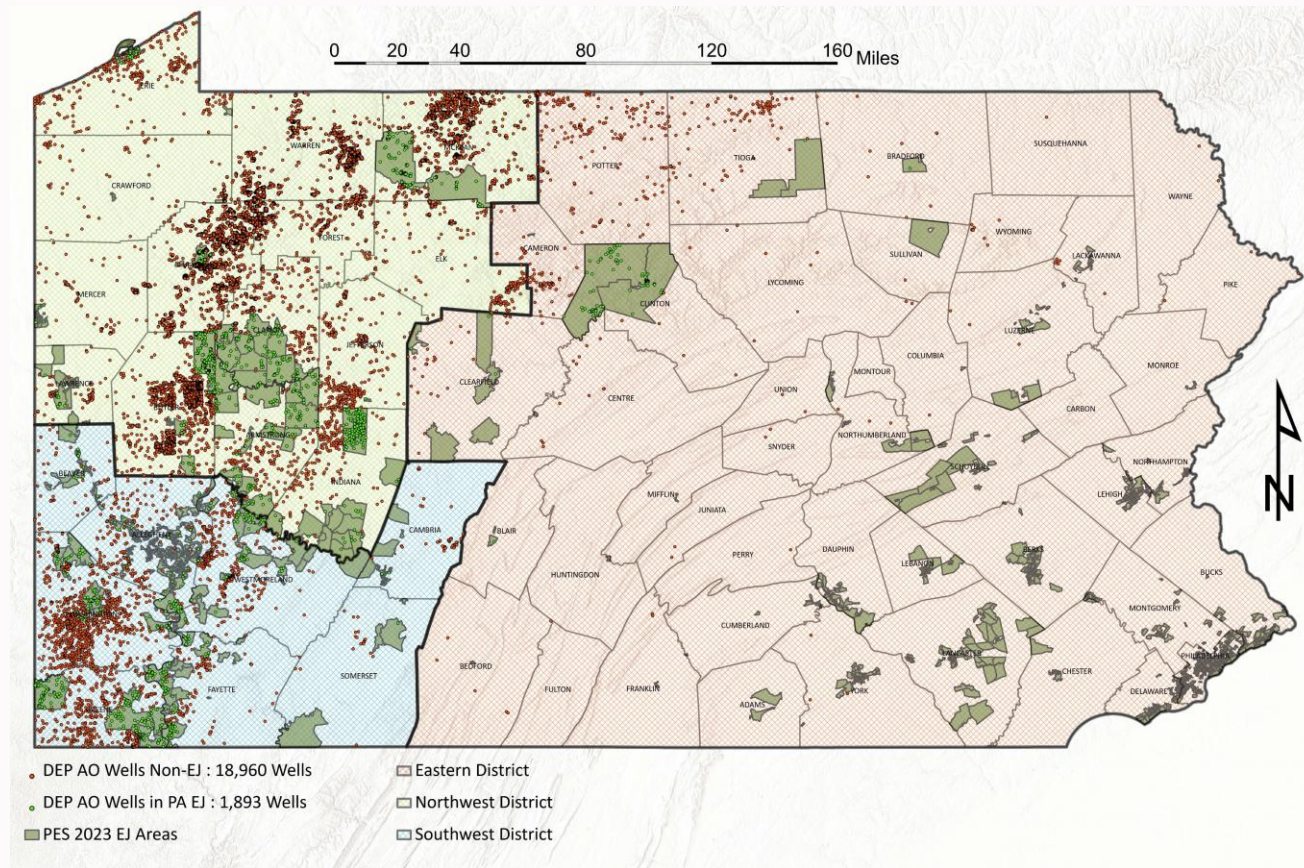
- As many as 300,000 to 760,000 wells have been drilled in PA; between 100,000 and 560,000 oil and gas wells remain unaccounted for in state records.
- PADEP tracks approximately 27,000 wells in our database with no viable owner to plug in PA.
- PADEP has plugged approximately 3,500 abandoned wells since 1989 in PA.





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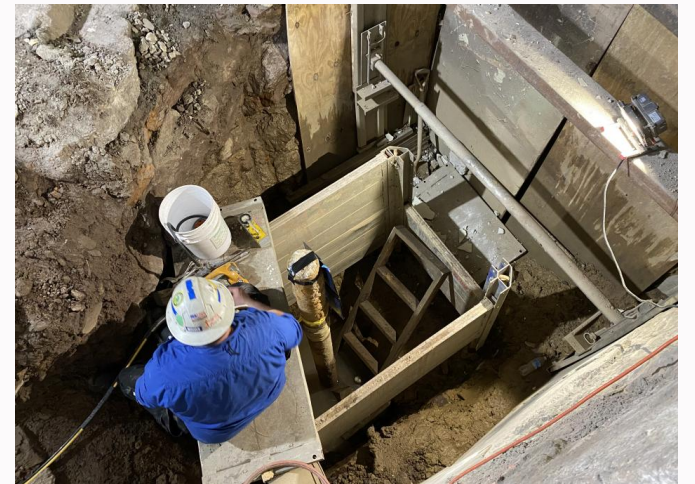
# Map of PADEP's Plugging List





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# Orphan Wells in Pennsylvania





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# Orphan Wells in Pennsylvania





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# **Pennsylvania Department of Environmental Protection's Plugging Program**



# PADEP's Plugging Program

- The Oil and Gas Act of 1984 requires oil and gas well operators to plug non-producing wells.
- This statute provided for an Abandoned Well Restricted Revenue Account to plug abandoned wells. The fund received revenues from fines, fees and penalties, and from a **\$50 surcharge on all oil and gas well drilling permits**. (This revenue supplies the Abandoned Well Plugging Fund.)
- In 1992, the Legislature amended the Oil and Gas Act to establish the Orphan Well Plugging Program. This program, which gives DEP the authority to plug orphan wells, is funded by a separate **surcharge on oil and gas well permit application fees: \$200 for gas wells and \$100 for oil wells**.



# PADEP's Plugging Program

## PA Act 13 of 2012 (Oil and Gas Act):

**Abandoned well** - Any of the following:

(1) A well:

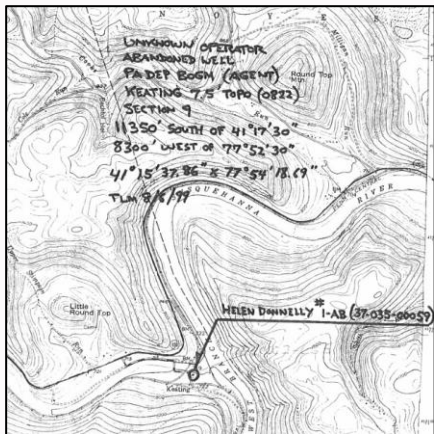
- (i) that has not been used to produce, extract or inject any gas, petroleum or other liquid within the preceding 12 months;
- (ii) for which equipment necessary for production, extraction or injection has been removed; or
- (iii) considered dry and not equipped for production within 60 days after drilling, re-drilling or deepening.

(2) The term does not include wells granted inactive status.

**Orphan well** - A well abandoned prior to April 18, 1985, that has not been affected or operated by the present owner or operator and from which the present owner, operator or lessee has received no economic benefit other than as a landowner or recipient of a royalty interest from the well.

**“All Orphan Wells are abandoned but not all Abandoned Wells are Orphans”**

# From Documenting the Undocumented to Plugged



<b>Human Receptors</b>	<i>Choose Up To 5</i>	
Gas in occupied structure with similar isotopic signature or believed to be associated with well*	50	<input type="checkbox"/>
Oil/brine in occupied structure believed to be associated with well*	50	<input type="checkbox"/>
Soil gas within 200 feet of structure believed to be associated with well	25	<input type="checkbox"/>
Gas in water supply	25	<input type="checkbox"/>
Oil/brine in water supply	15	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Ecological Receptors</b>	<i>Choose Up to 2</i>	
Liquids (oil/brine) to stream or wetland from well	25	<input type="checkbox"/>
Oil/brine seep (discharge not from wellbore)	10	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Well Site Hazards</b>	<i>Choose Up to 4</i>	
Any ambient H <sub>2</sub> S detection	25	<input type="checkbox"/>
Any ambient LEL readings ≥ 10%	25	<input type="checkbox"/>
Sustained ambient LEL <10%	10	<input type="checkbox"/>
Unstable equipment, open pits, E&S issues/washouts	10	<input type="checkbox"/>
Evidence of historical liquid spills not associated with well integrity breach	5	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Well Integrity</b>	<i>Choose Up to 4</i>	
Gas present outside surface casing/present in stream or liquid flow to surface	25	<input type="checkbox"/>
Measurable annular flow of gas	15	<input type="checkbox"/>
Wellhead pressure observed	10	<input type="checkbox"/>
Severe corrosion (pitting) on well component that possibly contains pressure or fluids	10	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Coal/Mining Status</b>	<i>Choose Up To 1</i>	
Well within active underground mine (sealed or undergoing mining ,i.e., longwall district) <sup>1</sup>	25	<input type="checkbox"/>
Within abandoned mined area	25	<input type="checkbox"/>
Permitted but not yet mined (intact coal/rock) <sup>1</sup>	10	<input type="checkbox"/>
Workable coal present but not permitted	5	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Setback/Surrounding Area</b>	<i>Choose Up to 4</i>	
Well within 200 feet of occupied building or water supply well	10	<input type="checkbox"/>
Well located in known gas migration area but not believed to be source	5	<input type="checkbox"/>
Well within 100 feet of stream	5	<input type="checkbox"/>
Well within 300 feet of any wetland >1 acre in size	5	<input type="checkbox"/>
		<input type="checkbox"/> 0
<b>Final Score</b>		<input type="checkbox"/> 0

# From Documenting the Undocumented to Plugged

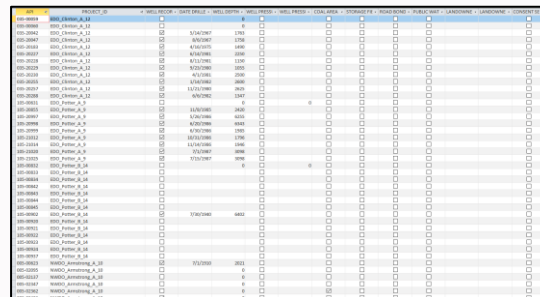
Imminent Threat to human health and the environment



Emergency Contract



No Imminent Threats



PROJECT ID	PROJECT NAME	PROJECT TYPE	PROJECT STATUS	PROJECT DATE	PROJECT LOCATION	PROJECT CONTACT	PROJECT COMMENTS
100-0001	100-0001_A_1	A					
100-0002	100-0002_A_1	A					
100-0003	100-0003_A_1	A					
100-0004	100-0004_A_1	A					
100-0005	100-0005_A_1	A					
100-0006	100-0006_A_1	A					
100-0007	100-0007_A_1	A					
100-0008	100-0008_A_1	A					
100-0009	100-0009_A_1	A					
100-0010	100-0010_A_1	A					
100-0011	100-0011_A_1	A					
100-0012	100-0012_A_1	A					
100-0013	100-0013_A_1	A					
100-0014	100-0014_A_1	A					
100-0015	100-0015_A_1	A					
100-0016	100-0016_A_1	A					
100-0017	100-0017_A_1	A					
100-0018	100-0018_A_1	A					
100-0019	100-0019_A_1	A					
100-0020	100-0020_A_1	A					
100-0021	100-0021_A_1	A					
100-0022	100-0022_A_1	A					
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100-0024	100-0024_A_1	A					
100-0025	100-0025_A_1	A					
100-0026	100-0026_A_1	A					
100-0027	100-0027_A_1	A					
100-0028	100-0028_A_1	A					
100-0029	100-0029_A_1	A					
100-0030	100-0030_A_1	A					
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100-0037	100-0037_A_1	A					
100-0038	100-0038_A_1	A					
100-0039	100-0039_A_1	A					
100-0040	100-0040_A_1	A					
100-0041	100-0041_A_1	A					
100-0042	100-0042_A_1	A					
100-0043	100-0043_A_1	A					
100-0044	100-0044_A_1	A					
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100-0046	100-0046_A_1	A					
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100-0097	100-0097_A_1	A					
100-0098	100-0098_A_1	A					
100-0099	100-0099_A_1	A					
100-0100	100-0100_A_1	A					

Invitation for Bid Contract contingent on available funding

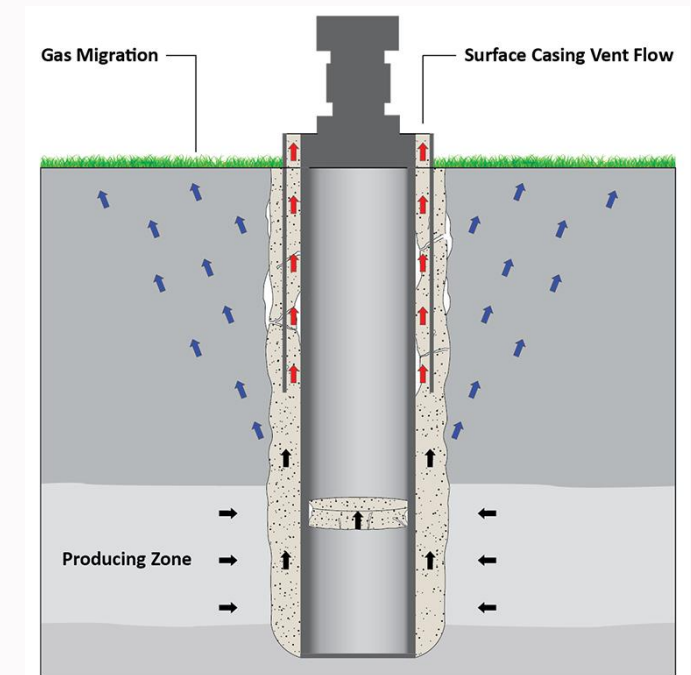


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- **Emergency Contract**
- **Invitation for Bid (Low Bid Contract)**

# Emergency Contracts

- DEP determines a well poses imminent threat to human health and environment.
- District Oil and Gas Inspector solicits 3 bids from local contractors for plugging/mitigation and submits emergency contract request for approval from bureau of oil and gas director, director of emergency response, Contracts, Procurement and Bonding Chief.
- With all approvals, inspector may issue notice to proceed within 72 hours.
- 8 wells plugged under emergency contract in 2023.
- 5 wells plugged in 2024 (5 more under contract).





# Emergency Contracts

## Taylor 1 Emergency

- Orphan well situated in a front yard/parking area of a residence in Shinglehouse, PA.
- No original well records of this historic well.
- Original operator of the well is unknown.
- Homeowner submitted complaint due to odors and drinking water well contamination.
- Emergency Request submitted 10/6/2023.
- Well plugged 1/5/2024.







# Invitation for Bid Contracts

## OOGM FS22-14 (Venango County)

- Two clusters totaling 19 wells each area anchored by “high scoring well.”
- Low bid amount \$1,756,185.00 (Approx. \$92,430.80 per well).
- Project funded via IJIA Initial Grant.

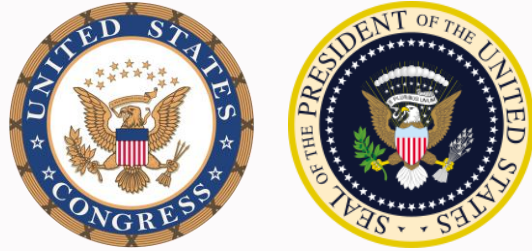




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# **Infrastructure Investment and Jobs Act (IIJA)**

# Infrastructure Investment and Jobs Act



Infrastructure Investment and Jobs Act (IIJA) enacted by the 117th United States Congress and signed into law by President Joe Biden on November 15, 2021.

Department of Interior Orphaned Wells Program Office is responsible for administering grants authorized by IIJA Sec. 40601. Orphaned well site plugging, remediation, and restoration.

# Infrastructure Investment and Jobs Act

PA is eligible for the following IIJA grants:



## Initial Grant

- \$25 Million awarded to PA
- Spend through 2024
- PA has awarded all Initial Grant Projects
- 226 Wells under contract

## Formula Grants

- PA eligible for \$305.6 million
- Application submitted
- Phase I expected award (\$76.4 million)
- Must be obligated within 5 years of award

## Performance Grants

- \$70 Million in Regulatory Improvement and Matching Grants
- Matching Grant Guidance is available
- Regulatory Improvement grant guidance is in development



# IIJA Dashboard

Oil & Gas Infrastructure Investment and Jobs Act (IIJA) Project Tracker ? < >

IIJA Overview | IIJA Plugging Impacts | IIJA Contracts - Proposed & In-Progress | IIJA Grants - Proposed & In-Progress | IIJA Inspection Data

Dashboard Overview of IIJA-Funded Well Plugging PA DEP Contracts

County(ies)  
Click to select County

Contracted Amount  
Click to input a range

Filter by Year  
Currently showing all years

- Allegheny Co. 003-00891
- Allegheny Co. 003-01085
- Allegheny Co. 003-01086
- Allegheny Co. 003-01098
- Allegheny Co. 003-01198
- Allegheny Co. 003-01267
- Allegheny Co. 003-22594
- Allegheny Co. 003-22595
- Allegheny Co. 003-22596
- Allegheny Co. 003-22611
- Armstrong Co. 005-00596
- Armstrong Co. 005-00607
- Armstrong Co. 005-00623
- Armstrong Co. 005-00739
- Armstrong Co. 005-02133
- Armstrong Co. 005-02171
- Armstrong Co. 005-02220

Total IIJA Wells by Land Type

National Forest	0%
Private	96%
State Forest	4%

IIJA Wells with Environmental Impacts

No	95%
Yes	5%

IIJA Wells with Human Impacts

No	88%
Yes	12%

Wells Plugged

220

Wells In Progress

1

IIJA Plugging Wells

Esri, USGS | PSU Office of Physical Plant, Centre County Government, data.pa.gov, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS | PennDOT Open Data Portal Powered by Esri



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# Infrastructure Investment and Jobs Act

## Initial Grant

- The intent of the Initial Grant was to provide funding for existing state well plugging programs to immediately plug wells
- Contracts for well plugging awarded beginning January 2023
- 13 Plugging Contracts - \$24.8M obligated via low bid winners
- 179 (and counting) of 226 wells plugged
- All funds must be spent by December 31, 2024
- 8 Contracts plugging is complete; 5 Contracts work continues
- 227 orphan wells plugged total since IJIA program began in Jan. 2023

# IJA Formula Grant

## **PA is eligible to apply for \$305.6 million in formula grants for the following tasks:**

As provided under Section 40601(c)(2), a State may use funding for any of the following purposes:

- i. To plug, remediate, and reclaim orphaned wells located on State-owned or privately-owned land;
- ii. To identify and characterize undocumented orphaned wells on State and private land;
- iii. To rank orphaned wells based on factors including public health and safety, potential environmental harm, and other land use priorities;
- iv. To make information regarding the use of funds received available on a public website;
- v. To measure and track -
  - (a) emissions of methane and other gases associated with orphaned wells; and
  - (b) contamination of groundwater or surface water associated with orphaned wells;
- vi. To remediate soil and restore native species habitat that has been degraded due to the presence of orphaned wells and associated pipelines, facilities, and infrastructure;
- vii. To remediate land adjacent to orphaned wells and decommission or remove associated pipelines, facilities, and infrastructure;
- viii. To identify and address any disproportionate burden of adverse human health or environmental effects of orphaned wells on communities of color, low-income communities, and Tribal and indigenous communities; and
- ix. To administer a program designed to carry out any activities described in i. through viii.



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# IIJA Formula Grant

## **Future procurement tools for well plugging work:**

- Act 96/136 Orphan Well Plugging Grant Program
- Request for Proposal Contract



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# IIJA Orphan Well Plugging Grant Program

- PA Acts 96 and 136 - Effective: January 3, 2023
- Applies to Orphan Wells only (Abandoned Wells do not apply).
  - **6846 Orphan Wells currently identified in PA**
- No less than 20% (\$15,281,295) of the federal money shall be made available for grants.
- If any amount remaining uncommitted six months prior to any date of recapture by the Federal Government, the PA DEP may use the amount in any other manner in accordance with Federal law and guidance.
- The Grant Program must be in place within 60 days after the award of federal funds under IIJA or the appropriation of plugging funds by the General Assembly, whichever is EARLIER.

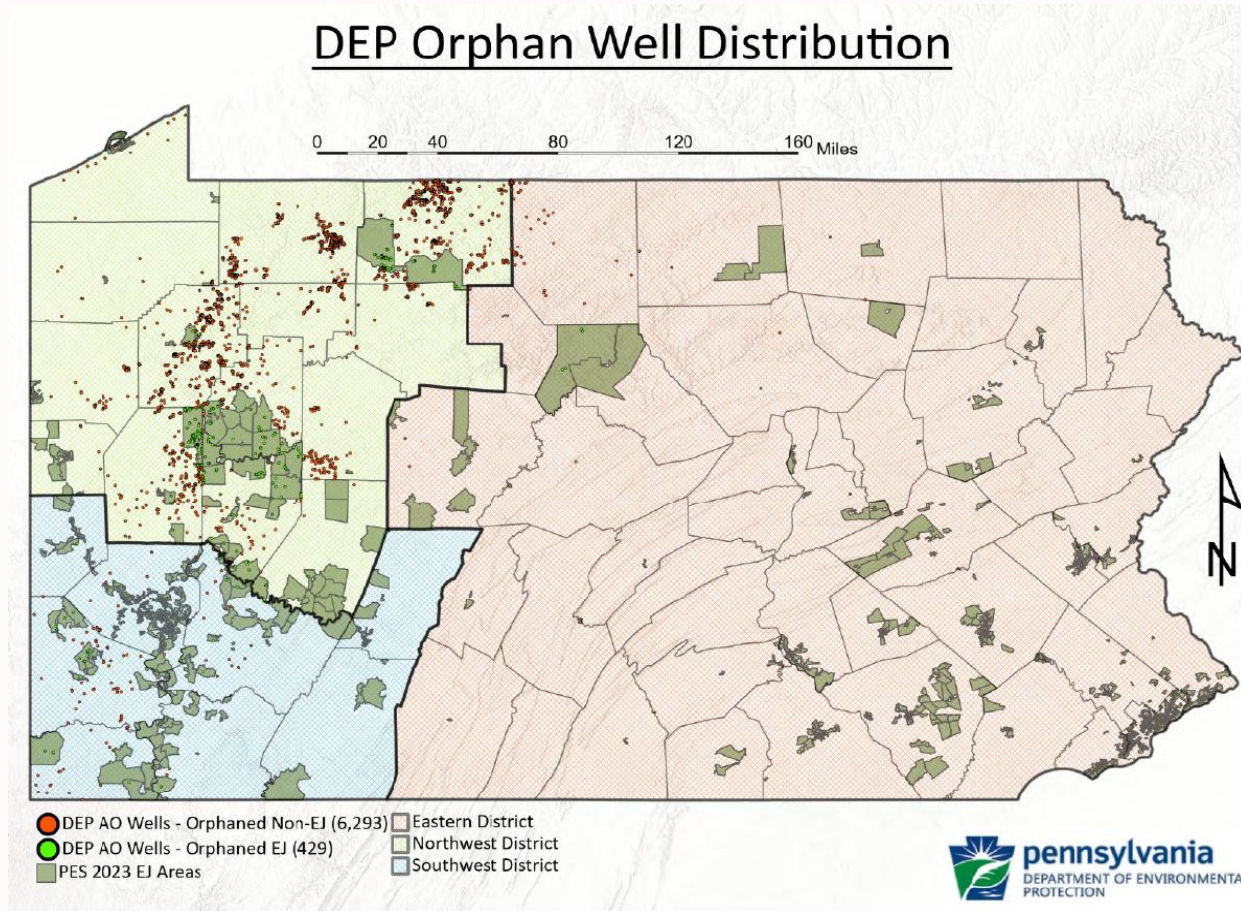


# IJA Orphan Well Plugging Grant Program

- \$40,000 for every eligible well plugged that is an orphan well of a depth of 3,000 feet or less or the actual cost of the qualified well plugger to plug the well, whichever is less.
- \$70,000 for every eligible well plugged that is an orphan well of a depth greater than 3,000 feet or the actual cost of the qualified well plugger to plug the well, whichever is less.
- If the PA DEP finds that it is not receiving an adequate number of applications for grants under this section, the PA DEP may increase the amounts under subsection (b) at its discretion by posting the increased amounts on its publicly accessible Internet website.



# Orphan Wells in Pennsylvania





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# What's Next for Well Plugging Procurement?

## Future Contracts

- Request for Proposal Contracts
  - Qualified Contractor for allowable scope of service
  - Regional Well Plugging Projects
  - Documenting Undocumented Wells
    - Well Location Drone Surveys
    - Document Review
    - Responsible Party Search
  - Remediation
    - Soil
    - Groundwater
  - Methane Qualification
  - Administrative Support



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# Thank You!

**Christopher M. Guise, P.G.**  
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**Harrisburg, PA 17101**

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The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water resources and to provide for the health and safety of its residents and visitors, consistent with the rights and duties established under the Environmental Rights Amendment (Article 1, Section 27 of the Pennsylvania Constitution).