

# Produced Water Reuse Hearing Factsheet



## Introduction: The Challenge of Oil and Gas Waste

- **Excessiveness:** The oil and gas industry in New Mexico generates vastly more waste than oil and gas.
- **Toxicity:** This waste is hazardous to public health and the environment due to its toxic constituents, posing risks of contamination to water sources and ecosystems.
- **Management Issues:** Handling this waste presents significant challenges, leading to spills, induced earthquakes, and widespread risk of environmental contamination.

## Problems with Proposed NMED Rule

- **Lack of Protection:** The New Mexico Environment Department's proposed Wastewater Reuse Rule fails to adequately protect public health and the environment.
- **Lack of Scientific Integrity:** The proposed rule lacks comprehensive scientific protocols, including tracking, reporting, and thorough analysis to ensure produced water treatment works as expected.
- **Poor Toxic Waste Management :** The proposed rule fails to properly classify waste generated by produced water treatment, instead treating produced water waste as exempt from hazardous waste management requirements.

## Produced Water: Toxic, Radioactive, and Lack of Disclosure

- **Radioactive Content:** Studies indicate that produced water from fracking operations in the Permian Basin contains high levels of radium, surpassing EPA's radioactive waste threshold.
- **Toxic Chemicals:** The composition of produced water includes various toxic chemicals, which can have adverse effects on human health and ecosystems.
- **Lack of Disclosure:** There is a concerning lack of transparency regarding the specific chemicals and scientific data related to the content and impact of produced water.

## Call to Action

**Provide Public Comment:** Provide written comments until May 17, 2024 via email to [pamela.jones@env.nm.gov](mailto:pamela.jones@env.nm.gov), reference WQCC 23-84(R) L. Public notice is [here](#).

- **Demand Transparency:** Urge NMED to prioritize public safety by requiring full disclosure of the chemical and radioactive composition of produced water.
- **Protect Our Communities:** Advocate for stringent regulations that safeguard our water resources and prevent the reuse of hazardous waste for agricultural or potable purposes.



## Frequently Asked Questions (FAQ) NMED Produced Water Reuse Hearing

### What is your stance on the NMED's prohibition on discharges of produced water?

We stand in full support of the New Mexico Environment Department's decision to prohibit discharges of produced water, recognizing the critical importance of safeguarding our water and public health.

### What are your concerns regarding experimental produced water projects?

While acknowledging the need to regulate experimental produced water projects, we emphasize the need for stringent scientific standards to evaluate their safety and effectiveness. Full disclosure of all chemicals present in produced water before treatment is essential to ensure transparency and mitigate risks.

### Why do you propose applying hazardous waste laws to produced water treatment?

We advocate for applying hazardous waste laws to produced water treatment because it has found to contain hazardous substances that should not be exempt from regulatory oversight of hazardous materials. This approach ensures proper handling, disposal, and accountability for potentially harmful materials related to produced water treatment and management.

## Key Concerns with Proposed NMED Rule

**Insufficient Safeguards:** We believe the proposed rule lacks adequate safeguards to address the potential risks associated with produced water reuse, particularly in experimental projects. Without strict scientific standards and proper management of new treatment wastes, public health and environmental safety may be compromised.

**Need for Transparency:** Transparency is essential in evaluating the safety of produced water reuse projects. Full disclosure of all chemicals present in produced water is necessary to assess potential risks accurately and make informed decisions.

## Sources

- WildEarth Guardians' Technical Testimony - Ground and Surface Water Protection Supplemental Requirements for Water Reuse: <https://www.env.nm.gov/opf/wp-content/uploads/sites/13/2024/04/2024-04-15-WQCC-23-84-WildEarth-NOI-and-Exhibits-pj.pdf>
- EPA Guidelines on Radioactive Waste: <https://www.epa.gov/radiation/radioactive-waste-basics#definitions>
- National Academy of Sciences Report on Ionizing Radiation: <https://www.nap.edu/catalog/11340/health-risks-from-exposure-to-low-levels-of-ionizing-radiation-beir-vii-phase-2>
- Groundwater Protection Council Produced Water Report: [https://www.gwpc.org/sites/default/files/Produced%20Water%20Report%20FINAL\\_0.pdf](https://www.gwpc.org/sites/default/files/Produced%20Water%20Report%20FINAL_0.pdf)

# Understanding the Risks of “Produced Water” Treatment

*Treating toxic oil and gas waste - known as “produced water”- is rife with risks and challenges. As New Mexico explores options for radioactive waste management as well as water scarcity, it's crucial to consider existing findings on the failure of oil and gas wastewater treatment.*

## Cause for Concern

### Treated Produced Water Contaminants:

- After treatment, contaminants in reused produced water may enter new waste streams, prompting questions about disposal, landfill monitoring, and landfill discharge permits for leachate tainted by radium and fracking chemicals.

### Highly Concentrated Sludges and Wastes:

- Produced water treatment produces concentrated sludges and other wastes, raising concerns about disposal, capacity, and the safety of the public and environment, considering exemptions from state hazardous waste laws.

## Studies on the Failure of “Produced Water” Treatment

### River Contamination from Treated Produced Water Discharges:

- Source: [Detailed Study of the Centralized Waste Treatment Point Source Category for Facilities Managing Oil and Gas Extraction Wastes](#) (EPA-821-R-18-004).
  - *Finding:* Central wastewater treatment facilities discharging treated oil and gas wastewater have measurable impacts on downstream surface waters and sediment.
- Source: [Sources of Radium Accumulation in Stream Sediments Near Disposal Sites in Pennsylvania: Implications for Disposal of Conventional Oil and Gas Wastewater](#) (DOI: 10.1021/acs.est.7b04952)
  - *Finding:* Evaluation of conventional oil and gas wastewater disposal reveals elevated radium levels in stream sediments near disposal sites.
- Source: [Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania](#) (Environmental Science & Technology, 2013)
  - *Finding:* Examination of water quality and radioactive contaminants associated with shale gas wastewater disposal indicates significant environmental impacts.

### Worker Exposure Risks:

- Source: [Technologically Enhanced Naturally Occurring Radioactive Material \(TENORM\) Study Report](#) May 2016
  - *Finding:* Radiation risks to workers at oil and gas wastewater treatment facilities.

### Failure of Treatment Technology:

- Source: [Investigative Report](#) mapping data from radiation study in Pennsylvania on radium concentrations in effluent from produced water treatment facilities.
  - *Finding:* Routine detection of radium in all sample types, with varying degrees of radium removal at treatment facilities. Some treatment increases radiation instead of decreases.