

## New Mexico Environment Department Proposed Produced Water Rule at 20.6.8 NMAC

Water Quality Control Commission hearing continues August 5, 2024

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**Q: What is produced water?**

**A:** Produced water is a wastewater byproduct from the drilling or production of oil and gas. It is the water and chemicals that go down the well when drilling and the water and chemicals that come with the oil or gas that is extracted. Produced water contains many known and unknown pollutants.

**Q: What is in produced water?**

**A:** Produced water can contain oil, grease, suspended solids, dissolved solids, heavy metals, naturally occurring radioactive materials, dissolved gasses, microorganisms, and a myriad of other known and unknown compounds.

Many of these are known hazards. For example, produced water commonly contains arsenic, barium, bromide, mercury, benzene, toluene, ethylbenzene, and xylenes. These have the potential to cause cancer and developmental, reproductive, and other harmful effects in humans and other life.

In addition, produced water can contain hundreds of other pollutants. For some of these, hazard information is lacking. A recent literature review documented more than 1,000 individual known chemicals, and a follow up review looking at additional data suggests more than 2,800 unique compounds may be present in produced water. In addition, many chemicals used in hydraulic fracturing or “fracking” are proprietary, so their basic chemical structure and toxicity is unknown to the public. A U.S. EPA study identified 692 ingredients in hydraulic fracturing fluids, 11% of which companies didn’t disclose to the public.

**Q: Can produced water be treated so that it is safe for humans and the environment?**

**A:** According to the New Mexico Environment Department, there is insufficient data on produced water and treatment methods to discharge untreated or treated produced water into the environment in a way that complies with state water quality standards and protects drinking water, aquatic life, wildlife, recreation, and agriculture.

**Q: What does the New Mexico Environment Department’s proposed produced water rule do?**

**A:** NMED’s proposed rule:

- Would prohibit the discharge of untreated and treated produced water to:
  - Ground water—subsurface water in aquifers used for drinking water and other purposes. Produced water would not be allowed to be discharged to or disposed of on land because it can leach into aquifers from the surface and contaminate ground water.
  - Surface waters, including rivers, streams, lakes, wetlands, and arroyos.



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- Would establish requirements for use of produced water in “demonstration projects” and “industrial projects,” which includes requirements that produced water would not be discharged to ground and surface waters and that the project operators develop spill prevention plans and pay for cleanup in case of a spill, accident, or discharge.

**Q: So, are there any circumstances under the rule that produced water would be introduced into ground or surface water?**

**A:** No.

**Q: Does the proposed rule allow produced water to be used to irrigate crops or for livestock grazing?**

**A:** No, the proposed rule prohibits produced water to be discharged on land, which could then directly or indirectly that could impact ground water. This includes using produced water to irrigate crops or for livestock grazing.

**Q: What are demonstration projects and industrial projects?**

**A:** Demonstration projects are laboratory or field studies conducted on produced water that include studies on treatment technologies for produced water. Industrial projects use produced water, such as in power plants, hydrogen production, or chemical plants.

**Q: Does the proposed rule allow demonstration projects or industrial projects to discharge produced water to ground or surface water?**

**A:** No. Under NMED’s proposed rule, operators must demonstrate there would be no discharge to ground or surface water from a demonstration or industrial project.

**Q: How will produced water be reused in industrial projects?**

**A:** NMED has not explained how produced water will be reused in various industrial settings, provided evidence that such reuse will be safe, or explained why authorization for industrial projects is even necessary at this point. Under NMED’s proposed rule, “industrial projects” are not one-time projects. Instead, NMED would authorize reuse of produced water in ongoing industrial processes and production with no time limits or limits on the volumes of produced water that could be reused. This type of industrial reuse is different from demonstration projects that are generally one-time projects designed to study and evaluate produced water toxicity and treatment, often in a laboratory or academic setting. Industrial projects therefore carry greater risks of contamination of ground and surface water through spills, accidents, and inadvertent discharges to public wastewater systems. Until there is a sufficient understanding of the safety and efficacy of how produced water will be reused in industrial settings, authorization for industrial projects should be removed.

**Q: So, will demonstration and industrial projects impair ground and surface waters?**

**A:** The rule prohibits any discharge to ground or surface water and therefore the risk of impairment to ground or surface water would occur through spills, accidents, and inadvertent discharges. When handling any water contaminant, there is some risk of a spill, accident, or discharge that could impact ground or surface water. Current state rules require immediate notification to NMED and cleanup if a spill occurs.

**Q: Could demonstration projects or industrial projects move forward without NMED's proposed rule?**

**A:** Yes. Because there is no discharge to ground and surface water, these projects could move forward and, in fact, demonstration projects have already moved forward. NMED's proposed rule places restrictions on demonstration and industrial projects to protect human health and the environment, and prohibits any discharge. To date, there is no known industrial project outside of the oil field that has gone forward.

**Q: What happens to the produced water waste generated from demonstration and industrial projects?**

**A:** That waste must be disposed of in an injection well or a waste facility regulated under Oil Conservation Commission rules implemented by the Oil Conservation Division. The surface waste facilities must be lined and ensure that contaminants do not migrate to ground or surface water.

**Q: How does this rule relate to drinking water?**

**A:** The rule prohibits reusing domestic, industrial, or produced water for drinking water. The exception to this prohibition allows "feasibility studies" to be conducted for the reuse of **domestic wastewater** for drinking water applications. Produced water is not allowed to be used in feasibility studies.

**Q: What is positive about the proposed rule?**

**A:** The rule prohibits discharge of treated and untreated produced water to New Mexico ground and surface waters, thereby protecting those waters from contamination from produced water.

In addition, the rule puts guardrails on demonstration projects including prohibiting any discharge to ground and surface waters, satisfying NMED financial assurance requirements, creating plans for transportation of the produced water, and developing spill prevention plans.

**Q: What is problematic about the proposed rule?**

**A:** Many of its definitions are unnecessary because they are not included in the body of the rule and therefore serve no regulatory purpose. For example, definitions such as "agricultural application" and "flood irrigation application" imply to the public that the rule permits discharging produced water to the land, which it does not. NMED has included these definitions in anticipation of a next round of rulemaking that will focus on domestic wastewater reuse. These definitions are not appropriate to include in this round of rulemaking because they are not used in the rule, and should be removed.

Also, as discussed, the proposed rule's authorization for industrial projects is not sufficiently justified at this point, and should be removed.

**Q: Is the proposed rule related to the governor's proposed Strategic Water Supply?**

**A:** It's complicated. The proposed Strategic Water Supply is a highly problematic [\\$500 million state initiative](#) that would subsidize oil and gas operators and other private companies to treat and sell produced water, risking further entrenchment of the oil and gas industry in New Mexico. Unfortunately, industry does not currently need approval of the initiative to move forward with their own self-funded produced water projects.

While the proposed rule authorizes industrial reuse of produced water—activity envisioned by the Strategic Water Supply—the rule would prohibit discharge of produced water to ground and surface waters and establish guardrails to protect water resources. The absence of the prohibition and guardrails could deprive the state of tools necessary to protect water resources from these projects.

So, while the proposed rule is not an approval of the Strategic Water Supply initiative, nonetheless we must remain vigilant and, if there are executive or legislative attempts to move the Strategic Water Supply initiative forward, we must ensure that our water resources are not jeopardized in any way and that public funds are used for the public good.

**Q: Are any parties trying to weaken the rule proposed by NMED?**

**A:** Yes. There are proposals from industry groups to change the rule as proposed by NMED to allow discharges of produced water to ground and surface water. These proposals do not propose setting water quality standards sufficient to protect human health and the environment, and should be strongly and roundly opposed.

**Q: How can the public participate in the rulemaking?**

**A:** Members of the public can participate in the hybrid in-person and virtual rulemaking by attending the hearing, **which continues on August 5**; giving oral comment at the hearing; and submitting written comment now through close of the hearing. A detailed description of how to participate is available [here](#)

Amigos Bravos and Sierra Club's direct testimony and proposed changes to the rule, filed by Western Environmental Law Center attorneys, is available [here](#).