

## Sarah Harsdorff

I am writing to oppose proposals that would allow treated oilfield produced water to be applied to farmland and ranch land, or discharged into rivers, streams, and other waterways.

Produced water from oil and gas operations is fundamentally different from municipal or agricultural wastewater. It contains high concentrations of salts (chlorides, sodium, and total dissolved solids) that can render soil infertile, degrade crop yields, and take years or decades to remediate once soils are damaged. It also routinely contains heavy metals such as arsenic, barium, and cadmium, naturally occurring radioactive materials (NORM/TENORM) brought up from deep geologic formations, and organic compounds including benzene, toluene, and other BTEX chemicals associated with cancer and other serious health effects.

A particular concern is the presence of PFAS and other chemicals used in hydraulic fracturing fluids, many of which are protected as trade secrets and are never fully disclosed to regulators or the public. Current treatment technologies, including reverse osmosis and other advanced processes, are not proven to reliably remove all of these contaminants, and PFAS in particular are persistent, do not break down in the environment, and accumulate in soil, crops, livestock, and ultimately in the people who eat them.

Applying this water to farmland risks contaminating the soil that produces our food, the groundwater that supplies drinking water wells, and the forage that livestock consume, with effects that may not become apparent for years. Discharging it into waterways threatens aquatic ecosystems, downstream water users, and irrigation supplies, with no guarantee that monitoring will catch problems before harm occurs.

Before any such reuse is permitted, there should be comprehensive, independent, peer-reviewed studies on the long-term effects of treated produced water on soil health, crop and livestock safety, and human health, full public disclosure of the chemicals involved, and treatment standards proven effective for the full range of contaminants present, not just the limited set currently tested for.

Until those conditions are met, treated oilfield wastewater should not be approved for use on agricultural land or discharge into waterways. The risks to our food supply, water resources, and public health are too significant, and too poorly understood, to proceed.