FOOD & WATER WATCH

New Mexico's Factory Farming Is an Environmental Emergency

As climate change looms over the Western U.S., New Mexico faces intensified drought and historic aridity.[1] As of May 2026, a staggering 94 percent of the state was under drought conditions, and this could worsen over time, with studies predicting that average temperatures will increase up to 10 degrees Fahrenheit by 2100.[2] Meanwhile, the industry responsible for guzzling the majority of New Mexico's water continues to do so with reckless abandon, spewing pollution at the same time. It is long past time to rein in Big Ag's egregious climate and water abuses. New Mexico must face the threat of Big Ag head-on and pass a moratorium on factory farm expansion. The New Mexico Environment Department must also create specific permit regulations that effectively restrict the discharge of factory farm pollutants.

More Cows, More Pollution

The agriculture sector is New Mexico's fourth largest greenhouse gas emitter,[3] and mega-dairies contribute significantly to these climate-warming emissions. Food & Water Watch (FWW) estimates that the state's mega-dairies[a] released 106,400 metric tons of methane in 2022.[4] This has the same global warming potential as driving 2.2 million cars their average annual mileage, or over 23 billion miles.[5] Methane traps significantly more atmospheric heat than carbon dioxide (CO_2) and contributes to the formation of other greenhouse gases, giving it a higher global warming potential in the short term than CO_2.[6]

In 2022, New Mexico had 280,000 dairy cows living on factory farms. These facilities are getting larger, confining an average of 3,685 cows each in 2022 — 64 percent more than in 2002 and 21 percent more than in 2017. New Mexico ranks fifth in the nation for average factory dairy farm size. Meanwhile, the state bleeds family-scale dairies, with the number of smaller dairies down 44 percent in 2022 compared to 2017.[7]

Consolidation and growth only worsen the climate impacts of mega-dairies. Most on-farm methane emissions come from two sources: enteric fermentation and manure management. Enteric fermentation, a process within the digestive system of ruminants like cattle, plays a massive role in mega-dairy emissions.[8] FWW estimates that enteric fermentation from New Mexico's mega-dairies released 41,500 metric tons of methane in 2022 — the warming equivalent of driving 850,000 cars

a In this analysis, mega-dairies are defined as those with 500+ milk cows. See FWW. "Factory Farm Nation: 2024 Edition." September 2024 at 14.

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their average annual mileage.[9] As herd sizes increase, so too do enteric fermentation emissions, deepening the climate chaos.

Manure management is the second major source of on-farm methane emissions and pollution. Small dairies can sustainably apply manure to surrounding cropland as fertilizer. But many of New Mexico's mega-dairies are "dry lot" operations, confining cows on barren soil that becomes a "mashed mess of urine and manure."[10] FWW estimates that New Mexico's mega-dairies produce a staggering 11.5 billion pounds of manure every year, four times as much as the state's human population.[11] This is too much manure for the land to handle, leading to overapplication and to nitrate-contaminated groundwater.[12] Based on regional estimates of manure management systems, FWW finds that these practices produced over 64,800 metric tons of methane in 2022 — the warming equivalent of driving over 1.3 million cars their average annual mileage.[13]

Water Scarcity Threats

As New Mexico stares down increasing aridification, factory farms guzzle the water supplies needed to weather this changing environment. The state predicts having 25 percent less water over the next fifty years, resulting in an annual shortage of 244 billion gallons.[14] Surface waters like the Colorado and Rio Grande rivers are drying up,[15] while groundwater reservoirs like the Ogallala Basin are over-pumped and declining.[16] The decrease in aquifer levels is especially concerning for drinking water supplies, which draw largely from groundwater resources.[17]

New Mexico cannot confront this crisis without serious reductions in water withdrawals from its agriculture sector, which accounts for about 80 percent of total withdrawals. This includes water used for livestock and for crops[18] — which, while appearing to be separate issues, are two sides of the same coin, given mega-dairies' reliance on alfalfa as a feed source.

FWW estimates that in 2022, New Mexico's mega-dairy cows required 9.6 billion gallons of water just for drinking and washing facilities — enough to supply over 240,000 households with their annual indoor water needs.[19] State reports estimate that nearly all the water used to support livestock comes from groundwater,[20] posing a major threat to strained supplies. This, however, is only a piece of the dairies' water use. A fuller picture emerges when we look at alfalfa for dairy feed production.

Notoriously water-thirsty,[21] alfalfa is New Mexico's dominant crop both in production and in financial value, and is harvested on 150,000 acres.[22] It is also the most nutritionally important hay crop fed to dairy cattle in the U.S., and the two industries are particularly interdependent in New Mexico.[23] The growth of New Mexico's dairy industry has been backed by abundant supplies of alfalfa, and any shock to supply will limit continued growth.[24] Dairy use accounts for up to 80 percent of alfalfa in major dairy states.[25] In New Mexico, over 30 percent of the alfalfa produced is exported out of state,[26] effectively shipping out the water supply.

In states like New Mexico, where rainfall is sparse, over 90 percent of alfalfa relies on irrigation.[27] FWW estimates that in 2025, alfalfa farms consumed an estimated 79 billion gallons of water, with a quarter of this occurring on large farms (those farming 1,000+ acres). This is enough water to supply everyone in New Mexico with household water for almost two and a half years.[28] Alfalfa is

also extremely dependent on groundwater. In Chaves County, New Mexico's top alfalfa producing county in 2024, 87 percent of irrigation water used for agriculture was groundwater. This groundwater abuse in the agriculture sector was 78 percent of all ground and surface water withdrawals in the county.[29]

While Big Ag thrives, families and communities suffer. Water levels in the High Plains Aquifer, spanning a vast area of the central U.S., are declining at a rate of 1.5 feet per year — 90 times the recharge rate. Even if all groundwater pumping stopped today, the aquifer's water levels would not increase significantly in our lifetimes.[30] Domestic wells go dry disproportionately more than agricultural wells due to their shallow depths, and these dry wells are concentrated in rural areas.[31] Across the American West, as many as 1 in 30 wells built since 1950 have run dry,[32] and New Mexico hydrologists have seen wells drop 30 feet in the span of a year.[33] Around 20 percent of New Mexicans rely on private wells,[34] and once that water is gone, it isn't coming back.

Conclusion

Mega-dairies present clear climate and water crises that policymakers must address. These will not go away through industry solutions or ignorance, and state regulators are only beginning to grapple with this reality. During rulemaking for the Clean Transportation Fuel Program, Food & Water Watch pushed the New Mexico Environment Department to effectively block in-state mega-dairies from profiting off the program, a major victory. This prevents the state from backsliding on its climate goals and indicates state acknowledgement of the threats posed by mega-dairies, but it is only the first step in tackling the emergency.

Current state plans lack the urgency required to address the problems. The state's own analysis finds that New Mexico fails to consider the devastating impacts of continued factory farming: by 2030, projected emissions from animal agriculture will *increase*, rather than decrease.[35] Just as egregious, the state's most recent Drought Plan fails to mention any scaling back of mega-dairy or alfalfa water guzzling.[36] It is time for New Mexico to take bold action by tackling factory farming head-on.

To do so, Food & Water Watch recommends the following:

- New Mexico's elected officials must support a statewide factory farm moratorium to stop the expansion of factory farms in the state.
- The New Mexico Environment Department must:
    - Create specific permit regulations that effectively restrict the discharge of factory farm pollutants into New Mexico's waterways, and
    - Continue to monitor the Clean Transportation Fuel Program for abuses.
- The Office of the State Engineer must prioritize beneficial uses of water over others in times of shortage.
- The New Mexico Drought Task Force must update the New Mexico Drought Plan to include mandatory drought-response actions specific to the threat that mega-dairies and other industrial agriculture pose to water supply and quality.

Endnotes

1 Frankson, Rebekah et al. Cooperative Institute for Satellite Earth System Studies. "New Mexico State Climate Summary 2022." National Oceanic and Atmospheric Administration (NOAA) Technical Report NESDIS 150-NM. 2022; Dunbar, Neila W. et al. New Mexico Bureau of Geology and Mineral Resources. "Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources." March 2022 at vi.

2 NOAA. National Integrated Drought Information System. "New Mexico." Available at https://www.drought.gov/states/new-mexico#current-conditions. Updated May 5, 2026 and on file with Food & Water Watch (FWW); New Mexico Office of the State Engineer (OSE), Interstate Stream Commission. "New Mexico State Water Plan Part II: Technical Report." December 6, 2018 at 16; Frankson et al. (2022).

3 Bharadwaj, Sharad et al. Energy and Environmental Economics, Inc. (E3). Prepared for the Center for the New Energy Economy, Colorado State University. "New Mexico Greenhouse Gas Emissions Inventory and Forecast: 2021 Emissions Inventory and 2030-2050 Forecast." Updated September 2025 at 6.

4 For methodology, see FWW. "Factory Farms, Fracking, and the Methane Emergency." July 2024.

5 *Ibid*.

6 Ravishankara, A. R. et al. United Nations Environment Programme. "Global methane assessment: Benefits and costs of mitigating methane emissions." 2021 at 18; U.S. Environmental Protection Agency (EPA). "Overview of greenhouse gases." Updated February 16, 2024. Available at https://www.epa.gov/ghgemissions/overview-greenhouse-gases#CO2-references; EPA. "Understanding global warming potentials." Updated March 27, 2024. Available at https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

7 FWW analysis of U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). 2022 Census of Agriculture. Available at https://www.nass.usda.gov/Publications/AgCensus/2022/index.php. Accessed February 2024.

8 Food and Agriculture Organization of the United Nations. "Reducing enteric methane for improving food security and livelihoods." 2016 at 4.

9 For methodology, see FWW (2024).

10 Wang, Jingjing and Janak Raj Joshi. University of New Mexico. "Policy Alternatives for Controlling Nitrate Pollution From New Mexico's Dairies." New Mexico Water Resources Research Institute. Report No. 369. June 2015 at 3 to 4; Broud, Mike. Kansas State University. "Where do cows live? The strategy behind dairy barns." Dairy Management, Inc. February 21, 2018; Sorrentino, Joseph. "Which milk: Practices on New Mexico's conventional dairies are hard to swallow." *Santa Fe Reporter*. December 16, 2014.

11 FWW analysis of USDA, NASS. 2022 Census of Agriculture.

12 Wang and Joshi (2015) at 3 to 4.

13 For methodology, see FWW (2024).

14 Office of the Governor. 50-Year Water Action Plan. January 30, 2024 at 3.

15 FWW. "Big Ag Fuels New Mexico's Water Crisis." July 2023 at 2 to 4.

16 Follingstad, Gretel et al. New Mexico Groundwater Alliance. New Mexico 360 Groundwater Report. January 2026 at 36 to 37.

17 Valdez, Julie et al. OSE. "New Mexico Water Use by Categories 2020." Technical Report 56. November 2024 at i.

18 *Ibid.* at i to ii.

19 FWW analysis of USDA, NASS. 2022 Census of Agriculture; Mekonnen, Mesfin M. and Arjen Y. Hoekstra. University of Twente. "A global assessment of the water footprint of farm animals." *Ecosystems*. Vol. 15. 2012 at 406 and 408; CA S.B. 1157 § 679 (2022).

20 Valdez et al. (2024) at ii.

21 Magnuson, Molly L. et al. OSE. "New Mexico Water Use by Categories 2015." Technical Report 55. May 2019 at 26; Wechsler, Seth J. and Daniel Milkove. USDA, Economic Research Service (ERS). "Genetically modified alfalfa production in the United States." *Amber Waves*. May 1, 2017.

22 USDA, NASS. "2024 State Agricultural Overview: New Mexico." Available at https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEW%20MEXICO.

23 Higginbotham, Gerald E. et al. "Alfalfa utilization by livestock." University of California, Division of Agriculture and Natural Resources. Publication 8303. July 2008 at 3; Skaggs, R. et al. "Surveys of New Mexico alfalfa producers and dairy hay users: Will growth of the state's dairy industry be limited by alfalfa availability?" New Mexico State University, Agricultural Experiment Station. Research Report 731. 1999 at 2.

24 Skaggs et al. (1999) at 2.

25 Higginbotham et al. (2008) at 3.

26 New Mexico Hay Association. "About us." Available at http://www. nmhay.com/about-us.html. Accessed September 2021 and on file with FWW.

27 Hanson, Blaine et al. University of California. "Chapter Seven: Irrigating Alfalfa in Arid Regions." University of California Agriculture and Natural Resources. Publication 8293. April 2008 at 1.

28 FWW analysis of Richter, Brian et al. "Water scarcity and fish imperilment driven by beef production." *Nature Sustainability*. Vol. 3. April 2020 at 321 and 325; USDA, NASS. Quick Stats. Available at https://quickstats.nass.usda.gov. Accessed January 2026.
29 USDA and New Mexico Department of Agriculture. "New Mexico Hay County Estimates." April 2025; Valdez et al. (2024) at 57.
30 Rawling, Geoffrey C. and Alex J. Rinehart. New Mexico Bureau of Geology and Mineral Resources. "Lifetime Projections for the High Plains Aquifer in East-Central New Mexico." Open-File Report 591. July 2017 at 7.
31 Perrone, Debra and Scott Jasechko. "Dry groundwater wells in the western United States." *Environmental Research Letters*. Vol. 12. September 28, 2017 at 5 and 8.
32 *Ibid.* at 9.
33 Staten, Madison. "Measuring New Mexico's groundwater remains challenging — here's why getting it right matters." *KRWG*. July 2, 2021.
34 New Mexico Environmental Public Health Tracking. "Private well basics." Available at https://nmtracking.doh.nm.gov/environment/water/private_wells/Resources.html. Accessed February 2026 and on file with FWW.
35 Bharadwaj et al. (2025) at 25.
36 FWW (2023) at 11.