

The Urgent Case for a Moratorium on Mega-Dairies in Oregon

The expansion of large-scale dairy operations in Oregon poses increasing risks to human health and the environment. As the dairy industry in Oregon grows, smaller family farms are displaced by industrial mega-dairies that house thousands of cows in confined spaces. These factory farms create colossal volumes of waste, pollute air and water, contribute to climate change, threaten animal welfare and wildlife, and undermine the economic vitality of our rural communities. As illustrated by the Lost Valley Farm disaster, Oregon cannot afford to ignore the many threats that mega-dairies pose.

What is a Factory Farm?

A factory farm is a facility that raises large numbers of animals in intensive confinement, concentrating the animals and their manure. Instead of allowing animals to forage for their feed, factory farms confine the animals and bring food to them.

The U.S. Environmental Protection Agency (EPA) uses the terms animal feeding operation (AFO) and concentrated animal feeding operation (CAFO) to describe these operations. The Oregon Department of Agriculture (ODA) also uses the term “CAFO,” but this refers to the state’s definition of *confined* animal feeding operations, which applies to the majority of farms with any livestock in the state. In this fact sheet, CAFO refers to the federal definition.

According to the EPA, large CAFOs contain 700 or more mature dairy cattle.¹ In Oregon, we are calling for a moratorium on new and expanded dairy operations with more than 2,500 cows.²

Mega-dairy expansion in Oregon

A rapidly-growing dairy industry has fueled the rise of large dairy CAFOs in Oregon, often referred to as “mega-dairies.”³ From 1997 to 2017, the number of dairy cows living on Oregon’s factory farms nearly quadrupled.⁴

At the forefront of Oregon’s expanding dairy industry, Threemile Canyon Farms is the largest dairy farm in Oregon, collectively permitted to house 90,000 cows.⁵ Oregon’s small and mid-sized dairies have declined significantly since Threemile began operating in 1999; an average of nine family dairy farms went out of business each month between 2002 and 2007.⁶

The increase in mega-dairy operations in Oregon and nationally is due in part to an ever-growing demand for dairy abroad. To remain competitive with suppliers from Europe and New Zealand on the world market, the United States has expanded dairy production, exporting 20 percent more dairy in 2018 than in 2017.⁷ This drive to increase dairy exports threatens to bring additional mega-dairies to Oregon.⁸

Mega-dairy water pollution on the rise

Agriculture is the leading polluter of U.S. rivers and streams,⁹ and the EPA’s weak rules allow most factory farms to avoid meaningful regulation.¹⁰ Oregon is no exception. ODA records demonstrate that despite discharge permit requirements, mega-dairies do not always keep manure pollution from reaching waterways.¹¹

In 2019, Oregon’s large dairy CAFOs produced close to 6.5 billion pounds of manure — twice the amount of waste produced by the population of more than 2 million people in the Portland Metropolitan area.¹² These mega-dairies typically flush untreated waste into large cesspools, called lagoons, where it is stored until it is applied as fertilizer on fields.

The sheer amount of manure that mega-dairies produce often exceeds what crops can absorb, resulting in over-application and runoff into local waterways.¹³ Mega-dairies also threaten catastrophic manure spills.

The Dangerous Legacy of Lost Valley Farm and a Looming New Threat

It is difficult to adequately consider the risks of CAFOs in Oregon without considering the Lost Valley Farm disaster and the risks that will come with new mega-dairy Easterday Farm. Once permitted to house 30,000 cows, in its first year of operation Lost Valley was cited for more than 200 environmental violations.¹⁴ Lost Valley's violations — which included the improper storage of manure, overflowing lagoons and improper management of dead animals — put nearby communities and 81 public drinking water systems at risk.¹⁵

ODA finally revoked Lost Valley's permit in October 2018, but the fight against mega-dairies in Oregon is only just beginning. Lost Valley was put up for auction after failing to comply with environmental regulations.¹⁶ Shortly thereafter, Easterday Farms Dairy LLC bought the land for \$66.7 million with plans to open yet another mega-dairy. The Easterday Farms CAFO would also house close to 30,000 cows here in Oregon.¹⁷

Easterday LLC has no experience operating a dairy farm, let alone a mega-dairy.¹⁸ Once up and running, the farm would produce close to 6 million cubic feet of solid manure and almost 12 million cubic feet of wastewater a year.¹⁹ Compounded with groundwater and air pollution threats that are already pervasive across the state, this means we're at risk of experiencing the same environmental issues that led to the downfall of Lost Valley.



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Lost Valley is not an exception. In April 2017, a manure tank malfunction at Tony Silveira Dairy spewed 190,000 gallons of untreated manure that contaminated Tillamook Bay and closed it to commercial shellfish harvesting for several days. In July 2019, an anaerobic digester tank spilled more than 300,000 gallons of manure near the same bay.²¹ Fish were killed as a result and traces of *E. coli* were found in water samples after the spill.²²

Water shortages and pollution threaten the state

Mega-dairies are enormous water users. They extract millions of gallons of surface and groundwater to irrigate the crops that absorb the animal waste and feed the cows, flush manure from barns, water cattle and run milking operations. The proposed Easterday mega-dairy, if permitted, would use approximately 22 million gallons of water per day.²³

What's worse, Lost Valley was getting water for its cows under a permit loophole for "stockwatering" that allowed water to be pulled from an aquifer that had been closed to new withdrawals for decades.²⁴ This immense water use is unsustainable — particularly considering that nearly every river in Oregon suffers from low flows and warming water, while most of Oregon's surface water and much of the groundwater is already overallocated.²⁵

Mega-dairy waste disposal also threatens to contaminate these scarce groundwater resources. Drinking water contamination from factory farms has been likened to rural America's "own private Flint,"²⁶ and in Oregon mega-dairies are a primary source of dangerous nitrate contamination in the Lower Umatilla Basin Groundwater Management Area.²⁷ At the beginning of 2020, a coalition of groups petitioned the EPA to take emergency action to address decades of widespread nitrate contamination in rural Oregon's groundwater, much of it in the Lower Umatilla Basin.²⁸

Air quality and climate at risk

The large quantity of manure that mega-dairies produce creates air pollution that puts the environment and public health at risk. Decomposing manure emits substantial amounts of toxic air pollutants — including ammonia, hydrogen sulfide and particulate matter — known to cause respiratory symptoms and nuisance odors.²⁹ A growing body of research shows that living near CAFOs increases childhood asthma rates and the need for asthma treatment.³⁰

These emissions also harm Oregon’s environment. According to the Department of Environmental Quality, livestock manure is “by far the most significant source of ammonia” in the state, and contributes to regional haze.³¹ The haze resulting from mega-dairy ammonia emissions is harming the iconic Columbia River Gorge National Scenic Area.³²

Mega-dairies also contribute significantly to climate change through methane and nitrous oxide emissions.³³ Livestock production is a leading source of the greenhouse gas methane in the United States; manure management was one of the top sources of methane emissions in 2018, with total emissions increasing by close to 60 percent between 1990 and 2018.³⁴ Dairy operations are a large part of these increases in manure methane emissions.³⁵ In Oregon, agriculture is the leading source of methane emissions.³⁶ Yet in an executive order issued in March 2020, the governor made a commitment to reducing climate emissions but failed to specifically address the emissions at mega-dairies.³⁷

Animal welfare concerns

Industrial dairies also raise numerous animal welfare concerns. Cows are highly confined and typically live their entire lives in buildings, often standing or lying all day in their own manure with little or no opportunity to graze out-

doors. These confined conditions prevent physical movement, resulting in disease and infection, stress disorders, stunted growth and chronic lameness.³⁸ As a result, dairy cows at CAFOs typically live only a quarter of their natural lifespan.³⁹

Repeated reimpregnation, short calving intervals and high milk demand cause reproductive and fertility problems in female cows. Male calves are of “little to no value to the dairy farmer,” and those that are not used for dairy cow breeding are often killed for veal.⁴⁰

It’s time to stop the spread of mega-dairies in Oregon

On the heels of the Lost Valley Farm catastrophe, more than 20 groups across the state have been vocal in their opposition to Easterday Farm and the continued push for large mega-dairies in Oregon.

Beyond Oregon’s legacy of poorly-managed dairy operations like Lost Valley, the state’s existing rules are not up to the task of protecting our water, air, public health, animal welfare and family farms from mega-dairies — particularly on the scale of those now moving into the state. Oregonians deserve a time-out, and the legislature must act. It’s time for a moratorium on mega-dairies in Oregon.

Endnotes

- 40 C.F.R. § 122.23(b).
- Plaven, George. “Groups call for ‘mega-dairy’ moratorium.” *Capital (OR) Press*. December 13, 2018.
- Food & Water Watch (FWW). “Air Pollution From Oregon’s Large Dairies.” March 2017 at 1; Oregon Department of Agriculture (ODA). “OR AFO Spreadsheet 2019.” 2019. On file at Food & Water Watch.
- FWW analysis of U.S. Department of Agriculture (USDA) National Agricultural Statistics Service (NASS) data. Available at <https://quickstats.nass.usda.gov/>. Accessed August 2019.
- ODA. (2019).
- Bauer, Kathleen. “Big milk: Big issues for local communities.” *Edible Portland*. November 1, 2017 at 2.
- Welshans, Krissa. “U.S. dairy exports reach record-high levels during first half.” *Feedstuffs*. September 5, 2018.
- “Exploring new markets for dairy exports.” *Oregon Dairy and Nutrition Council*. April 26, 2017.
- U.S. Environmental Protection Agency (EPA). Water quality assessment and TMDL information, national summary tables and charts. Available at https://ofmpub.epa.gov/waters10/attains_index.home. Accessed February 2018.
- Pew Environment Group. [Fact sheet]. “Animal Agriculture and the Clean Water Act.” December 1, 2010 at 1 to 2.
- ODA. “Confined Animal Feeding Operation (CAFO) Program 2017 Annual Report.” 2017 at 16 and 17.
- FWW analysis of ODA (2019); FWW. “Factory Farm Nation: 2020 Edition.” April 2020 at 10.
- FWW. “Factory Farm Nation: 2015 Edition.” 2015 at 21.
- Loew, Tracy. “Oregon megadairy Lost Valley Farm fined \$187,320 for 224 environmental violations.” *Statesman (OR) Journal*. October 16, 2018; Plaven, George. “Waste permit revoked for controversial Oregon dairy.” *Capital Press (OR)*. June 27, 2018.
- Flatt, Courtney. “A year’s worth of controversy hasn’t put this Oregon dairy under... yet.” *Oregon Public Broadcasting. EarthFix*. May 31, 2018; Loew, Tracy. “Oregon sues to shut down new mega-dairy, citing repeated manure spills.” *Statesman (OR) Journal*. February 28, 2018.
- Plaven (June 2018); Loew, Tracy. “Troubled Oregon megadairy Lost Valley Farm sold to lone bidder, cows auctioned.” *Statesman (OR) Journal*. February 19, 2019.
- Plaven, George. “Easterday family plans to re-open state’s second largest dairy.” *Capital (OR) Press*. July 9, 2019.
- Easterday Farms. “Our story.” Available at <http://www.easterday-farms.com/our-story.html>. Accessed August 2020; Plaven (2019).
- Plaven (2019).
- Loew, Tracy. “Massive manure spill closes Tillamook Bay.” *Statesman (OR) Journal*. April 19, 2017.
- Kavanaugh, Shane Dixon. “Manure spill splashes 300,000 gallons near Tillamook Bay.” *Oregonian*. July 23, 2019; Dorsey, Hilary. “Massive manure spill in Tillamook Bay.” *Tillamook Headlight Herald*. July 24, 2019.
- Dorsey (2019); Plaven, George. “Oregon DEQ hands out \$63,750 in fines for manure digester overflow.” *Statesman (OR) Journal*. June 19, 2020.

- 23 FWW analysis of USDA NASS data. Available at [https:// quickstats.nass.usda.gov/](https://quickstats.nass.usda.gov/). Accessed August 2019; Oregon Water Resources Department documents obtained from the Oregon Water Resources Department through a Freedom of Information Act (FOIA) request. September 2020; Ohio State University Extension. "Water Use on Ohio Dairy Farms." September 2007 at 2 to 3.
- 24 Loew, Tracy. "State officials let mega-dairy use loophole to tap endangered Oregon aquifer." *Statesman (OR) Journal*. March 22, 2018.
- 25 Montesano, Nicole. "Agriculture use strains limited water resources." *Yamhill Valley (OR) News Register*. August 21, 2015 at 4 and 9.
- 26 Healy, Jack. "Rural America's own private Flint: Polluted water too dangerous to drink." *New York Times*. November 3, 2018.
- 27 Oregon Department of Environmental Quality (DEQ). "Estimation of Nitrogen Sources, Nitrogen Applied, and Nitrogen Leached to Groundwater in the Lower Umatilla Basin Groundwater Management Area." June 13, 2011 at ii and 1; Oregon DEQ. "Analysis of Groundwater Nitrate Concentrations in the Lower Umatilla Basin Groundwater Management Area." February 23, 2012 at Table 5-1, Table 5-2 and Figure 1-1; Oregon DEQ and ODA. "Lost Valley Farm CAFO Permit — Frequently asked questions." At 1.
- 28 FWW. [Press release]. "Groups petition EPA to take emergency action on chronic groundwater pollution in rural Oregon." January 16, 2020.
- 29 National Academies of Science. (2003). *Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs*. Washington, DC: National Academies Press at 54 and 67; Hribar, Carrie. National Association of Local Boards of Health. "Understanding Concentrated Animal Feeding Operations and Their Impact on Communities." 2010 at 5 to 6; Michigan Department of Environmental Quality. CAFO subcommittee of the Toxics Steering Group. "Concentrated Animal Feedlot Operations (CAFOs) Chemicals Associated With Air Emissions." May 10, 2006 at 9; Von Essen, Susanna G. and Brent W. Auvermann. "Health effects from breathing air near CAFOs for feeder cattle or hogs." *Journal of Agromedicine*. Vol. 10, No. 4. 2005 at 56 and 60.
- 30 Pavilonis, Brian T. "Relative exposure to swine animal feeding operations and childhood asthma prevalence in an agricultural cohort." *Environmental Research*. Vol. 122. April 2013 at 75 and 77; Sigurdarson, S.T., and J.N. Kline. "School proximity to concentrated animal feeding operations and prevalence of asthma in students." *Chest Journal*. Vol. 129, No. 6. June 2006 at 1487 to 1489.
- 31 Oregon DEQ. "Oregon Regional Haze Plan: 5-Year Progress Report and Update." February 2016 at i and 21.
- 32 Flatt, Courtney. "Mega-dairy air pollution threat puts environmentalists on alert." *Oregon Public Broadcasting. EarthFix*. April 11, 2017 at 2.
- 33 U.S. Environmental Protection Agency (EPA). "Greenhouse Gas Emissions: Overview of Greenhouse Gases." Available at <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> and on file at Food & Water Watch. Accessed February 15, 2017.
- 34 EPA. "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018." 2018 at ES-16, ES-22 and 2-20.
- 35 *Ibid.* at 2-20.
- 36 Oregon Global Warming Commission. "2018 Biennial Report to the Legislature: For the 2019 Legislative Session." 2018 at 37.
- 37 State of Oregon Newsroom. [Press release]. "Governor Kate Brown takes climate action." March 10, 2020.
- 38 The Humane Society of the United States. "An HSUS Report: The Welfare of Cows in the Dairy Industry." 2009 at 1, 2, 4 and 5.
- 39 *Ibid.* at 1.
- 40 *Ibid.* at 1 and 2.



Stand Up to Factory Farms is a coalition of local, state and national organizations concerned about the harmful impacts of mega-dairies on Oregon's family farms communities, environment and animal welfare.

The solution to Oregon's mega-dairy crisis is a moratorium on all new and expanding mega-dairy permits until policies are in place that ensure the humane treatment of animals, the economic viability of family farmers, and that meaningfully protect our air, water, wildlife, and climate.