

Washington's CAFO General Permit: Ecology must protect public health from CAFO manure



Washington is home to about 500 dairies, with an average herd size of 500 cows. **Dairies with more than 500 cows represent more than three-fourths of the state's production.**

The vast majority of these operations are concentrated animal feeding operations (CAFOs), in which animals are not kept in grazing pastures, but packed together in barns and feedlots, standing in their own waste 365 days per year. An adult dairy cow generates 120 pounds of manure per day. The 200,000 adult dairy cows in Washington produce up to **20 million pounds of manure each day, collectively.** Much of this manure is getting into Washington's surface and groundwater, causing significant public health and pollution problems.

Washington CAFO fast facts:

All unlined manure storage lagoons leak at least 1,000 gallons per day per acre. There are approximately 415 unlined manure storage lagoons in close proximity to the waters that feed Puget Sound, all of which are contributing nitrates, fecal coliform, and other pollutants to the waters of the state.

Nitrates are toxins. High doses particularly threaten pregnant mothers, babies, and seniors, causing methemoglobinemia, or "blue baby syndrome," which can be fatal.

The Washington Department of Health has confirmed that **manure from dairy CAFOs is responsible for the shellfish bed closures** that have plagued Puget Sound.

The Sumas-Blaine Aquifer in northwestern Whatcom County is the major drinking water source for up to 27,000 local residents. Ecology and USGS report **29% of sampled wells in the aquifer exceed the nitrate maximum** contaminant level (MCL) of 10 mg/L, with 14% more than double the MCL.

Over-application of manure to fields as fertilizer is common practice and is estimated to contribute **66% of the nitrogen inputs** to the Sumas-Blaine Aquifer, and **58% of nitrate contamination** in the Lower Yakima Valley.

Only 1% of CAFOs in the state are currently covered by a waste discharge permit, even though they are defined as point sources under federal and state law and are actively discharging into the waters of the state.

Nutrient pollution from dairies is exacerbating ocean acidification in Puget Sound's delicate ecosystem. Harmful algal blooms and depressed oxygen levels negatively impact plants, animals, and people who rely on the resource.

*An effective CAFO
General Permit for
Washington MUST
include:*

**Universal coverage for all
medium and large CAFOs**

**Mandatory surface and
groundwater monitoring**

**Implementation of best
management practices such
as synthetically lined storage
lagoons and salmon riparian
buffer requirements**

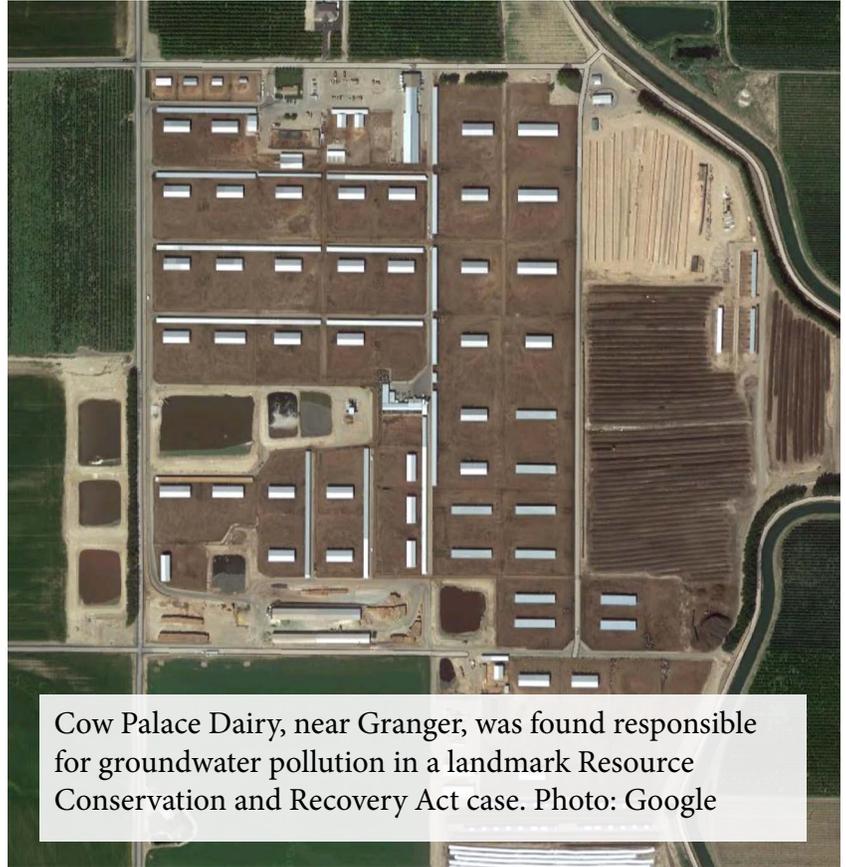


Field application of manure. Photo: CARE

Case Studies:

Yakima and Whatcom Counties

Yakima and Whatcom Counties have the most CAFOs and the most polluted drinking water of all Washington's counties. The Lower Yakima Valley aquifer is seriously polluted with nitrates, and EPA has determined that CAFOs are the likely source. Forty-eight percent of drinking water samples from homes near industrial dairies in the Lower Yakima Valley exceed EPA's maximum contaminant level of 10 mg/L for nitrates. Valley residents had to pay \$44,000 to drill a new, deeper well for Outlook Elementary School because of nitrate contamination. One in five private wells in the area is similarly polluted, but many folks cannot afford to drill deeper.



Whatcom County, with the state's second largest number of industrial dairies, relies on the Sumas-Blaine Aquifer, the state's most contaminated aquifer, to serve roughly 27,000 people. Of the wells sampled there, 29% have excessive nitrate levels. A 2013 Ecology study tagged agriculture as the source of 97% of the soil nitrates, which in turn leached into the aquifer.

The CAFO permit expired in 2011. Since then, Ecology, the Department of Health, and others have amassed incontrovertible evidence that shows manure from CAFOs pollutes Washington's surface and ground water. Ecology scientists and staff know that the CAFO permit should be revised to apply to all CAFOs that rely on lagoons or manure spreading, and should require them to monitor nearby soil and groundwater. But Ecology keeps extending and re-extending its deadline for issuing a draft permit. Further delay only means more overapplication of manure, and more contamination of groundwater—just as climate change makes our limited water resources even more precious.

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