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BEFORE THE OREGON WATER RESOURCES DEPARTMENT

In the Matter of LL-1690 (Willow Creek Dairy c/o Greg te Velde)	)	Comments of Center for Biological Diversity, Center for Food Safety, Columbia Riverkeeper, Friends of the Columbia Gorge, Food & Water Watch, Humane Oregon, Humane Society of the United States, and WaterWatch of Oregon

I. INTRODUCTION

Willow Creek Dairy, an assumed business name of California dairy magnate Greg te Velde, seeks a "limited license" to pump 664 gallons of water per minute from an alluvial aquifer near the Columbia River for his new mega-dairy. The application should be denied because the proposed use is not "short-term or fixed" in duration, and because it would result in limited licenses of more than five consecutive years for the same use. The application also should be denied because, under Oregon Administrative Rules, a limited license can be granted only if "the proposed water use will not impair or be detrimental to the public interest." That finding cannot be made here because water is not available, because the proposed use would injure other water rights, and because the limited license would facilitate construction of large, industrial dairy that would pollute the air and water, hurt fish and wildlife, displace family farms, and subject nearly 10,000 cows (30,000 in the long-run) to extreme confinement and other inhumane treatment.

II. DISCUSSION

As discussed below, the application should be denied because the proposed use: (A) is not "for a short-term or fixed duration"; (B) would result in a limited license of more than five

consecutive years for the same use; and (C) would otherwise impair or be detrimental to the public interest.

A. The Proposed Use Is Not Short-Term or Fixed in Duration

A "limited license" is an authorization to use water on a short-term basis. *See* ORS 537.143. Because the authorization is short-term, the "[u]ses" that are "eligible" for a limited license must be of "short-term or fixed duration." ORS 537.143(1).

In this case, Willow Creek seeks a limited license for "construction and operation of a dairy." (Application, p. 1.) Attachment B to the application says that the water will be used as drinking water for the cows and for such things as "cooling milk," "cleaning milk equipment," "washing pens" and "flushing the livestock barns." Unless Willow Creek plans to close the dairy within five years, none of these uses have a "short-term or fixed duration."

Willow Creek in fact is seeking the limited license so it can have water now for a long-term use (a dairy operation) that it hopes to supply later with a transfer of groundwater rights from a neighboring landowner (in exchange for a transfer of some surface water rights). (*See* T-12247 and T-12248.) However, that is not an authorized purpose for a limited license.

B. The Proposed Use Would Result in A Limited License for The Same Use for More Than Five Consecutive Years

ORS 537.143(8) provides:

> Except as provided in subsection (10) of this section [relating to water from storage], the department may not issue a limited license for the same use for more than five consecutive years.

Willow Creek seeks this five-year limited license for construction and operation of a dairy. Attachment B to the application admits it would use a "trench well" already being used

under Limited License 1645 (along with two new wells). Limited License 1645, for the period June 7, 2016, through April 30, 2017, also is for construction of a dairy.[1] Thus, the proposed limited license would add five years to a use that already has had at least one year. It therefore would violate ORS 537.143(8).

C. The Proposed Use Is Not in The Public Interest

Before granting a limited license, the Director of the Department must find "that the proposed water use will not impair or be detrimental to the public interest." OAR 690-340-0030(2). Statutes and rules applicable to limited licenses do not limit the factors that may be considered for this. Presumably they include (but are not limited to) factors identified in "public interest" determinations for long-term water appropriations. For groundwater, this analysis asks generally if the proposed use "would preserve the public welfare, safety and health." ORS 537.625(3). Specific considerations include:

- Whether water is "available" for the proposed use. ORS 537.621(2).
- Whether the proposed use would "injure" existing water rights. ORS 537.621(2).
- Whether the proposed use is within the "capacity" of the resource and would "maintain" stable groundwater levels. ORS 537.525(6), (7).
- Whether the proposed use would result in "impairment of natural quality of ground water by pollution." ORS 537.525(8) (made applicable by ORS 537.621(2)).
- Whether the proposed use would otherwise adversely impact "fish and wildlife" or "water quality." OAR 690-310-0140(3)(b).

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[1] LL-1645 itself replaced LL-1636, an emergency limited license for "dust control," apparently related to construction of the dairy, from March 16, 2016, through May 15, 2016.

While these factors are illustrative, anything relevant to the "public interest" should be relevant to whether the limited license should be granted.[2] Under this analysis, the proposed limited license also should be denied for at least the following reasons:

1. The proposed use seeks water that is not available.

Water is not "available" for a proposed use if the proposed source is "over-appropriated." OAR 690-300-0010(57)(a). A groundwater source is "over-appropriated" if "[t]he appropriation of groundwater resources by all water rights exceeds the average annual recharge to a groundwater source over the period of record or results in the further depletion of already over-appropriated surface waters." OAR 690-400-0010(11)(a).

In review of prior limited license applications by the same applicant for water from the same aquifer, the Department said it could not determine if the aquifer was over-appropriated. The Department therefore lacks substantial evidence to find that water is available for the limited license.

2. The proposed use would injure existing water rights.

The statutes and rules do not define "injure" for purposes of limited licenses. However, for water right transfers, "[i]njury to an existing water right" means "a proposed transfer would

[2] Although the rule does not explicitly state who has the burden of proof, courts have consistently held that permit applicants have the burden of proving that their proposed activity is within the public interest. *See, e.g., Kristensen v. Eugene Planning Comm'n*, 24 Or. App. 131, 544 P.2d 591 (1976) ("applicant for a conditional use permit must bear the burden of proving" it meets the public need recognized by the zoning ordinance); *Borich Transfer Co. v. Haley*, 2 Or. App. 666, 469 P.2d 638 (1970) (applicant for motor carrier permit has burden of proving permit is in the public interest); *see also Federation of Indep. Seafood Harvesters v. Ore. Fish & Wildlife Comm'n*, 291 Or. 452, 632 P.2d 777 (1981) ("Shifting the burden of presenting evidence from the applicant to the Commission or an outside interest group is inconsistent with the legislative intent to insure protection of the fishery resource").

result in another, existing water right not receiving previously available water to which it is legally entitled." OAR 690-380-0100(3).

In review of prior limited license applications by the same applicant for water from the same source, Department staff expressed concerns about possible injury to existing water rights in the nearby Ordnance Gravel Critical Groundwater Area. Staff concluded that a truly short-term use (a few months) could probably be accomplished without injury, but that longer term use could not. For example, in the groundwater review for LL-1637, which requested less water for a shorter time period (seven months) from the same aquifer, staff wrote:

> The proposed use will likely intercept groundwater that would otherwise flow into the [Ordnance Gravel Critical Groundwater Area], so new long-term uses are not likely feasible without injury to other users.

(Groundwater Review, LL-1637, p. 2 (March 31, 2016).)

This license application now proposes substantial withdrawals from the same source on a continuous basis for five years. Given prior concerns about lower rates of appropriation for shorter periods of time, the Department cannot reasonably conclude that this proposed five-year use will not injure existing water rights.

3. <u>The proposed use is not within the capacity of the resource or consistent with the public interest in maintaining stable groundwater levels</u>.

The facts discussed above also show that the proposed use would not be within the capacity of the resource or consistent with the public interest in maintaining stable groundwater levels.

4. The proposed use would pollute the water.

The proposed use is for a mega-dairy to be used as drinking water for the cows and for such things as "washing pens" and "flushing the livestock barns." This proposed use will contribute to and exacerbate pollution in the groundwater by adding more nitrate and other pollutants to the groundwater through disposal of cow waste, including washing and flushing of cow waste with water the applicant hopes to obtain through the proposed limited license.

The Willow Creek Dairy will operate in the Lower Umatilla Basin Groundwater Management Area.[3] This Area was designated because of the elevated nitrate concentrations in the groundwater.[4] Nitrate-nitrogen concentrations in many groundwater samples in the area exceed the federal safe drinking water standard.[5] "Throughout the Umatilla Reporting Basin there are more than 20 locations with water quality concerns due to excess pathogens and chemicals from manure and bio-solids."[6] Morrow County officials who signed the facility's Land Use Compatibility Statement for a proposed water quality permit expressed concern that "the addition of 30,000 cows has the ability to significantly contribute to the nitrogen loading of the [Groundwater Management Area]," and signed it only "with trepidation."[7]

As EPA has established, "[p]ollutants in animal waste and manure [from "confined animal feeding operations" such as this] can enter the environment [by] leaching into soil and

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[3] *See* Or. Dep't of Envtl. Quality, Lower Umatilla Basin Groundwater Management Area, http://www.deq.state.or.us/wq/groundwater/docs/GWMARegionsLoUmatilla.pdf (map depicting the boundaries of the Lower Umatilla Basin Groundwater Management Area).

[4] Or. Dep't of Envtl. Quality, Groundwater Management Areas, http://www.deq.state.or.us/wq/groundwater/gwmas.htm.

[5] Or. Dep't of Envtl. Quality, Lower Umatilla Basin Groundwater Management Area, http://www.deq.state.or.us/wq/groundwater/lubgwma.htm.

[6] Oregon Watershed Enhancement Board, 2013-2015 Plan Accomplishments: Umatilla Basin, https://www.oregon.gov/OWEB/Pages/BiennialReport1315/Umatilla_Basin.aspx.

[7] Morrow County Planning Department, Land Use Compatibility Statement (Aug. 18, 2015).

ground water."[8] "Among the reported environmental problems associated with animal manure are . . . ground water quality degradation."[9] Indeed, one of the leading causes of nitrate contamination in the Lower Umatilla Basin's groundwater is dairies.[10] Excessive nitrate levels in drinking water are dangerous to both humans and livestock.[11] EPA has noted that:

> CAFO wastes can contaminate ground water and thereby cause health risks and other welfare losses to people relying on ground water sources for their potable supplies or other uses. Of particular concern are nitrogen and other constituents that leach through the soils and the unsaturated zone and ultimately reach ground waters. Nitrogen loadings convert to elevated nitrate concentrations at household and community system wells, and elevated nitrate levels in turn pose a risk to human health in households with private wells.[12]

Adding large quantities of nitrates to an area with already heightened nitrate-nitrogen concentrations has serious implications for human health. Elevated nitrate levels can cause methemoglobinemia (also known as blue-baby syndrome). The Centers for Disease Control has determined that there may be a link between high nitrate levels in well water near feedlots and spontaneous abortions in humans.[13] Additionally, there is a link between nitrate levels in water and increased risk of stomach and esophageal cancers.[14]

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[8] National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7176, 7181 (Feb. 12, 2003) ("EPA CAFO Reports").

[9] *Id.*

[10] Or. Dep't Envtl. Quality, Lower Umatilla Basin Groundwater Management Area Action Plan 9 (Dec. 8, 1997), available at http://www.deq.state.or.us/wq/groundwater/docs/lubgwma/actionplan.pdf.

[11] EPA CAFO Reports at 7181.

[12] Id. at 7241.

[13] Centers for Disease Control & Prevention, Spontaneous Abortions Possibly Related to Ingestion of Nitratecontaminated Well Water – LaGrange County, Indiana, 1991-1994, 45:26 Morbidity and Mortality Weekly 569, 569-71 (July 1996).

[14] EPA CAFO Reports, 68 Fed. Reg. at 7238.

Willow Creek Dairy does not currently have an *approved* Animal Waste Management Plan (AWMP) (the one attached to the application is proposed) or a National Pollutant Discharge Elimination System (NPDES) permit. At a minimum, the Department cannot approve the proposed use as being in the public interest until those regulatory safeguards are in place.

Moreover, the draft AWMP and NPDES permit are inadequate to demonstrate that the animal wastewater will not pollute groundwater. Although the draft NPDES Permit requires several lagoons and cells to comply with seepage design rates, the groundwater vulnerability and already-high nitrates present in the Umatilla Basin groundwater call into question whether the projected seepage rates will be low enough to prevent exceedances of the nitrate Maximum Contaminant Level of 10 mg/L. The lagoon complex will use a double liner with a leak detection system. (AWMP App. A.) However, Willow Creek's own engineering firm has estimated that "[i]f we assume one small pinhole with a diameter of 2mm per acre, the leakage rate could be about 330 gallons per day per acre." *Id.* This means as much as 1,480 total gallons of leakage per day by the engineer's own estimate. *Id.* The AWMP provides no indication of how conservative or realistic this estimate may be.

In addition to polluting groundwater with waste leaking from lagoons, the proposed use could pollute though application of waste to crops. Without adequate and enforceable limits on land application of manure-filled wastewater, there is a significant risk of contamination of groundwater from greater than agronomic application. If plants cannot use all nutrients, there will be seepage of nitrogen and other nutrients beyond the root zone in fields where wastewater is applied.

In sum, there is significant risk that the propose use will contribute significantly to pollution of an already impaired groundwater aquifer. For this reason, too, the proposed use would impair or be detrimental to the public interest.

5. The proposed use would pollute the air.

The dairy that would be constructed and operated under the license also would contribute significantly to air pollution in the Columbia Gorge. Industrial-scale dairies emit large amounts of air pollution, including methane, ammonia, nitrous oxide, volatile organic compounds, and particulate matter.[15] The Columbia Gorge already has a problem with this from Threemile Canyon Farms, which at 70,000 cows is one of the largest dairies in the country. Studies link haze and acid deposition in the Columbia River Gorge to pollution from CAFOs in eastern Oregon and Washington, including Threemile.[16] Allowing another huge dairy in the same area would add significantly to the problem. For this reason, too, the proposed limited license would impair or be detrimental to the public interest.

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[15] Oregon Dairy Air Quality Task Force, Final Report to the Oregon Department of Agriculture and Oregon Department of Agriculture (July 1, 2008), http://library.state.or.us/repository/2012/201204101013082/finalReport.pdf.

[16] *See, e.g.*, Bob Bachman, *Nitrogen increases in Eastern portion of the Columbia River Gorge National Scenic Area*, U.S. Forest Service (undated), https://www.wilderness.net/toolboxes/.../Columbia%20River%20Gorge%20NSA.doc ("The visibility impairment increase is supported by several sources of information including ammonia emission inventories in the Columbia Basin and along the Snake River drainage indicating steady growth in ammonia emissions – the Three Mile Canyon Farm near the Boardman Power Plant stands out as a new and extremely large ammonia source.").

6. The proposed use would hurt fish and wildlife.

According to prior limited license applications for the same use from the same aquifer, the proposed use may affect habitat of sensitive, threatened or endangered fish species. Presumably this refers to a possible connection between the aquifer and surface water in the nearby Columbia River. That means pumping groundwater from the aquifer as proposed could reduce flows in the Columbia River, which is not allowed between April 15 and September 30. OAR 690-033-0120(2)(b). Thus, the license should not be granted unless there is affirmative, substantial evidence to rule out any impact to surface flows during that period.

The potentially affected reach of the Columbia River also appears to have state-listed sensitive species (fall chinook), along with several threatened or endangered species. The Department therefore must consult with an inter-agency review team and ensure that the proposed use will not result in a net loss of essential habitat. OAR 690-033-0330, OAR 690-033-0340.

Finally, the proposed use would be within a few miles of the Boardman Grasslands nature preserve. Species there include "an array of wildlife species recognized as sensitive or vulnerable in Oregon, including the Washington ground squirrel — listed in Oregon as an endangered species — white-tailed jackrabbit, burrowing owl, ferruginous hawk, Swainson's hawk, loggerhead shrike, long-billed curlew, grasshopper sparrow, sage sparrow and northern sagebrush lizard."[17] The species would be harmed by the additional air and water pollution noted above. For this reason, too, the proposed use is not in the public interest.

[17] https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/oregon/placesweprotect/boardman-grasslands.xml?redirect=https-301.

7. The proposed use would hurt animals on the farm.

The proposed limited license would facilitate construction and operation of a dairy that would eventually use 30,000 cows for milk production. In dairies of this scale, the cows typically live short, confined lives on concrete, and are pregnant for most of the time. They get killed at an early age and turned into meat when they become "unproductive" for milk.[18] The will rarely if ever get a chance to graze outdoors.[19] Their offspring will be taken away almost immediately, to the audible distress of their mothers, and the males calves will quickly be turned into veal.[20] In short, industrial dairies such as the one proposed are inhumane. It is not in the public interest to facilitate construction and operation of such a thing.

8. The proposed use would displace family farms.

By facilitating another industrial scale dairy, the requested limited license also would contribute to the ongoing loss of family farms in Oregon. Mega-dairies flood the market with milk, driving down milk prices and making it increasingly difficult for family farmers to stay in business. In 2002, Oregon had over 1,100 dairy farms, mostly small and mid-sized, but now there are fewer than 250, a decline of more than 75% even as overall cow numbers have gone up. According to the Oregon Employment Department, between 2002 and 2007, the first five years

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[18] *See* E. Telezhenko & C. Bergsten, *Influence of Floor Type on the Locomotion of Dairy Cows*, Applied Animal Behavior Science 93(3-4):183-97 (2005) (dairy cows raised on concrete floors); U.S. Dep't of Agric., *Dairy 2007: Part I: Reference of Dairy Cattle Health and Management Practices in the United States* (2007) (dairy cows constantly re-impregnated); HF Troutt & BI Osburn, *Meat from Dairy Cows: Possible Microbiological Hazards and Risks*, Scientific & Technical Review 16(2):405-14 (1997) (dairy cows slaughtered for meat).

[19] U.S. Dep't of Agric., *Dairy 2007 Part I: Reference of Dairy Cattle Health & Management Practices in the United States* (2007) (showing overwhelming majority of U.S. dairy operations confine lactating and dry cows in primarily indoor systems, with only 9.9% of operations primarily raising lactating cows on pasture).

[20] U.S. Dep't of Agric., FSIS, *Veal from Farm to Table, at* https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/meat-preparation/veal-from-farm-to-table/CT_Index (last visited Mar. 20, 2017); FC Flower & DM Weary, *The Effects of Early Separation on the Diary Cow and Calf*, Animal Welfare 12(3):339-48 (2003).

after Threemile Canyon Farms came to the state, Oregon lost nearly half of its dairy farms, an average of nine per month for five straight years. At that point, Threemile had over 50,000 cows on site while the average dairy farm in Oregon had 200. Granting the requested limited license would exacerbate this trend. For this reason, too, the proposed use is not in the public interest.

III. CONCLUSION

For all of the above reasons, limited license application LL-1690 should be denied.

CENTER FOR BIOLOGICAL DIVERSITY s/ *Stephanie M. Parent* By: Stephanie M. Parent, Senior Attorney	CENTER FOR FOOD SAFETY s/ *George Kimbrell* By: George Kimbrell, Senior Attorney
COLUMBIA RIVERKEEPER s/ *Lauren Goldberg* By: Lauren Goldberg, Staff Attorney	FRIENDS OF THE COLUMBIA GORGE s/ *Steven D. McCoy* By: Steven D. McCoy, Staff Attorney
FOOD & WATER WATCH s/ *Tarah Heinzen* By: Tarah Heinzen, Staff Attorney	HUMANE OREGON s/ *Brian Posewitz* By: Brian Posewitz, Administrator
HUMANE SOCIETY OF THE UNITED STATES s/ *Amanda Hungerford* By: Amanda Hungerford, Staff Attorney	WATERWATCH OF OREGON s/ *Brian Posewitz* By: Brian Posewitz, Staff Attorney

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	File	Consent	Name	Company	Email	Received	Comment
Select		☑	Philip Mandel		phmand@gmail.com	3/17/2017	To Whom it may Concern: This proposed use of water is not in the public interest because it would allow large amounts of water to be taken from a limited groundwater resource. It also would enable construction of an industrial scale dairy that would pollute the surrounding air and water with gas and waste from the animals. Finally, dairies of this scale are inhumane because they keep the cows in highly confined conditions, rarely if ever let them outside to graze, deny them contact with their offspring, and give them only a very short life. Thank you for considering these comments.
Select		☑	Carlson Brian	Western Sheet Metal	westernsm@aol.com	3/17/2017	I OPPOSE any new or expansion of existing large scale Confined animal farming operations. Animal feces and urine in such concentrated amounts are harmful to fresh water due to run off or aquifer contamination. The wholesale manipulation and slaughter of thousands of cows also ethically abhorrent as well as the wrong direction regarding climate change.
Select		☑	Lora Meisner		lcat5016@gmail.com	3/17/2017	Oregon does not need a huge polluting industry anywhere in our state. This proposed use of water is not in the public interest because it would allow large amounts of water to be taken from a limited groundwater resource. It also would enable construction of an industrial scale dairy that would pollute the surrounding air and water with gas and waste from the animals. Finally, dairies of this scale are inhumane because they keep the cows in highly confined conditions, rarely if ever let them outside to graze, deny them contact with their offspring, and give them only a very short life. Thank you for considering these

					comments.
Select	Kathy Hessler		khessler@lclark.edu	3/17/2017	At a time when the protection of natural resources is under further threat, and there is less state and federal money for clean up of environmental pollution, and protection for water quality is diminished, it does not make sense to authorize this use of a public water resource for private profit. This proposed use of water is not in the public interest because it would allow large amounts of water to be taken from a limited groundwater resource. It also would enable construction of an industrial scale dairy that would pollute the surrounding air and water with gas and waste from the animals. Finally, dairies of this scale are inhumane because they keep the cows in highly confined conditions, rarely if ever let them outside to graze, deny them contact with their offspring, and give them only a very short life. Thank you for considering these comments. I am using my office address for ease of contact, my comments are not made on behalf of my employer.
Select	Haley Smith	Ms.	haleysmith937@outlook.com	3/17/2017	
Select	Haley Smith	Ms.	haleysmith937@outlook.com	3/17/2017	I have lived near a big dairy farm in Washington and so I am completely against this project. If this project is approved, large amounts of water will be taken from a limited groundwater resource. Since Oregon has to always be concerned about drought conditions, this is NOT in the public interest. Having lived near a dairy farm, I can personally attest to the fact that a dairy farm of this size will definitely result in air and water pollution - not to mention increasing climate change due to the methane in cow poop. Have you ever visited a large dairy farm? They are incredibly inhumane businesses. Dairy cows are kept in confined spaces, it is heartbreaking how mother calves are separated from their mothers, and the cows are definitely not "Happy California Cows" like you see in advertising by the California Cheese association. Oregon can do better for the cows in this state and the public than our neighboring states. Do NOT approve this application. Thank you
Select	Cami LeWarne		Cami.idzerda@gmail.com	3/18/2017	This would enable construction of an industrial scale dairy that would pollute the surrounding air and water with gas and waste from the animals, not to mention draining large amounts of valuable water. Dairies of this scale are inhumane because they keep the cows in highly confined conditions, rarely if ever let them outside to graze, deny them contact with their offspring, and give them only a very short life. These types of mega farms do not reflect Oregonian values around sustainability, the environment, and healthy and humane food sources. Thank you for considering these comments.
Select	Oliver Tatom		olivertatom@gmail.com	3/19/2017	Oregon is beautiful -- let's keep it that way! Please do not approve the use of our water to support inhumane industrial dairy farming. This is bad for our environment and bad for the cows. Thank you!
Select	Nzioki Makau		nziokimakau@lclark.edu	3/19/2017	This proposed use of water is not in the public interest because it would allow large amounts of water to be taken from a limited groundwater resource. It also would enable construction of an industrial scale dairy that

					would pollute the surrounding air and water with gas and waste from the animals. Finally, dairies of this scale are inhumane because they keep the cows in highly confined conditions, rarely if ever let them outside to graze, deny them contact with their offspring, and give them only a very short life. Thank you for considering these comments.
Select	☑	Andrea Kozil	andreasher_2@yahoo.com	3/20/2017	I am writing in strong Opposition to the proposed Mega Dairy near Boardman OR. The proposed water source is limited and the water used for the CAFO is too large quantity. We know from experience that the mega dairy will severely pollute water and air in the area through the gas and waste that will be produced, highly impacting people and wildlife. Mega dairy operations are extremely inhumane, treating cows like machines, and depriving them of grazing, socialization and most importantly by keeping them perpetually pregnant and taking away their newborn calves repeatedly. The water waste and the pollution are not in the best interest of Oregonians.

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