



March 14, 2023

Senate Committee on Natural Resources  
900 Court St. NE  
Salem, OR 97301

**Re: Friends of the Columbia Gorge's comments supporting SB 85-1**

Dear Chair Golden and members of the committee:

Friends of the Columbia Gorge ("Friends") submits the following comments in support of SB 85-1. Thank you for the opportunity to comment. Friends is a non-profit organization with approximately 5,500 members. Friends is dedicated to protecting and enhancing the scenic, cultural, recreation, and natural resources of the Columbia River Gorge National Scenic Area ("National Scenic Area" or "Gorge"). Friends' membership lives, works, and plays in the Columbia River Gorge and is adversely affected by the direct, indirect, and cumulative impacts caused by emissions from industrial dairies that affect the National Scenic Area.

**SB 85-1 would not shut down any of the Tier 2 Large CAFOs<sup>1</sup> ("mega-CAFOs") it addresses. Instead, it simply pauses new mega-CAFOs and prevents current smaller CAFOs from growing into the mega-CAFO size range for eight years. That will give the legislature and agencies time to address the impacts of mega-CAFOs, including air quality in the Gorge.**

**Air quality in the National Scenic Area is already severely impaired**

The Columbia River Gorge National Scenic Area is already severely impaired by air pollution, especially nitrogen oxides (NOx) and particulate pollution. A 2005 joint study by the U.S. Forest Service and National Park Service studied twelve federally managed areas around the West and found that the Columbia River Gorge National Scenic Area and Sequoia National Park had by far the worst "annual standard visual range[s]" of the twelve areas.<sup>2</sup> Similarly, a 2000 Forest Service study of air quality monitoring data from 39 federally managed "visibility protected" areas in the West found that the National Scenic Area has "the

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<sup>1</sup> The mega-CAFO threshold in SB 85-1 is very large, for example: 200,000 turkeys; 125,000 chickens of any type, if using a wet waste treatment works; 300,000 laying hens, 350,000 broiler chickens, if using a dry waste treatment, or 125,000 ducks, if using a dry waste treatment works; 3,500 cattle; 2,500 mature dairy cows; 8,000 swine that exceed 55 pounds in weight; 30,000 swine that are 55 pounds or less in weight; or 40,000 sheep or lambs.

<sup>2</sup> Mark Fenn, USDA Forest Service et al., *Why federal land managers in the Northwest are concerned about nitrogen emissions*, at 10 (Dec. 2004).

highest levels of haze” and “the sixth worst visibility pollution of these areas.”<sup>3</sup> Gorge air quality has been monitored for the last twenty years. The Forest Service has documented that visibility impairment occurs on at least 95% of the days that have been monitored.<sup>4</sup>

Deposition of pollutants also has profound negative impacts on ecosystems. Studies demonstrate that in the Western United States, some aquatic and terrestrial plant and microbial communities are significantly altered by nitrogen deposition.<sup>5</sup> Sulfur and nitrogen concentrations in lichen tissue found in the Gorge are comparable to those found in lichen tissue sampled in large urban areas and nitrogen deposition rates in the Gorge are comparable to the most polluted areas in the United States.

Oregon mega-CAFOs are responsible for damage to the residents, visitors, and the protected resources of the Columbia River Gorge National Scenic Area. Mega-CAFOs emit ammonia, hydrogen sulfide, and particulate matter, all of which can cause chronic respiratory disease and even death. Ammonia is also a significant driver of dangerous fine particulate pollution. Dairy workers are exposed to these toxic fumes and face the risk of asphyxiation, while Gorge communities are likely to suffer chronic health impacts from emissions. According to a recent study, livestock emissions are responsible for more deaths in the U.S. than coal plants — largely due to fine particulate matter. However, DEQ does not yet regulate these emissions from mega-CAFOs.

Particulate matter pollution also threatens human health and welfare. In fact, when reviewing the National Ambient Air Quality Standards for PM<sub>2.5</sub>, the EPA found that there is no level of particulate matter pollution at which there are no human health effects. According to the EPA, fine particulate matter pollution causes a variety of adverse health effects, including premature death, heart attacks, strokes, birth defects, and asthma attacks.<sup>6</sup> Even low levels of PM<sub>2.5</sub> can cause low birth weights, damage lung function, and increase risks of heart attack and premature death. Studies reviewed by the EPA revealed a linear or almost linear relationship between diseases like cancer and the amount of fine particulate matter in the ambient air.<sup>7</sup> Consequently, particulate matter contamination has adverse health effects at any concentration.

In addition, sulfur dioxide emissions contribute to acid rain. Acid rain threatens both ecosystems and Native American rock images.

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<sup>3</sup> Arthur Carroll, USDA Forest Service, Letter to Columbia River Gorge Commission, at 3 (Feb. 7, 2000).

<sup>4</sup> Robert Bachman, USDA Forest Service, *A summary of recent information from several sources indicating significant increases in nitrogen in the form of ammonia and ammonium nitrate in the Eastern Columbia River Gorge and the Columbia Basin*, at 2 (June 24, 2005).

<sup>5</sup> See Mark E. Fenn, et al, *Ecological Effects of Nitrogen Deposition in the Western United States*, *BioScience* Vol. 53:4, Apr. 2003, available at <http://www.bioone.org/doi/abs/>

<sup>6</sup> 71 Fed. Reg. 2620, 2627–36 (Jan. 17, 2006).

<sup>7</sup> *Id.*

## **More mega-CAFOs will further degrade the air quality in the Gorge**

Mega-CAFOs often have enormous manure lagoons where the waste anaerobically rots and pollutants are released into the air. Livestock production is a leading source of methane gas emissions in the United States and manure management is the fastest growing source of methane emissions. This is because factory farms with their massive polluting manure lagoons are rapidly replacing family farms that don't have manure lagoons. Since thresholds for significant adverse impacts have already been exceeded for particulate matter and nitrogen deposition, any significant source of pollutants will likely contribute to cumulative significant adverse impacts to Gorge resources. A NOAA study concluded that “[v]isibility improvement can only come as a result of emission reductions. The only emission reductions that can be made are those that are the result of manmade activities.”<sup>8</sup> **Even when the coal-fired power plant in Boardman was shut down for maintenance, air quality issues persisted in the Gorge and “NH<sub>3</sub> emissions from the nearby dairy industry [we]re likely a contributing factor.”<sup>9</sup> Simply put, adding more mega-CAFOs without taking into account emissions from the new facilities will make matters worse. That is why it is so important to pass SB 85-1 and press the pause button on more mega-CAFOs until air quality can be taken into account.**

## **DEQ is not following the law**

The Management Plan for the Columbia River Gorge National Scenic Area requires that Gorge “[a]ir quality shall be protected and enhanced, consistent with the purposes of the National Scenic Area Act.” NSA Management Plan at p. 118. Pursuant to this requirement, the Columbia River Gorge Commission approved the Columbia River Gorge Air Study and Strategy (Sept. 2011). It adopts thresholds for significant impacts to visibility and an overall goal of “continued improvement” in visibility in the National Scenic Area which is consistent with the National Scenic Area Act’s requirement to protect and enhance air quality in the Gorge.

DEQ is required by state law to adhere to the adopted thresholds in the Strategy. ORS 196.155 (“[a]ll state agencies . . . are hereby directed and provided authority to carry out their respective functions and responsibilities in accordance with the compact executed under ORS 196.150 to 196.165 and the Columbia River Gorge National Scenic Area Act.”). It is time for DEQ to take this mandate seriously by regulating mega-CAFO emissions. Friends asks that you pass SB 85-1 so that DEQ can do this important work before more mega-CAFOs are approved that can then further degrade Gorge air quality.

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<sup>8</sup> *Columbia River Gorge Air Quality Study Science Summary Report*, National Oceanic and Atmospheric Administration, p. 109 (February 8, 2008).

<sup>9</sup> *Now you see it, now you don't: Impact of temporary closures of a coal-fired power plant on air quality in the Columbia River Gorge National Scenic Area*, Atmospheric Chemistry and Physics, Jaffe, D.A., p. 8004, (October 23, 2009).

## **Conclusion**

Nitrogen oxides are a major component of haze pollution that effects the Columbia River Gorge National Scenic Area. Sulfur dioxide also contributes to acid rain, which threatens ecosystems and Native American rock images. Ammonia is dangerous to human health and the environment and contributes to regional haze and dangerous particulate pollution. PM2.5 is hazardous to human health and is already a problem in the Gorge. **Friends asks that you pass SB 85-1 and pause the approval of new mega-CAFOs until air quality measures can be put into effect.**

Sincerely,



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