



# STAND UP TO FACTORY FARMS

September 24, 2020

**Submitted via ca.gov**

Mary D. Nichols, Chairperson  
California Air Resources Board  
1001 I Street #2828  
Sacramento, CA 95814

**RE: COMMENTS IN OPPOSITION TO TIER 2 PATHWAY APPLICATION NO. B0072**

Dear Chairperson Nichols:

Pursuant to Cal. Code Regs. tit. 17, § 95488.7(d)(5), Stand Up to Factory Farms—a coalition of environmental, family farm, public health, rural advocacy, animal welfare, and wildlife protection organizations—submits the following comments in opposition to Threemile Canyon Farms’ application for certification of a Tier 2 pathway for biomethane.<sup>1</sup> The applicant, located in Oregon, is the largest dairy concentrated animal feeding operation (CAFO) in the United States. The applicant is part of the industrial animal agriculture system, which is one of the largest global contributors to climate change and pollution. As wildfires continue to rage in California, Oregon, and throughout the west, it is incumbent upon the California Air Resources Board (CARB) to prevent the environmentally destructive “mega-dairy” industry from exploiting and profiting from the Low Carbon Fuel Standard (LCFS) program, which exists to mitigate climate change and pollution.

CARB should reject the application because it is fatally flawed, both factually and methodologically, and because to do otherwise would undermine the purpose of the LCFS program. First, important factual information is omitted, redacted, or labeled “confidential” in the application, rendering meaningful stakeholder review of its claims impossible. Second, the application fails to employ a methodologically sound life cycle analysis that accounts for the greenhouse gas (GHG) emissions that result from the applicant’s production of biomethane. Finally, granting the application would incentivize the applicant to expand its industrial dairy business, which would increase air pollution, accelerate climate change, further degrade

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<sup>1</sup> These comments also incorporate by reference the comments on this application submitted concurrently by Association of Irrigated Residents on behalf of several California-based organizations.

water quality and quantity, and harm community health. Accordingly, we urge CARB to reject the application.

## I. COMMENTING COALITION

**Stand Up to Factory Farms** is an Oregon-based coalition of local, state and national organizations concerned about the harmful impacts of mega-dairy CAFOs on Oregon’s family farms, communities, environment, and animal welfare. We believe the solution to Oregon’s mega-dairy crisis is a moratorium on new mega-dairy permits and on the expansion of existing mega-dairies until policies are in place to ensure the humane treatment of animals, the economic viability of family farmers, and the meaningful protection of our air, water, wildlife, and climate.

## II. BACKGROUND

### A. The Low Carbon Fuel Standard Program

The 2006 California Global Warming Solutions Act called for the state to reduce GHG emissions to fight climate change, and made clear that state efforts to reduce GHG emissions should not compromise or conflict with efforts to reduce air pollution.<sup>2</sup> In 2007, then-Governor Schwarzenegger signed Executive Order S-1-07, which declared GHG emissions a “serious threat” to the environment and human health.<sup>3</sup>

CARB, which is responsible for reducing GHG emissions,<sup>4</sup> adopted the LCFS regulation in 2009, and began implementing it in 2011.<sup>5</sup> “The LCFS is a key part of a comprehensive set of programs in California to cut GHG emissions and other smog-forming and toxic air pollutants,” and the program exists to reduce the GHG emissions that cause climate change.<sup>6</sup> The bedrock of the LCFS program is “the principle that each fuel has *‘life cycle’* [GHG] emissions that include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and other GHG contributors.”<sup>7</sup>

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<sup>2</sup> Cal. Health & Safety Code §§ 38500–38599.

<sup>3</sup> Executive Order S-1-07 (Jan. 18, 2007).

<sup>4</sup> Cal. Health & Safety Code § 38510.

<sup>5</sup> *Low Carbon Fuel Standard*, CAL. AIR. RES. BD., <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about> (last visited Sep. 20, 2020).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.* (emphasis added).

## B. Concentrated Animal Feeding Operations

CAFOs—also known as factory farms—are industrial-scale agricultural facilities that keep hundreds to thousands of animals in cruel, high-density confinement.<sup>8</sup> CAFOs deplete water quantity and produce vast amounts of animal manure<sup>9</sup> and emissions (including GHG) that spur climate change and significantly degrade air and water quality.<sup>10</sup> These environmental effects harm human health,<sup>11</sup> particularly in communities with “minority” and low-income populations,<sup>12</sup> where CAFOs are disproportionately sited.<sup>13</sup> CAFOs and their environmental effects also harm animals, including farmed animals and wild animals who are members of endangered and threatened species.<sup>14</sup>

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<sup>8</sup> CARRIE HRIBAR, NAT’L ASSOC. OF LOCAL BDS. OF HEALTH, UNDERSTANDING CONCENTRATED ANIMAL FEEDING OPERATIONS AND THEIR IMPACTS ON COMMUNITIES 1 (2010), CENTERS FOR DISEASE CONTROL AND PREVENTION, [https://www.cdc.gov/nceh/ehs/docs/understanding\\_cafos\\_nalboh.pdf](https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf).

<sup>9</sup> “Underlying all of the environmental problems associated with CAFOs is the fact that too much manure accumulates in restricted areas.” EPA, *Risk Assessment Evaluation for Concentrated Animal Feeding Operations* 2 (May 2004); see *id.* at 9 (stating that a dairy CAFO with one thousand cows produce the same amount of waste as a city of 164,500 humans).

<sup>10</sup> Hribar, *supra* note 8, at 2–11.

<sup>11</sup> *Id.*

<sup>12</sup> See, e.g., Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order No. 12,898, 3 C.F.R. 859 (1995), reprinted as amended in 42 U.S.C. § 4321 (1998).

<sup>13</sup> See Jan. 12, 2017 EPA External Civil Rights Compliance Office Letter of Concern to N.C. Dep’t of Env’tl. Quality (describing discriminatory health and quality of life impacts from pig and poultry CAFOs), [https://www.epa.gov/sites/production/files/2018-05/documents/letter\\_of\\_concern\\_to\\_william\\_g\\_ross\\_nc\\_deq\\_re\\_admin\\_complaint\\_11r-14-r4\\_.pdf](https://www.epa.gov/sites/production/files/2018-05/documents/letter_of_concern_to_william_g_ross_nc_deq_re_admin_complaint_11r-14-r4_.pdf); Kelley J. Donham et al., *Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations*, 115 ENVTL. HEALTH PERSP. 317 (2007); Steve Wing et al., *Environmental Injustice in North Carolina’s Hog Industry*, 108 ENVTL. HEALTH PERSP. 225 (2000).

<sup>14</sup> ENVIRONMENTAL IMPACT OF INDUSTRIAL FARM ANIMAL PRODUCTION 30 (2008), PEW COMMISSION ON INDUSTRIAL FARM ANIMAL PRODUCTION, [http://www.pcifapia.org/\\_images/212-4\\_EnvImpact\\_tc\\_Final.pdf](http://www.pcifapia.org/_images/212-4_EnvImpact_tc_Final.pdf); LIVESTOCK’S LONG SHADOW: ENVIRONMENTAL ISSUES AND OPTIONS 196, 209, 273 (2006), UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION, <http://www.fao.org/3/a0701e/a0701e.pdf>.

## 1. CAFO emissions spur climate change, degrade air quality, and harm human health.

CAFOs produce emissions that fuel climate change<sup>15</sup> and diminish ambient air quality.<sup>16</sup> These emissions include four hundred different volatile organic compounds, particulate matter, methane, ammonia, hydrogen sulfide, ozone, endotoxins, and noxious odors.<sup>17</sup> CAFOs produce nearly 75% of the United States' ammonia air pollution.<sup>18</sup>

These emissions are so concentrated that it can be dangerous even to approach a waste lagoon—particularly in hot summer months.<sup>19</sup> “The oxygen-deficient, toxic, and/or explosive atmosphere which can develop in a manure pit has claimed many lives.”<sup>20</sup> There are multiple incidents of farm workers approaching lagoons to make repairs and succumbing to fatal emissions; some died from hydrogen sulfide poisoning, while others asphyxiated in the oxygen-starved air.<sup>21</sup> Others died after collapsing during rescue attempts.<sup>22</sup>

But it is not necessary to be near a lagoon to suffer health effects from the emissions. One study showed that people in CAFO-occupied communities “suffered disproportionate levels of tension, anger, confusion, fatigue, depression, and lack of overall vigor as well as more upper respiratory and gastrointestinal ailments than

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<sup>15</sup> Hribar, *supra* note 8, at 7; see R.M. Duren et al., *California's methane super-emitters*, 575 NATURE 180 (Nov. 7, 2019) (results of a study finding that California dairy CAFOs contribute 26% of all of California's point-source methane emissions—more than the oil and gas sector); CAFO SUBCOMM. OF THE MICH. DEP'T OF ENVTL. QUALITY TOXICS STEERING GRP., CONCENTRATED ANIMAL FEEDLOT OPERATIONS (CAFOs) CHEMICALS ASSOCIATED WITH AIR EMISSIONS 8 (May 10, 2006).

<sup>16</sup> Hribar, *supra* note 8, at 3.

<sup>17</sup> See ROBBIN MARKS, CESSPOOLS OF SHAME: HOW FACTORY FARM LAGOONS AND SPRAYFIELDS THREATEN ENVIRONMENTAL AND PUBLIC HEALTH 1, 17 (July 2001), <https://www.nrdc.org/sites/default/files/cesspools.pdf>; see also Sarah C. Wilson, Comment, *Hogwash! Why Industrial Animal Agriculture is Not Beyond the Scope of Clean Air Act Regulation*, 24 PACE ENVTL. L. REV. 439, 441 (2007) (highlighting the health impacts of such emissions).

<sup>18</sup> *CAFOs Ordered to Report Hazardous Pollution*, WATERKEEPER ALLIANCE (Apr. 11, 2017), <http://waterkeeper.org/cafos-ordered-to-report-hazardous-pollution/>.

<sup>19</sup> Marks, *supra* note 17, at 26.

<sup>20</sup> *NIOSH Warns: Manure Pits Continue to Claim Lives*, CENTERS FOR DISEASE CONTROL AND PREVENTION (July 6, 1993), <https://www.cdc.gov/niosh/updates/93-114.html>.

<sup>21</sup> Marks, *supra* note 17, at 19.

<sup>22</sup> See *id.* at 26.

neighbors of other types of farms and non-livestock areas.”<sup>23</sup> Ammonia is a “strong respiratory irritant” that causes chemical burns to the respiratory tract, skin, and eyes.<sup>24</sup> It also causes severe coughing and chronic lung disease.<sup>25</sup> Hydrogen sulfide is acutely dangerous, causing “inflammation of the moist membranes” in the eyes and respiratory tract as well as olfactory neuron loss, pulmonary edema, and even death.<sup>26</sup> Particulate matter causes “chronic bronchitis, chronic respiratory symptoms, declines in lung function, [and] organic dust toxic syndrome.”<sup>27</sup>

## **2. CAFOs degrade water quantity and quality, which harms human health.**

CAFOs consume “a massive amount of water” for various operational purposes, such as flushing manure from barns and watering animals.<sup>28</sup> Pig and dairy CAFOs are particularly water intensive.<sup>29</sup> For example, one sow and twenty piglets in a pig CAFO would require approximately 14,000 gallons of drinking water and nearly 55,000 gallons of flushing water per year.<sup>30</sup> A single dairy in Oregon, Lost Valley Farm, was expecting to use close to one million gallons of water each day before the state shuttered it for hundreds of permit violations and massive environmental degradation.<sup>31</sup> “Because of this demand for water, CAFOs tend to seek sites above major aquifers [and] water is essentially treated as a free good after it is removed from the ground.”<sup>32</sup>

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<sup>23</sup> Wilson, *supra* note 17, at 445 n.45.

<sup>24</sup> CAFO Subcomm., *supra* note 15, at 4.

<sup>25</sup> Hribar, *supra* note 8, at 6.

<sup>26</sup> *Id.*; CAFO Subcomm., *supra* note 15, at 4.

<sup>27</sup> Hribar, *supra* note 8, at 6.

<sup>28</sup> See WILLIAM J. WEIDA, CONCENTRATED ANIMAL FEEDING OPERATIONS AND THE ECONOMICS OF EFFICIENCY 22 (Mar. 19, 2000), <https://www.sraproject.org/wp-content/uploads/2017/10/cafosandtheeconomicsofefficiency.pdf>; see Faith Cullens, *Water use on dairy farms*, MICH. STATE. U. [https://www.canr.msu.edu/news/water\\_use\\_on\\_dairy\\_farms](https://www.canr.msu.edu/news/water_use_on_dairy_farms) (noting that agriculture uses 70% of fresh water).

<sup>29</sup> See Hribar, *supra* note 8, at 8.

<sup>30</sup> Weida, *supra* note 28, at 22.

<sup>31</sup> See Tracy Loew, *State officials let mega-dairy use loophole to tap endangered Oregon aquifer*, STATESMAN JOURNAL (Mar. 22, 2018), <https://www.statesmanjournal.com/story/tech/science/environment/2018/03/22/lost-valley-mega-dairy-oregon-used-loophole-tap-aquifer-allowed-state-officials/426738002/>.

<sup>32</sup> Weida, *supra* note 28, at 22; see Loew, *supra* note 31 (describing how Lost Valley Farm, a former dairy CAFO located approximately twelve miles from Threemile Canyon Farms, exploited a legal loophole to extract water from an overdrawn aquifer).

CAFOs also pollute surface water and groundwater via lagoon breaches, seeps, and leaks; catastrophic flooding; and sprayfield runoff.<sup>33</sup> Contaminants in manure include nitrates and pathogens,<sup>34</sup> as well as ammonium, phosphate, dissolved solids, metals and metalloids, pharmaceutical chemicals, and natural and synthetic hormones.<sup>35</sup> Pathogens are parasites, bacteria, and viruses capable of causing disease or infection in animals or humans, and there are one hundred and fifty different pathogens in manure capable of affecting human health.<sup>36</sup> Metals and metalloids include copper, zinc, arsenic, nickel, and selenium.<sup>37</sup> Pharmaceutical chemicals include antibiotics, and hormones include estrogen.<sup>38</sup>

The health impacts of polluted water are serious, particularly for those who have weakened immune systems. Symptoms of illnesses caused by contaminated water include “nausea, vomiting, fever, diarrhea, muscle pain, death,” and kidney failure.<sup>39</sup> People at high risk of illness or death constitute approximately 20% of the United States population, and they include elders, infants, children, and those who are pregnant, HIV positive, on chemotherapy, or are otherwise immunosuppressed.<sup>40</sup> Rural America faces significant health disparities which are exacerbated by the presence of CAFOs.<sup>41</sup> Most immediately, COVID-19 is revealing just how disparate health services and outcomes are in rural communities when compared to urban populations.<sup>42</sup>

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<sup>33</sup> *Id.* at 4.

<sup>34</sup> Wing et al., *supra* note 13, at 225; see Food & Water Watch et al., Petition for Emergency Action Pursuant to the Safe Drinking Water Act § 1431, 42 U.S.C. § 300i, to Protect Citizens of the Lower Umatilla Basin in Oregon from Imminent and Substantial Endangerment to Public Health Caused by Nitrate Contamination of Public Water Systems and Underground Sources of Drinking Water 15 (Jan. 16, 2020), [https://www.foodandwaterwatch.org/sites/default/files/2020.01.16\\_final\\_petition\\_for\\_emergency\\_action\\_pursuant\\_to\\_the\\_safe\\_drinking\\_water\\_act1.pdf](https://www.foodandwaterwatch.org/sites/default/files/2020.01.16_final_petition_for_emergency_action_pursuant_to_the_safe_drinking_water_act1.pdf) (describing the dangers of nitrate loading) (Attach 1).

<sup>35</sup> STEPHEN R. HUTCHINS ET AL., CASE STUDIES ON THE IMPACT OF CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs) ON GROUND WATER QUALITY 7–8 (2012).

<sup>36</sup> Hribar, *supra* note 8, at 8–9.

<sup>37</sup> Hutchins et al., *supra* note 35, at 9.

<sup>38</sup> *Id.* at 9–13.

<sup>39</sup> Hribar, *supra* note 8, at 10.

<sup>40</sup> *Id.* at 4.

<sup>41</sup> See generally, Virginia Guidry et al., *Connecting Environmental Justice and Community Health*, 79 N.C. Med. J. 5, 324–28 (Sept. 10, 2018), <https://www.ncmedicaljournal.com/content/79/5/324.full>.

<sup>42</sup> Liz Essley Whyte and Chris Zubak-Skees, *Underlying Health Disparities Could Mean Coronavirus Hits Some Communities Harder*, NPR (Apr. 1, 2020),

In addition to pathogen-driven illnesses, CAFOs also breed new viruses and generate pandemics. When the U.S. Centers for Disease Control and Prevention (CDC) sequenced the DNA of the swine flu that killed thousands of Americans in 2009, they traced its origin to a single North Carolina pig CAFO.<sup>43</sup> The CDC estimates that the 2009 swine flu pandemic sickened 60.8 million Americans, hospitalized 274,304, and killed 12,469, including more than a thousand children.<sup>44</sup> Similarly, though both COVID-19 and SARS likely originated in live animal markets,<sup>45</sup> they could have originated in CAFOs due to their similar conditions—and the next pandemic very well may.<sup>46</sup>

Finally, there are often antibiotics in CAFO animal feed.<sup>47</sup> Seventy percent of all antibiotics used in the United States are administered to farmed animals as feed additives.<sup>48</sup> CDC has recommended that the use of antibiotics in “food animals” be “phased out.”<sup>49</sup> These antibiotics are dangerous because “[t]he antibiotics often are

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<https://www.npr.org/sections/health-shots/2020/04/01/824874977/underlying-health-disparities-could-mean-coronavirus-hits-some-communities-harder>.

<sup>43</sup> Gavin J. D. Smith, et al., *Origins and Evolutionary Genomics of the 2009 Swine-origin H1N1 Influenza of Epidemic*, 459 NATURE 1122 (2009); Bernice Wuethrich, *Chasing the Fickle Swine Flu*, 299 SCIENCE 1502 (2003).

<sup>44</sup> Sundar S. Shrestha et al., *Estimating the Burden of 2009 Pandemic Influenza of (H1N1) in the United States (April 2009–April 2010)*, 52 CLINICAL INFECTIOUS DISEASES S75–82 (2011).

<sup>45</sup> Aylin Woodward, *Both the new coronavirus and SARS outbreaks likely started in Chinese wet markets*, BUS. INSIDER (Feb. 26, 2020), <https://www.businessinsider.com/wuhan-coronavirus-chinese-wet-market-photos-2020-1> (discussing the potential for zoonotic diseases to jump from animals to humans).

<sup>46</sup> ANIMAL LEGAL DEFENSE FUND, COVID-19 AND ANIMALS: RETHINKING OUR RELATIONSHIP WITH ANIMALS TO REDUCE THE LIKELIHOOD OF THE NEXT GLOBAL PANDEMIC 9, (June 2020), <https://aldf.org/wp-content/uploads/2020/06/White-Paper-COVID-19-and-Animals.pdf> (“A variety of factors contributed to the development and spread of COVID-19 and aggravate humanity’s risk from further zoonotic diseases . . . . The common thread binding all risk factors, however, is our exploitation of both animals and the natural environment we share with them.”).

<sup>47</sup> Hribar, *supra* note 8, at 10; *Antibiotic Resistance Threats in the United States*, CENTERS FOR DISEASE CONTROL AND PREVENTION 11 (2013), <https://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf#page=6>; see Mary J. Gilchrist et al., *The Potential Role of Concentrated Animal Feeding Operations in Infectious Disease Epidemics and Antibiotic Resistance*, 115 ENVTL. HEALTH PERSPECTIVES 313, 313–14 (2006).

<sup>48</sup> Hribar, *supra* note 8, at 10; see Gilchrist et al., *supra* note 47, at 313 (noting that estimates suggest up to 87% of all antibiotic use in the United States is for livestock animals).

<sup>49</sup> CDC, *supra* note 47, at 11.

not fully metabolized by animals, and can be present in their manure. If manure pollutes a water supply, antibiotics can also leech into groundwater or surface water.”<sup>50</sup> The risk to public health is high because this exposure causes antibiotics to be less effective for humans while also leading to the development of antibiotic-resistant microbes.<sup>51</sup>

### **3. CAFOs disproportionately harm communities of color and low-income communities.**

Environmental justice communities suffer disproportionately from both the environmental and the economic impacts of factory farms.<sup>52</sup> A study of the vertically integrated hog farm industry in North Carolina, for example, found that there were “18.9 times as many hog operations in the highest quintile of poverty as compared to the lowest,” and that such operations were “5 times as common in the highest three quintiles of the percentage nonwhite population as compared to the lowest.”<sup>53</sup> Individuals suffering adverse health impacts from CAFOs include not only members of local communities of color and low-income communities, but also CAFO workers themselves, of whom a large number are undocumented and/or people of color.<sup>54</sup> And as explained below, these realities are of particular concern with regard to the applicant’s location in Morrow County, Oregon.

### **4. CAFOs harm animals, including those who are members of endangered and threatened species.**

CAFOs harm farmed animals by subjecting them to extreme, high-density confinement. These conditions increase the confined animals’ susceptibility to injury, illness, and disease.<sup>55</sup> For example, chicken crowding causes footpad

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<sup>50</sup> Hribar, *supra* note 8, at 10.

<sup>51</sup> *Id.* (citing Marc Kaufman, *Worries Rise Over Effect of Antibiotics in Animal Feed: Humans Seen Vulnerable to Drug-Resistant Germs*, WASH. POST, A01 (Mar. 17, 2000), <http://www.washingtonpost.com/wp-srv/WPcap/2000-03/17/071r-031700-idx.html> (explaining that eating the flesh of animals who have been fed antibiotics further increases one’s risk of developing antibiotic resistance)).

<sup>52</sup> Steve Wing and Jill Johnson, *Industrial Hog Operations in North Carolina Disproportionately Impact African-Americans, Hispanics and American Indians*, UNIVERSITY OF NORTH CAROLINA (2014), <http://www.ncpolicywatch.com/wp-content/uploads/2014/09/UNC-Report.pdf>; Wing et al., *supra* note 13, at 225.

<sup>53</sup> Wing et al., *supra* note 13, at 225.

<sup>54</sup> *Factory Farm Workers*, FOOD EMPOWERMENT PROJECT, <https://foodispower.org/factory-farm-workers/> (last visited Sep. 19, 2020).

<sup>55</sup> THE CRITICAL RELATIONSHIP BETWEEN FARM ANIMAL HEALTH AND WELFARE 7 (2018), ANIMAL WELFARE INSTITUTE, <https://awionline.org/sites/default/files/uploads/documents/FA-AWI-Animal-Health-Welfare-Report-04022018.pdf>.



dermatitis, bruising, and other injuries.<sup>56</sup> Likewise, gestation crates, which are not even big enough for a pig to turn around in, cause pigs to experience musculoskeletal problems.<sup>57</sup> In addition, the animals generate massive amounts of waste, causing ammonia emissions to fill the warehouses in which the animals are confined, and causing the animals to suffer painful skin, lung, and eye damage.<sup>58</sup> These are only a small sampling of the ways in which CAFOs harm the animals they confine.

CAFOs also produce pollution and engage in land use practices that harm wildlife, including animals who are members of endangered and threatened species. For example, CAFOs harm aquatic biodiversity by degrading habitat, reducing species fertility, causing species mutation, increasing mortality, changing natural food resources, and generating expansion of nonnative species, often at the expense of native populations.<sup>59</sup> CAFOs harm terrestrial biodiversity by restricting genetic diversity, limiting or eliminating habitat (including forest, grassland, and wetland habitat),<sup>60</sup> “increas[ing] vulnerability to large-scale damage by pests,”<sup>61</sup> and introducing invasive species, including the farmed animals.<sup>62</sup> CAFO air emissions further harm terrestrial and aquatic biodiversity by harming wildlife health and population numbers, and by changing species migration patterns, altering vegetative growth rates, and causing species extinction through climate change.<sup>63</sup>

### C. Threemile Canyon Farms

The applicant is the largest dairy CAFO in the United States.<sup>64</sup> It is permitted to confine more than 90,000 cows on its 93,000-acre property—the same size land footprint as the City of Portland<sup>65</sup>—in Morrow County, Oregon.<sup>66</sup> The

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<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> Pew Comm’n on Industrial Farm Animal Prod., *supra* note 14; U.N. Food and Agri. Org., *supra* note 14, at 196, 209, 273.

<sup>60</sup> U.N. Food and Agri. Org., *supra* note 14, at 187.

<sup>61</sup> Pew Comm’n on Industrial Farm Animal Prod., *supra* note 14, at 30.

<sup>62</sup> U.N. Food and Agri. Org., *supra* note 14, at 197.

<sup>63</sup> *Id.* at 187, 195–96.

<sup>64</sup> Bruce Shultz, *Dairy producers need pricing overhaul plan*, SYDNEY DAILY NEWS (Aug. 5, 2020), <https://www.sidneydailynews.com/news/agriculture/182277/dairy-producers-need-pricing-overhaul-plan>.

<sup>65</sup> Courtney Flatt, *Mega-Dairy Air Pollution Threat Puts Environmentalists On Alert*, OPB (Apr. 11, 2017), <https://www.opb.org/news/article/environmentalists-worry-mega-dairies-will-affect-air-quality/>.

<sup>66</sup> Shultz, *supra* note 64; *Homegrown Stories, The Story of One Oregon Mega-dairy is the Story of America’s Ag Epidemic*, HOMEGROWN STORIES,

applicant is a significant source of environmental degradation—especially fine particulate matter and air pollutants that fuel climate change, harm community health, and degrade the Columbia Gorge National Scenic Area.<sup>67</sup>

In a recently released report, the American Lung Association gave Umatilla County, Oregon, which lies just east and sometimes downwind of the applicant's property, an "F" grade for high ozone days.<sup>68</sup> Ammonia and nitrous oxides are two of the three major components of haze pollution that affect the Columbia River Gorge Scenic Area, and they also contribute to acid rain.<sup>69</sup> The Gorge has long suffered from the effects of persistent air pollution and poor visibility—monitoring studies have documented impaired visibility on 95% of days monitored.<sup>70</sup> The Oregon Department of Environmental Quality (ODEQ) has found that animal manure management, which includes land application, is "by far the most significant source of ammonia" that contributes to regional haze.<sup>71</sup> When operating with 50,000 cows in 2005, the applicant reported ammonia emissions that ranked among the highest of all reported industrial sources in the United States.<sup>72</sup> Today, the applicant is

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<https://www.homegrownstories.org/the-story-of-one-oregon-mega-dairy-is-the-story-of-americas-ag-epidemic> (last visited Sep. 19, 2020).

<sup>67</sup> See, e.g., C. Alan Rotz, *Modeling Greenhouse Gas Emissions from Dairy Farms*, 101 J. OF DAIRY SCI. 6675, 6675 (2018), <https://www.journalofdairyscience.org/action/showPdf?pii=S0022-0302%2817%2931069-X> ("Dairy farms have been identified as an important source of greenhouse gas emissions. Within the farm, important emissions include enteric CH<sub>4</sub> from the animals, CH<sub>4</sub> and N<sub>2</sub>O from manure in housing facilities during long-term storage and during field application, and N<sub>2</sub>O from nitrification and denitrification processes in the soil used to produce feed crops and pasture.").

<sup>68</sup> AMERICAN LUNG ASS'N, STATE OF THE AIR 2019, REPORT CARD: OREGON, <https://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/states/oregon/>.

<sup>69</sup> OREGON DAIRY AIR QUALITY TASK FORCE, TECHNICAL SUPPORT DOCUMENT FOR DAIRY AIR QUALITY TASK FORCE REPORT; OREGON DAIRY AIR QUALITY TASK FORCE, FINAL REPORT TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND DEPARTMENT OF AGRICULTURE 6–7 (2008).

<sup>70</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 2 (June 24, 2005).

<sup>71</sup> OREGON DEP'T OF ENVTL QUALITY, OREGON REGIONAL HAZE PLAN: 5-YEAR PROGRESS REPORT AND UPDATE i, 21 (Feb. 2016).

<sup>72</sup> The applicant reported to EPA that its ammonia emissions totaled nearly 5.7 million pounds *each year*. Nat'l Ass'n of Clean Air Agencies, Comment on Proposed CERCLA/EPCRA Reporting Exemption 3, Docket ID No. EPA-HQ-SFUND-2007-0469 3 (Mar. 27, 2009), <http://www.4cleanair.org/Documents/>

permitted to have nearly twice that number of cows on its property—thus, it is likely that the applicant also produces nearly twice the amount of ammonia emissions.

In addition to air pollution, the applicant also contributes to the significant degradation of groundwater and surface water resources in the region.<sup>73</sup> As described in ODEQ’s 2012 Nitrate Report, thirteen of the fifteen groundwater wells on the applicant’s mega-dairy reflected nitrate concentrations over the 10mg/LMCL.<sup>74</sup> ODEQ confirmed more recently that the applicant continues to contribute to dangerous nitrate loading in the region.<sup>75</sup>

These environmental effects are not equitably distributed. Morrow County is disproportionately occupied by mega-dairies,<sup>76</sup> which is a manifestation of environmental injustice. Indeed, 37.7% of the population of Morrow County is Hispanic or Latinx, while the statewide population is only 12.4% Hispanic or Latinx, and the population of Multnomah County—home to the City of Portland—is only 12% Hispanic or Latinx.<sup>77</sup>

Despite these facts—and over the objections of the undersigned coalition<sup>78</sup>—ODEQ issued the applicant a Title V permit for its methane digesters and related gas treatment system to produce pipeline quality natural gas from its digester biogas.<sup>79</sup> The permit fails to protect the environment and community health from the applicant’s dangerous air emissions. Emissions from the applicant’s active mega-dairy operations remain entirely unregulated.<sup>80</sup>

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CAFOLetter32708.pdf (citing Letter from Tom Lindley on behalf of Threemile Canyon Farms to EPA Region X, April 18, 2005).

<sup>73</sup> See Food & Water Watch et al., *supra* note 34 (describing nitrate loading in the region due to the extreme number of mega-dairies, including the applicant’s).

<sup>74</sup> *Id.* at 19.

<sup>75</sup> *Id.* at 18 (citing Email from Phil Richerson, DEQ Nonpoint Source Hydrogeologist, to Don Butcher, DEQ (Feb. 14, 2017)).

<sup>76</sup> In addition to the applicant, Lost Valley Farms was also located in Morrow County until the state shut it down. Now, yet another mega-dairy—Easterday Farms Dairy—is attempting to take over the property formerly occupied by Lost Valley Farms.

<sup>77</sup> *QuickFacts*, UNITED STATES CENSUS BUREAU, <https://www.census.gov/quickfacts/morrowcountyoregon> (last visited Sept. 22, 2020).

<sup>78</sup> See Coalition Comments re: WOF PNW Threemile Project, LLC Proposed Oregon Title V Operating Permit (Apr. 25, 2019) (Attach. 2).

<sup>79</sup> See OREGON DEP’T OF ENVTL QUALITY, OREGON TITLE V OPERATING PERMIT NO. 25-0047-TV-01.

<sup>80</sup> Flatt, *supra* note 65.

The applicant’s methane digesters are one of the ways in which it attempts to “greenwash” the environmentally destructive practices inherent in its business model.<sup>81</sup> But methane digesters are ineffective, inefficient, and dirty energy sources, much like the fossil fuels the LCFS program seeks to displace. First, they do nothing to abate the applicant’s unregulated air emissions, including the enteric emissions that comprise approximately half of all dairy emissions.<sup>82</sup> Second, they do not capture all of the methane they produce, and some amount escapes as emissions.<sup>83</sup> Such “fugitive methane” cuts into the reductions in GHG emissions that digesters claim to offer.<sup>84</sup> Third, “when digesters burn methane, they release [other GHGs] like carbon dioxide and nitrogen oxide, which contribute[] to smog” and climate change.<sup>85</sup> Fourth, digesters do nothing to abate the applicant’s water pollution or other adverse environmental impacts. Fifth, “[d]igesters require significant energy to collect, pump and truck manure to and from the digester and to heat the manure once it is in the digester. As much as half of the energy produced from digesters may be needed to operate the digester itself.”<sup>86</sup> Finally, digesters have the potential to spill or leak manure—and they may even explode.<sup>87</sup>

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<sup>81</sup> Bruce Watson, *The troubling evolution of corporate greenwashing*, THE GUARDIAN (Aug. 20, 2016), <https://www.theguardian.com/sustainable-business/2016/aug/20/greenwashing-environmentalism-lies-companies> (explaining that the term “greenwashing” was coined by environmentalist Jay Westerveld in 1986 to describe how corporations “present themselves as caring environmental stewards, even as they [commit] environmentally unsustainable practices”).

<sup>82</sup> Research indicates that “enteric emissions are normally the largest source of greenhouse gas on a dairy farm. On well-managed confinement farms, they contribute about 45% of the total GHG emission of the full farm system. . . .” Rotz, *supra* note 67, at 6677.

<sup>83</sup> See FOOD AND WATER WATCH, *HARD TO DIGEST: GREENWASHING MANURE INTO RENEWABLE ENERGY 3* (Nov. 2016), [https://www.foodandwaterwatch.org/sites/default/files/ib\\_1611\\_manure-digesters-web.pdf](https://www.foodandwaterwatch.org/sites/default/files/ib_1611_manure-digesters-web.pdf).

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 2 (“Just like manure lagoons without any methane capture system, digesters may accidentally spill or leak liquid manure and also present environmental risks from explosions associated with methane production. A 1.25 million gallon manure digester in Wisconsin, constructed in part with public funds, spilled 380,000 gallons of manure into nearby waterways in 2013, then another 22,000 gallons in 2014. The digester then experienced a major methane explosion.”).

### III. GRANTING THE APPLICATION—WHICH IS FATALLY FLAWED BECAUSE IT IS FACTUALLY INCOMPLETE AND METHODOLOGICALLY UNSOUND—WOULD UNDERMINE THE PURPOSE OF THE LCFS PROGRAM.

#### A. Important factual information is omitted, redacted, or labeled “confidential” in the application, rendering meaningful stakeholder review of its claims impossible.

Publicly posted application materials “must provide sufficient information to allow for meaningful stakeholder review.”<sup>88</sup> The application fails to conform to this requirement.

The applicant omits information that is necessary for stakeholders to perform a meaningful review of its claims. For example, the applicant fails to include information concerning the number of cows on the property, the number of cows whose manure the applicant is sending to the digesters, the total amount of manure generated on the property, the total amount of manure the applicant is sending to the digesters, GHG emissions from the cows, GHG emissions resulting from manure stored and applied on the property, GHG emissions resulting from operations to feed, water, and transport the cows, etc. Even the number of methane digesters and information related to volume is redacted, as depicted below.

## II. Project Description

### 1. General

Three Mile Farm, including the Columbia River Dairy (CRD) and Six Mile Dairy (SMD), are located in Boardman, Oregon and send manure from the dairy operations to onsite digesters for biogas production. Dairy manure is currently processed through [REDACTED] anaerobic digesters, with a combined volume of [REDACTED] gallons. A [REDACTED] will be brought online in Spring 2020, increasing total digesting volume to [REDACTED] gallons. All [REDACTED] digesters are enclosed and heated vessels. The anaerobic digesters provide an oxygen-free environment for microorganisms to break down the organics in the manure feedstock. Once broken down, the microorganisms produce biogas. When the feedstock has been fully processed by the anaerobic digester, the digester liquid waste stream is separated into fiber and liquid through a series of screens, screw presses, and conveyor belt feeders. The fiber is used as a soil amendment or as bedding for the dairy cows, and the liquid waste stream is used as fertilizer on their agricultural fields. The raw biogas is sent to a gas upgrading system which upgrades the incoming methane into pipeline quality renewable natural gas.

The carbon intensity analysis is similarly opaque. The applicant states that it used a modified version of the Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure. But this information is useless—

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<sup>88</sup> CAL. AIR. RES. BD., LOW CARBON FUEL STANDARD (LCFS) GUIDANCE 20-05 1 (Apr. 2020), [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance\\_20-05\\_ADA.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance_20-05_ADA.pdf).

the applicant admits that it departed from the standard inputs and parameters in its calculations but withholds information about exactly *how* it departed from them. Moreover, the application obscures the actual value of the inputs and parameters used, claiming that such information is confidential business information. Similarly, information in the carbon intensity analysis is almost entirely redacted, as depicted below.

Exhibit 4. Total Carbon Intensity (gCO<sub>2</sub>e/MJ) for Dairy Manure RNG Pathway

Process Stage	Carbon Intensity gCO <sub>2</sub> e/MJ
Raw Biogas Production	[REDACTED]
Biogas Upgrading	[REDACTED]
Biomethane Transmission	[REDACTED]
Compression to CNG	3.50
Tailpipe - CNG	60.73
Methane Avoided Credit	[REDACTED]
CO <sub>2</sub> Diverted Credit	[REDACTED]
Conservative Margin of Safety	[REDACTED]
Certified CI	-188.78

Without these basic pieces of information, it is impossible for stakeholders—such as the undersigned coalition, or CARB if it similarly lacks access—to meaningfully review the claims in the application and evaluate the environmental impact of the project.

**B. The application fails to employ a methodologically sound life cycle analysis that accounts for the GHG emissions that result from the applicant’s production of biomethane.**

As previously discussed,<sup>89</sup> the bedrock of the LCFS program is “the principle that each fuel has ‘*life cycle*’ [GHG] emissions that include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and other GHG contributors.”<sup>90</sup> Contrary to this bedrock principle, the applicant’s methodology assumes the preexistence of the vast quantity of manure and GHG emissions that the applicant produces from its regular business of raising cows for milk and proceeds from that pseudo baseline. But in reality, the biomethane that the applicant produces begins with the cows, and a methodologically sound life cycle analysis would also begin with them.

The applicant is permitted to keep more than 90,000 cows on its property, and these cows produce the manure that the methane digesters convert to

<sup>89</sup> See *supra* section II.A.

<sup>90</sup> Cal. Air. Res. Bd., *supra* note 5 (emphasis added).

biomethane. The cows require enormous volumes of food, water, and transportation in order to be profitable to the applicant, but none of the significant emissions<sup>91</sup> associated with these activities are accounted for or even acknowledged in the application. Nor are the significant emissions that come directly from the bodies of the cows.<sup>92</sup> The GHG emissions from the cows and the CAFO as a whole—including methane released from manure, enteric emissions, and other dairy operations—are unregulated. These emissions must be calculated and applied to the lifecycle GHG analysis for this project.

The applicant's failure to employ a methodology that accounts for the life cycle of the biomethane it produces is a fatal flaw because, in its current state, the application disregards the bedrock principle of the LCFS program. But if the applicant revised the application such that it complied with this bedrock principle by accurately representing the *life cycle* GHG emissions that result from production of the applicant's biomethane, it would reveal that there is nothing sustainable, renewable, or "green" about mega-dairies or methane digesters. In other words, if the application were methodologically sound, it would become more obvious that the applicant undermines the purpose of the LCFS program, and that CARB should not allow the applicant to exploit and profit from the program.

**C. Granting the application would incentivize the applicant to expand, which would increase air pollution, accelerate climate change, further degrade water quality and quantity, and harm community health.**

The applicant uses methane digesters for one reason and one reason only: to increase its own profits. The applicant profits from the methane digesters by using them to greenwash its destructive business model and by using and selling the biomethane. The single biggest revenue stream available from the methane digesters, however, "come[s] from taking advantage of incentive structures like Oregon's Clean Fuels Program and California's Low Carbon Fuel Standard . . . ."<sup>93</sup>

By allowing the applicant to take what is really a costly liability to its business—vast quantities of manure—and turn it into yet another source of profit,

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<sup>91</sup> "Emissions occur during the production of electricity, fuel, fertilizer, purchased feed, and so on, and they must be included in the life cycle . . . ." Rotz, *supra* note 67, at 6684.

<sup>92</sup> Enteric emissions are the largest source of GHG emissions from dairies. *Id.* at 6677.

<sup>93</sup> Tracy Leow, *Manure is big business at Oregon's largest dairy with conversion to natural gas*, STATESMAN JOURNAL (Mar. 31, 2019), <https://www.statesmanjournal.com/story/tech/science/environment/2019/03/31/oregon-threemile-canyon-farms-dairy-natural-gas-manure/3247197002/>.

CARB would incentivize the applicant to continue expanding its operations and emitting ever-larger quantities of dangerous and climate change inducing GHG—*especially* methane. This stands in direct violation of the California Global Warming Solutions Act, which, as discussed above,<sup>94</sup> specifies that efforts to reduce GHG emissions should not compromise or conflict with efforts to reduce air pollution.<sup>95</sup>

Allowing the applicant to participate in the LCFS program would also encourage the applicant to continue expanding, which would worsen the applicant's other forms of environmental degradation and the associated community health impacts.

#### **IV. CONCLUSION**

The application should be rejected because it is fatally flawed, both factually and methodologically, and because there is no place for CAFOs like Threemile Canyon Farms in the LCFS program. The program exists to address climate change and pollution—not prop up the businesses responsible for causing climate change and pollution in the first place.

Sincerely,

**STAND UP TO FACTORY FARMS**

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<sup>94</sup> See *supra* section II.A.

<sup>95</sup> See Cal. Health & Safety Code § 38570(b).