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Submitted via ca.gov

Mary D. Nichols, Chair
California Air Resources Board
1001 I Street #2828
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RE: COMMENTS IN OPPOSITION TO CERTIFICATION OF THE PROPOSED NEW TEMPORARY PATHWAY FOR HYDROGEN ULTIMATELY PRODUCED FROM THE MANURE OF COWS AND PIGS CONFINED IN CONCENTRATED ANIMAL FEEDING OPERATIONS

Dear Chair Nichols:

Pursuant to the California Code of Regulations, title 17, section 95488.9(b)(4), we submit the following comments on behalf of the Animal Legal Defense Fund (ALDF), the Association of Irritated Residents (AIR), Food & Water Watch (FWW), and Leadership Counsel for Justice and Accountability—and the foregoing organizations' millions of members and supporters across the United States[1]—in

[1] **ALDF** is a national, nonprofit membership organization based in California with over 300,000 members and supporters nationwide. ALDF's mission is to protect the lives and advance the interests of animals through the legal system. Advocating for effective oversight and regulation of the animal agriculture industry across the United States is one of ALDF's central goals. **AIR** is a nonprofit, public interest organization based in California with members in Kern, Tulare, Kings, Fresno, and Stanislaus Counties. AIR formed in 2001 to advocate for clean air and environmental justice in the San Joaquin Valley. **FWW** is a national, nonprofit membership organization with over 2.5 million members and supporters, including tens of thousands of Californians. FWW works to mobilize regular people to build political power to move bold and uncompromised solutions to the most pressing food, water, and climate problems of our time. FWW uses grassroots organizing, media outreach, public education, research, policy analysis, and litigation to protect people's health, communities, and democracy from the growing destructive power of the most powerful economic interests. **Leadership Counsel for Justice and Accountability** fundamentally shifts the dynamics that have created the stark

opposition to certification of the proposed new temporary pathway for hydrogen ultimately produced from the manure of cows and pigs confined in concentrated animal feeding operations (CAFOs). CAFOs are the central feature of the industrial animal agriculture system, which is one of the largest contributors to climate change and pollution in California and around the world. It is incumbent upon the California Air Resources Board (CARB) to ensure that CAFOs and their partners do not exploit and profit from the Low Carbon Fuel Standard (LCFS) program, which exists to mitigate climate change and pollution—not entrench and reward the environmentally destructive industrial animal agriculture system that disproportionately impacts the most vulnerable communities in California and throughout the United States.

CARB must reject the proposed new temporary pathway. First, the Staff Summary[2] does not include a sufficient rationale for the carbon intensity (CI) value assigned to the proposed new temporary pathway, as required pursuant to section 95488.9(b)(4). Second, certifying the proposed new temporary pathway would incentivize the expansion of industrial animal agriculture—including CAFOs—and exacerbate its environmental effects, including environmental injustice. Third, the methane digesters at the heart of this proposed temporary pathway are false solutions to the environmental problems inherent to industrial animal agriculture. Fourth, CARB's certification of the proposed new temporary pathway would violate the California Environmental Quality Act (CEQA). Accordingly, we respectfully request that CARB not certify the proposed new temporary pathway—to do otherwise would be arbitrary, capricious, contrary to law, and a violation of CEQA.

I. LEGAL BACKGROUND: THE LOW CARBON FUEL STANDARD PROGRAM

The 2006 California Global Warming Solutions Act called for the state to reduce greenhouse gas (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.[3] In 2007, then-Governor Schwarzenegger signed Executive Order S-1-07, which declared GHG emissions a "serious threat" to the environment and human health.[4]

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inequality that impacts California's low income, rural regions. Based in the San Joaquin and Eastern Coachella Valleys, we work alongside the most impacted communities to advocate for sound policy and eradicate injustice to secure equal access to opportunity regardless of wealth, race, income, and place.

[2] CARB, LOW CARBON FUEL STANDARD, PROPOSED NEW TEMPORARY FUEL PATHWAY, HYDROGEN FROM BIOMETHANE PRODUCED FROM DAIRY AND SWINE MANURE (Nov. 6, 2020), https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuel pathways/comments/tier2/new_temp_h2_dairy_swine.pdf.

[3] Cal. Health & Safety Code §§ 38500–38599.

[4] Executive Order S-1-07 (Jan. 18, 2007).

CARB, which is responsible for reducing GHG emissions,[5] adopted the LCFS regulation in 2009 and began implementing it in 2011.[6] "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.[7] The bedrock of the LCFS program is "the principle that each fuel has 'life cycle' [GHG] emissions that include CO_2, CH_4, N_2O, and other GHG contributors."[8]

II. COMMENTS

A. The publicly posted information does not include a sufficient rationale for the CI value assigned to the proposed new temporary pathway.

Proposed new temporary pathways must be posted for public comment before certification, and publicly posted information must have a "rationale for assigning the CI to that particular [t]emporary pathway."[9] The only publicly posted information about the proposed new temporary pathway is the Staff Summary.[10] This single document, which is barely more than one page long, does not include a sufficient rationale for the CI value assigned to the proposed new temporary pathway.

First, the Staff Summary indicates that the animal agriculture industry triggered this proposal to establish a new temporary fuel pathway, and that its purpose is "to facilitate credit generation for hydrogen from biomethane derived from these feedstocks while pathway applications with operational data are under review."[11] Thus, this proposal is not based on operational data. This fact alone renders the rationale deficient because such operational data is central to establishing a rationale for an assigned CI value.

Second, contrary to the bedrock principle of the LCFS program—"that each fuel has '***life cycle***' [GHGs] that include CO_2, CH_4, N_2O, and other GHG contributors"[12]—the Staff Summary fails to consider the life cycle GHGs of the

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5 Cal. Health & Safety Code § 38510.

6 *Low Carbon Fuel Standard*, CAL. AIR. RES. BD., https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about (last visited Dec. 18, 2020).

7 *Id.*

8 *Id.*

9 Cal. Code Regs. tit. 17, § 95488.9(b)(4).

10 CARB, *see supra* note 2.

11 *Id.*

12 Low Carbon Fuel Standard, *supra* note 6 (emphasis added); *POET, LLC v. State Air Res. Bd.*, 218 Cal. App. 4th 681, 702 (Cal. Ct. App. 2013) ("The carbon

hydrogen fuel that the proposed new temporary fuel pathway would credit. Instead, the Staff Summary ignores the GHG emissions endemic to the CAFOs upon which the proposed new temporary fuel pathway would rely for feedstock. CAFOs confine hundreds or thousands of animals who require enormous volumes of food and water, and CAFOs depend on transporting these and other inputs, often from far afield, in order to be profitable. There are significant emissions associated with these activities.[13] There are also significant emissions that come directly from the bodies of the animals (enteric emissions) and from lagoons, which store vast quantities of liquified manure before and after digestion.[14] The Staff Summary fails to consider—or even acknowledge—these significant life-cycle emissions, which is particularly problematic given that the proposed new temporary fuel pathway will likely cause CAFOs to come into existence, remain in existence, or expand. Moreover, the Staff Summary ignores the California Global Warming Solutions Act, which, as discussed above,[15] specifies that efforts to reduce GHG emissions should not compromise or conflict with efforts to reduce air pollution.[16]

Third, the Staff Summary states that "fossil natural gas is used to generate the steam for the reformation process."[17] But the LCFS program exists "to cut GHG emissions and other smog-forming and toxic air pollutants" to reduce the GHG emissions that cause climate change.[18] It is nonsensical to propose a new temporary fuel pathway for the LCFS program that entrenches reliance on burning fossil natural gas, especially when other green sources of hydrogen are now available.[19]

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intensity value [is] determined using a life cycle analysis. This analysis estimates the aggregate quantity of greenhouse gas emissions from ***all steps*** in a fuel's life cycle, ***including the direct effects*** of producing and using the fuel, ***and the indirect effects*** that may result from the increased production of that fuel." (emphasis added)), *as modified on denial of reh'g* (Aug. 8, 2013) ("*POET I*").

13 "Emissions occur during the production of electricity, fuel, fertilizer, purchased feed, and so on, and they must be included in the life cycle . . . ." C. Alan Rotz, *Modeling Greenhouse Gas Emissions from Dairy Farms*, 101 J. OF DAIRY SCI. 6675, 6684 (2018), https://www.journalofdairyscience.org/action/showPdf?pii=S0022-0302%2817%2931069-X.

14 For example, enteric emissions are the largest source of GHG emissions from dairies. *Id.* at 6677; *see infra* section II.B.1.

15 *See supra* section I.A.

16 *See* Cal. Health & Safety Code § 38570(b).

17 CARB, *see supra* note 2.

18 Low Carbon Fuel Standard, *supra* note 6.

19 CARB should instead focus on incentivizing the production and use of green hydrogen, which harnesses wind and solar power to generate hydrogen from water. *See, e.g.*, Jim Robbins, *Green Hydrogen: Could It Be Key to a Carbon-Free Economy?*, YALE ENV. 360 (Nov. 5, 2020), https://e360.yale.edu/features/green-hydrogen-could-it-be-key-to-a-carbon-free-economy.

Finally, the overall dearth of information in the Staff Summary renders the required meaningful stakeholder review impossible.[20] For example, it fails to include any information whatsoever about the unknown number of CAFOs that would profit from this proposed new temporary fuel pathway, including where they might be located, how many animals they might have, their GHG emissions, or their record of compliance—and noncompliance—with environmental regulations. Notably, the Staff Summary also fails to explain whether or how CARB will prevent double counting of supposed GHG reductions through the proposed new temporary fuel pathway—that is, whether or how CARB intends to prevent one set of credits from being issued for the generation of biomethane and ***another*** set of credits from being issued for the generation of hydrogen from that same biomethane. There is simply not enough information in the Staff Summary to satisfy CARB's duty to provide enough information for the public to meaningfully evaluate CARB's rationale and the proposed new temporary fuel pathway.

B. Certifying the proposed new temporary pathway would incentivize the expansion of industrial animal agriculture—including CAFOs—and exacerbate its environmental effects, including environmental injustice.

CAFOs are not farms—they are industrial-scale agricultural facilities that keep hundreds to thousands of animals in cruel, high-density confinement.[21] CAFOs produce vast quantities of animal manure[22] and emissions (including GHGs) that wreak havoc on the environment by polluting surface and groundwaters, degrading air quality, and spurring climate change.[23] These environmental effects harm human health,[24] particularly in the environmental justice communities[25] where CAFOs are disproportionately sited.[26] CAFOs and their environmental effects also

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20 *See* § 95488.9(b)(4).

21 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.

22 "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).

23 Hribar, *supra* note 21, at 2–11.

24 *Id.*

25 *See* 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).

26 *See* Jan. 12, 2017 EPA External Civil Rights Compliance Office Letter of Concern to N.C. Dep't of Envtl. Quality (describing discriminatory health and quality of life impacts from pig and poultry CAFOs), https://www.epa.gov/sites/

harm animals, including farmed animals and wild animals who are members of endangered and threatened species.[27]

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

CAFOs produce emissions that fuel climate change[28] and degrade ambient air quality.[29] These emissions include four hundred different volatile organic compounds, particulate matter, methane, ammonia, hydrogen sulfide, ozone, endotoxins, and noxious odors.[30] CAFOs produce nearly 75% of the United States' ammonia air pollution.[31]

These emissions are so concentrated that it can be dangerous even to approach a waste lagoon—particularly in hot summer months.[32] "The oxygen-deficient, toxic, and/or explosive atmosphere which can develop in a manure pit has

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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).

[27] 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; 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.

[28] Hribar, *supra* note 21, 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).

[29] Hribar, *supra* note 21, at 3.

[30] *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).

[31] *CAFOs Ordered to Report Hazardous Pollution*, WATERKEEPER ALLIANCE (Apr. 11, 2017), http://waterkeeper.org/cafos-ordered-to-report-hazardous-pollution/.

[32] Marks, *supra* note 30, at 26.

claimed many lives."[33] 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.[34] Others died after collapsing during rescue attempts.[35]

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 neighbors of other types of farms and non-livestock areas."[36] Ammonia is a "strong respiratory irritant" that causes chemical burns to the respiratory tract, skin, and eyes.[37] It also causes severe coughing and chronic lung disease.[38] 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.[39] Particulate matter causes "chronic bronchitis, chronic respiratory symptoms, declines in lung function, [and] organic dust toxic syndrome."[40] Tellingly, some of the nation's worst air quality is in the Central Valley, which is home to the largest concentration of dairy CAFOs in California.[41]

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.[42] Pig and

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33 *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.

34 Marks, *supra* note 30, at 19.

35 *See id.* at 26.

36 Wilson, *supra* note 30, at 445 n.45.

37 CAFO Subcomm., *supra* note 28, at 4.

38 Hribar, *supra* note 21, at 6.

39 *Id.*; CAFO Subcomm., *supra* note 28, at 4.

40 Hribar, *supra* note 21, at 6.

41 *See Ambient Air Quality Standards & Valley Attainment Status*, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, https://valleyair.org/aqinfo/attainment.htm (last visited Dec. 21, 2020); Timothy Douglas, *Dairy Digesters: Not a Solution*, LEADERSHIP COUNSEL FOR JUSTICE & ACCOUNTABILITY (Oct. 30, 2019), https://leadershipcounsel.org/dairy-digesters-not-a-solution/.

42 *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; Faith Cullens, *Water use on dairy farms*, MICH. STATE. U. https://www.canr.msu.edu/news/

dairy CAFOs are particularly water intensive.[43] 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.[44] 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.[45] "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."[46]

CAFOs also pollute surface water and groundwater via lagoon breaches, seeps, and leaks; catastrophic flooding; and sprayfield runoff.[47] Contaminants in manure include nitrates and pathogens,[48] as well as ammonium, phosphate, dissolved solids, metals and metalloids, pharmaceutical chemicals, and natural and synthetic hormones.[49] 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.[50] Metals and metalloids include copper, zinc, arsenic, nickel, and selenium.[51] Pharmaceutical chemicals include antibiotics, and hormones include estrogen.[52]

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.[53] 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 immuno-

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water_use_on_dairy_farms (noting that agriculture uses 70% of fresh water).

43 *See* Hribar, *supra* note 21, at 8.

44 Weida, *supra* note 42, at 22.

45 *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-aquifier-allowed-state-officials/426738002/.

46 Weida, *supra* note 42, at 22; *see* Loew, *supra* note 45.

47 *Id.* at 4.

48 Wing et al., *supra* note 26, at 225.

49 STEPHEN R. HUTCHINS ET AL., CASE STUDIES ON THE IMPACT OF CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS) ON GROUND WATER QUALITY 7–8 (2012).

50 Hribar, *supra* note 21, at 8–9.

51 Hutchins et al., *supra* note 49, at 9.

52 *Id.* at 9–13.

53 Hribar, *supra* note 21, at 10.

suppressed.[54] Rural Americans face significant health disparities that are exacerbated by the presence of CAFOs.[55] Most immediately, COVID-19 is revealing just how disparate health services and outcomes are in rural communities when compared to urban populations.[56]

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.[57] 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.[58] Similarly, though both COVID-19 and SARS likely originated in live animal markets,[59] they could have originated in CAFOs due to their similar conditions—and the next pandemic very well may.[60]

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[54] *Id.* at 4.

[55] *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.

[56] Liz Essley Whyte & Chris Zubak-Skees, *Underlying Health Disparities Could Mean Coronavirus Hits Some Communities Harder*, NPR (Apr. 1, 2020), https://www.npr.org/sections/health-shots/2020/04/01/824874977/underlying-health-disparities-could-mean-coronavirus-hits-some-communities-harder.

[57] 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).

[58] 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).

[59] 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).

[60] 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.").

Finally, there are often antibiotics in CAFO animal feed.[61] Seventy percent of all antibiotics used in the United States are administered to farmed animals as feed additives.[62] CDC has recommended that the use of antibiotics in "food animals" be "phased out."[63] These antibiotics are dangerous because "[t]he antibiotics often are 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."[64] 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.[65]

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.[66] A study of the vertically integrated hog farm industry in North Carolina 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."[67] Individuals suffering adverse health impacts from CAFOs include not only members of local communities of color and low-income communities, but also CAFO workers

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61 Hribar, *supra* note 21, 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).

62 Hribar, *supra* note 21, at 10; *see* Gilchrist et al., *supra* note 61, at 313 (noting that estimates suggest up to 87% of all antibiotic use in the United States is for livestock animals).

63 CDC, *supra* note 61, at 11.

64 Hribar, *supra* note 21, at 10.

65 *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)).

66 Steve Wing & 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 26, at 225.

67 Wing et al., *supra* note 26, at 225.

themselves, of whom a large number are undocumented and/or people of color.[68] The same is also true in the Central Valley, where CAFOs are "put[ting] the health of local, often low-income communities and communities of color, at greater risk."[69]

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

CAFOs harm farmed animals by subjecting them to abuse and high-density confinement that increases their susceptibility to injury, illness, and disease.[70] For example, a recent undercover investigation of production practices for Fairlife Milk showed that, as a matter of routine and practice, Fairlife's cows were tortured, kicked, stomped, body slammed, stabbed with steel rebar, thrown off the side of trucks, dragged through the dirt by their ears, and left to die unattended in over 100-degree heat.[71] Calves who did not survive this cruelty were dumped in mass graves.[72] And pigs in CAFOs suffer in gestation crates, which are not even big enough for them to turn around in and cause them to experience musculoskeletal problems.[73] In addition, farmed animals generate massive amounts of waste, causing ammonia emissions to fill the warehouses in which they are confined and causing them to suffer painful skin, lung, and eye damage.[74] 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.[75] CAFOs harm terrestrial biodiversity by restricting genetic diversity, limiting or eliminating habitat (including forest, grassland, and wetland

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68 *Factory Farm Workers*, FOOD EMPOWERMENT PROJECT, https://foodispower.org/factory-farm-workers/ (last visited Dec. 18, 2020).

69 Douglas, *supra* note 41.

70 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.

71 *See, e.g.*, Alexia Elejalde-Ruiz, *1 arrested in Fair Oaks Farms animal abuse case; Fairlife, farm owners hit with lawsuit as activists release new video*, CHICAGO TRIBUNE (June 13, 2019), https://www.chicagotribune.com/business/ct-biz-fairlife-mccloskeys-fraud-lawsuit-20190612-story.html.

72 *See id.*

73 Animal Welfare Institute, *supra* note 70.

74 *Id.*

75 Pew Comm'n on Industrial Farm Animal Prod., *supra* note 27; U.N. Food and Agri. Org., *supra* note 27, at 196, 209, 273.

habitat),[76] "increas[ing] vulnerability to large-scale damage by pests,"[77] and introducing invasive species, including the farmed animals.[78] 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.[79]

C. Methane digesters are false solutions to the environmental problems inherent in industrial animal agriculture.

Methane digesters, such as the ones that would produce biomethane for the proposed new temporary fuel pathway, are ineffective, inefficient, and dirty energy sources, much like the fossil fuels the LCFS program seeks to displace. First, methane digesters do nothing to abate the other air emissions—including enteric emissions[80] and other GHG emissions—and noxious odors that emanate from CAFOs.[81] Second, they do not capture all methane, and the resulting "fugitive methane" emissions cut into the reductions in GHG emissions that digesters claim to offer.[82] Third, digesters "release [other GHGs] like carbon dioxide and nitrogen oxide, which contribute[] to smog" and climate change.[83] Fourth, "[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."[84] Fifth, like manure lagoons, methane digesters are unstable and dangerous—sometimes they even

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76 U.N. Food and Agri. Org., *supra* note 27, at 187.

77 Pew Comm'n on Industrial Farm Animal Prod., *supra* note 27, at 30.

78 U.N. Food and Agri. Org., *supra* note 27, at 197.

79 *Id.* at 187, 195–96.

80 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 13, at 6677; *see also id.* at 6675 ("Dairy farms have been identified as an important source of greenhouse gas emissions. Within the farm, important emissions include enteric CH_4 from the animals, CH_4 and N_2O from manure in housing facilities during long-term storage and during field application, and N_2O from nitrification and denitrification processes in the soil used to produce feed crops and pasture.").

81 FOOD & 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.

82 *Id.*

83 *Id.*

84 *Id.*

explode.[85] Finally, digesters do not abate water pollution from CAFOs, and they may even worsen it.[86]

Methane digesters do not redeem industrial animal agriculture—they entrench it and monetize CAFOs' manure mismanagement. They are merely one of the ways in which the industry attempts to "greenwash" the environmentally destructive practices inherent in its business model.[87] And the industry also uses methane digesters as an additional source of profit—indeed, the single biggest revenue stream available from using methane digesters "come[s] from taking advantage of incentive structures like . . . California's Low Carbon Fuel Standard[.]"[88]

D. Certification of the proposed new temporary fuel pathway would violate CEQA.

CARB has a mandatory duty to comply with CEQA's requirements when certifying any proposed new temporary fuel pathway.[89] CARB is thus required to consider whether the impacts of its certification would have significant adverse effects on the environment, to avoid any such impacts, and prepare and make publicly available a staff report evincing its compliance with CEQA's mandates.[90] Certification that does not comply with these requirements would violate CEQA.

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85 *Id.*

86 *Id.*; *see* U.S. DEP'T. OF AGRIC., NATURAL RESOURCES CONSERVATION SERVICE, CONSERVATION PRACTICE STANDARD NO. 366: ANAEROBIC DIGESTERS 6 (Oct. 2017) (warning that digester effluent can pose greater risks to water quality than undigested manure).

87 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").

88 Tracy Loew, *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/.

89 *POET I*, 218 Cal. App. 4th at 711 ("A certified regulatory program is exempt from the procedures regarding the preparation of a negative declaration or EIR, but the 'certified program remains subject to other provisions in CEQA such as the policy of avoiding significant adverse effects on the environment where feasible'" (quoting Cal. Code Regs. tit. 14, § 15250)); *see id.* at 697 (holding that the "substantive and procedural requirements" of CEQA apply to the LCFS program).

90 *See POET I*, 218 Cal. App. 4th at 697, 711.

There is no evidence in the Staff Summary or elsewhere that CARB has contemplated CEQA's application to this action whatsoever. It has not, for example, considered whether certification of the proposed new temporary fuel pathway would have significant adverse effects on the environment. On the other hand, there is a plethora of evidence that certification would cause direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment. As described above, by allowing CAFOs to take what is really a costly liability—the vast quantities of manure that they produce—and turn it into yet another source of profit, certifying the proposed new temporary fuel pathway would incentivize the animal agriculture industry to continue expanding and emitting ever-larger quantities of dangerous and climate change inducing GHGs. Allowing the animal agriculture industry to profit from the LCFS program would also exacerbate its other forms of environmental degradation and the associated community health and environmental justice impacts. Thus, CARB's certification of the proposed new temporary fuel pathway would violate CEQA.

III. CONCLUSION

There is no place for the animal agriculture industry in the LCFS program, which exists to address climate change and pollution—not prop up the businesses responsible for causing climate change and pollution in the first place. We respectfully request that CARB not certify the proposed new temporary pathway—to do otherwise would be arbitrary, capricious, contrary to law, and a violation of CEQA.

Sincerely,

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On behalf of:

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