

**BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE,
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

PETITION FOR EMERGENCY RULEMAKING

**CENTER FOR BIOLOGICAL DIVERSITY;
NATURAL RESOURCES DEFENSE COUNCIL;
ANIMAL LEGAL DEFENSE FUND; ASSOCIATION
OF IRRITATED RESIDENTS; CAPE FEAR RIVER
WATCH; CATAWBA RIVERKEEPER
FOUNDATION; CENTER ON RACE, POVERTY &
THE ENVIRONMENT; COASTAL CAROLINA
RIVERWATCH; ENVIRONMENTAL WORKING
GROUP; JOHNS HOPKINS CENTER FOR A
LIVABLE FUTURE; MOUNTAINTRUE; SOUND
RIVERS; and WATERKEEPER ALLIANCE,**

Petitioners,

Filed With:

SONNY PERDUE, in his official capacity as Secretary of
Agriculture; and **KEVIN SHEA**, in his official capacity as
Administrator, Animal and Plant Health Inspection
Service.

Docket No. _____



Credit: Sound Rivers

I. INTRODUCTION

Pursuant to the right to petition the government provided in the First Amendment to the U.S. Constitution¹ and the Administrative Procedure Act,² the undersigned organizations (Petitioners) formally submit this petition to the Animal and Plant Health Inspection Service (APHIS or Agency) of the U.S. Department of Agriculture (USDA). Petitioners ask APHIS to take immediate action to protect people and the environment from dangerous pollution resulting from the mass killing and disposal of industrially-raised farm animals in connection with the COVID-19 pandemic. Specifically, as set forth below, Petitioners seek an interim final rule, effective until the resolution of the COVID-19 pandemic, prohibiting the two methods of carcass disposal that, APHIS admits, present the greatest risks to people and the environment: unlined burial and on-site incineration. In addition, Petitioners ask that APHIS create and publish an online database with information about federal assistance for carcass disposal.

Over the past several months, slaughterhouses have emerged as leading hot spots for the spread of COVID-19 infections. As thousands of workers have fallen ill, slaughterhouses have operated at reduced capacity or closed altogether, resulting in a backlog of millions of industrially-raised farm animals ready for slaughter. The meat industry has responded to this backlog by killing entire herds or flocks of animals through methods such as smothering, gassing, shooting, drug overdoses, blunt force trauma, and suffocation. Already, the poultry industry has killed an estimated 10 million hens,³ and the pork industry has warned that more than 10 million pigs could be killed by September.⁴ Collectively, the industry refers to this mass killing as “depopulation.”⁵

¹ See U.S. Const. Amend. I; see also *United Mine Workers v. Ill. State Bar Ass’n*, 389 U.S. 217, 222 (1967) (explaining that the right to “petition for a redress of grievances [is] among the most precious of the liberties safeguarded by the Bill of Rights”).

² See 5 U.S.C. § 553(e).

³ See Sophie Kevany, *Millions of U.S. Farm Animals to be Culled by Suffocation, Drowning, and Shooting*, The Guardian (May 19, 2020), <https://www.theguardian.com/environment/2020/may/19/19/millions-of-us-farm-animals-to-be-culled-by-suffocation-drowning-and-shooting-coronavirus?fbclid=IwAR0l44gqUoLWzxVv-O5r1Uwm8sQAmWqQy8dFKaJTE1ikR8Y2vpgS0-VHhFc>.

⁴ See Audrey Conklin, *Coronavirus May Force Hog Farmers to Kill 10M Pigs by September*, Fox Business (May 17, 2020), <https://www.foxbusiness.com/markets/farmers-ethanize-10-million-pigs-coronavirus>; see also Letter from Nat’l Pork Producers Council, to Makan Delrahim, Assistant Att’y Gen. U.S. Dept. of Justice, Urgent COVID-19-Related Request for a Business Review Letter (May 8, 2020) [hereinafter “NPPC Letter”], <https://www.justice.gov/opa/press-release/file/1276966/download>.

⁵ According to the American Veterinary Medical Association, “[t]he term depopulation refers to the rapid destruction of a population of animals in response to urgent circumstances with as much consideration given to the welfare of the animals as practicable.” Am. Veterinary Med. Ass’n, *AVMA Guidelines for the Depopulation of Animals: 2019 Edition*, 4 (2019) [hereinafter “AVMA Guidelines”], <https://www.avma.org/sites/default/files/resources/AVMA-Guidelines-for-the-Depopulation-of->

Responsible management of farm animal carcasses is essential to protect people and the environment. APHIS has established a National Incident Coordination Center (NICC) to assist the meat industry with depopulation and disposal, including by providing federal funds and other direct support.⁶ However, APHIS currently allows the industry to engage in the very carcass disposal practices that the Agency “expect[s] to have the greatest impacts to the environment,”⁷ and APHIS is providing assistance to the industry without ensuring that surrounding communities have access to the information they need to stay safe.

Petitioners are deeply concerned that unrestricted, undisclosed mass carcass disposal poses imminent and substantial threats to people and the environment. That this disposal is taking place in the midst of a preexisting global pandemic only heightens Petitioners’ concerns, as does the growing body of evidence establishing that communities of color are suffering disproportionately as a result of COVID-19. Some of the carcass disposal practices that APHIS currently allows, such as on-site incineration by pyre, risk exacerbating this suffering by increasing air pollution, a factor linked to higher COVID-19 death rates.

The threats posed by depopulation and disposal will continue at least until the meat industry stops killing farm animals in connection with the COVID-19 pandemic, even if that killing outlasts the pandemic itself. In addition, Petitioners are concerned that these threats will reemerge and increase over the coming months and years. For example, the impending hurricane season is expected to be unusually active, and severe storms could cause unlined burial pits to flood. Hurricanes and other natural disasters also could kill additional animals, the carcasses of which would require disposal in or near the locations where disposal currently is taking place.

Petitioners therefore request that APHIS promptly publish an interim final rule to prohibit the disposal of farm animal carcasses by unlined burial and on-site incineration until the resolution of the COVID-19 pandemic. Petitioners also request that APHIS provide the public with certain critical information about federal assistance for mass carcass management. Not only will the requested rules help to prevent catastrophic harm to people and the environment, they also will provide people living near mass carcass disposal sites with the information they need to protect themselves, including by minimizing their risk of exposure to pollution that could increase their susceptibility to COVID-19. We urge APHIS to act without delay.

[Animals.pdf](#). Petitioners have adopted this term for clarity and convenience, but do not endorse it as sufficient to capture the gravity of the activity so described.

⁶ See U.S. Dept. Agric., *USDA APHIS Establishing Coordination Center to Assist Producers Affected by Meat Processing Plant Closures* (Apr. 24, 2020) [hereinafter “APHIS NICC Press Release”], https://www.aphis.usda.gov/aphis/newsroom/stakeholder-info/sa_by_date/sa-2020/sa-04/meat-processing-coordination-center.

⁷ U.S. Dep’t of Agric., *Carcass Management During a Mass Animal Health Emergency Final Programmatic Environmental Impact Statement—December 2015*, at vi (2015) [hereinafter “EIS”], https://www.aphis.usda.gov/stakeholders/downloads/2015/eis_carcass_management.pdf.

II. PETITIONERS

The **Center for Biological Diversity** (Center) is a nonprofit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has more than 1.7 million members and online activists committed to the protection and restoration of endangered species and wild places. For 26 years, the Center has worked to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people and animals from toxic threats such as industrial agriculture.

The **Natural Resources Defense Council** (NRDC) is a nonprofit environmental membership organization that works to protect public health and the environment. NRDC has more than 375,000 members and 2 million online activists. NRDC has been committed to public health and public disclosure of pollution risks for fifty years. NRDC engages in research, advocacy, media, and litigation related to protecting public health and the environment.

The **Animal Legal Defense Fund** (ALDF) is a national nonprofit membership organization based in California with over 200,000 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, which it achieves by filing lawsuits, administrative comments, and rulemaking petitions to increase legal protections for animals; by supporting strong animal protection legislation; and by fighting against legislation, like state "Ag Gag" laws, that is harmful to animals and communities surrounding concentrated animal feeding operations (CAFOs). Through these efforts, ALDF seeks to ensure transparency in the CAFO system, which is paramount to its ability to protect farmed animals and ALDF members from CAFOs' immensely harmful effects.

The **Association of Irrigated Residents** (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.

Cape Fear River Watch (CFRW) is a grassroots, environmental, 501(c)(3) nonprofit started over twenty-five years ago by a group of volunteers committed to protecting and improving North Carolina's largest and most diverse river basin for future generations. Today we carry that commitment forward with a dedicated staff of scientists, educators, advocates, and activists, and a large number of members and volunteers. CFRW is home to the **Cape Fear Riverkeeper**.

The **Catawba Riverkeeper Foundation** is a 501(c)(3) nonprofit organization dedicated to protecting the lakes, rivers, and streams of the Catawba River basin. Founded in 1997 and currently supported by over 500 members, **Catawba Riverkeeper** has acted as an independent watchdog for our waterways for more than 20 years. The Foundation is headquartered in Charlotte, but serves the more than two million people in the 26 counties in the Carolinas that

make up the Catawba-Wateree watershed. Catawba Riverkeeper uses 3 main pillars—education, engagement, and protection—to work towards our vision of clean, plentiful water for all.

The Center on Race, Poverty & the Environment (CRPE) is a non-profit environmental justice organization. CRPE’s mission is to achieve environmental justice and healthy sustainable communities through collective action and the law. Throughout our 30-year history, CRPE has worked with low income communities and communities of color to build community power, reduce pollution, and improve community health.

Coastal Carolina Riverwatch (CCRW) is a citizen-volunteer, grassroots organization dedicated to restoring and protecting the waters, land, and communities of eastern North Carolina. CCRW’s mission is to accomplish this through strong advocacy, supporting enforcement of environmental laws, public education, and promotion of citizen ownership and responsibility. CCRW serves as an umbrella organization for Waterkeeper Alliance watersheds in the area, which currently include **Crystal Coast Waterkeeper** and **White Oak-New Riverkeeper Alliance**. CCRW holds Waterkeeper Alliance licenses for both of these organizations. CCRW advocates for clean water for all.

The **Environmental Working Group (EWG)** is a non-profit, non-partisan organization that works to empower people to live healthier lives in a healthier environment. For over twenty-five years, EWG’s mission has been to educate and inspire people, businesses, and governments to make better decisions and to take action to protect public health and the environment. EWG has more than one million online activists dedicated to standing up for public health when government and industry will not.

The **Johns Hopkins Center for a Livable Future (CLF)** is based at the Bloomberg School of Public Health in Johns Hopkins University’s Department of Environmental Health and Engineering. CLF does research, education and advocacy at the intersection of food production, public health and the environment. Since 1996, the Center has had a primary focus on the impact of large-scale animal operations on public health and the environment. A report, by the Pew Commission on Industrial Farm Animal Production, *Putting Meat on the Table: Industrial Farm Animal Production in the United States*, found that industrial food animal operations represent an unacceptable level of threat to public health and the environment and depress economic activity in the communities where those operations are located. CLF was the principal investigator for the Pew Commission, and growing concerns since the release of this report in 2008 motivated CLF to lead a moratorium resolution effort approved last year by the American Public Health Association to limit the expansion of existing operations or the establishment of new operations until public health concerns are addressed.

MountainTrue champions resilient forests, clean waters, and healthy communities. We are committed to keeping our mountain region a beautiful place to live, work, and play. MountainTrue has over 1,300 members and over 10,000 online activists. Our members protect our forests, clean up our rivers, plan vibrant and livable communities, and advocate for a sound

and sustainable future for all. MountainTrue is active in the Broad, French Broad, Green, Hiwassee, Little Tennessee, New and Watauga watersheds, and is home to the **Broad Riverkeeper**, **French Broad Riverkeeper**, **Green Riverkeeper**, and **Watauga Riverkeeper**.

Sound Rivers is an environmental nonprofit organization with 2,500 members that seeks to protect the Tar-Pamlico and Neuse River basins. These two river basins combined covers 23% of the state of North Carolina’s landmass and is home to over 2 million people. Sound Rivers’ three Riverkeepers—Jill Howell, the **Tar-Pamlico Riverkeeper**; Katy Hunt, the **Lower Neuse Riverkeeper**; and Matthew Starr, the **Upper Neuse Riverkeeper**—monitor the region’s waterways, serving as scientific experts and educational resources to the communities. Through research, advocacy, education, and public engagement, Sound Rivers works towards fishable, swimmable, drinkable water for all.

Waterkeeper Alliance is a nonprofit, member supported, international environmental organization based in New York City. Waterkeeper Alliance unites more than 300 Waterkeeper Organizations and Affiliates that are on the frontlines of the global water crisis, patrolling and protecting more than 2.5 million square miles of rivers, lakes, and coastal waterways on 6 continents. Waterkeeper groups defend our fundamental human right to drinkable, fishable, and swimmable waters, and combine firsthand knowledge of their waterways with an unwavering commitment to the rights of their communities. Waterkeeper Alliance’s Pure Farms, Pure Waters campaign calls attention to the destructive pollution practices of industrialized meat production, ensures compliance with environmental laws, and supports the traditional family farms that industrial practices endanger.

III. SPECIFIC REQUEST FOR AGENCY ACTION

1. Petitioners request that, within 7 business days from the date of submission of this petition (or by July 10, 2020), APHIS issue an emergency interim final rule, effective immediately, to:
 - A. Prohibit the use of the following mass carcass management practices until the resolution of the mass animal health emergency arising from the COVID-19 pandemic: unlined burial and incineration through on-farm pyres or air curtain incinerators.
 - i. “Mass carcass management practices” shall be understood to mean “[t]he discovery, collection, transportation, disposal and/or processing of 50 tons (100,000 pounds) or more of dead animals and body parts on a single premise (where livestock are housed or kept), as well as the subsequent cleanup and decontamination of affected sites.”⁸ According to the U.S. Environmental Protection Agency, 50 tons of carcasses is approximately

⁸ EIS at I-9.

equivalent to 100 dead cows, 565 dead pigs, 25,000 dead chickens, or 5,000 dead turkeys.⁹

- ii. “Mass animal health emergency” shall be understood to mean “[a] natural disaster . . . generating 50 tons of carcasses or more.”¹⁰

B. Require APHIS to create and publish online an electronically searchable and sortable database with information about any assistance pertaining to mass carcass management provided by APHIS, including through the NICC, from March 13, 2020 until the resolution of the mass animal health emergency arising from the COVID-19 pandemic. The rule shall mandate that the information be published as quickly as possible or within one business day of receipt, whichever is earlier. The information provided in such database for each grant of assistance shall include, but is not limited to:

- i. The owner of the animals;
- ii. The number and species of animals depopulated;
- iii. The date(s) of depopulation and disposal (and, if disposal occurred on multiple days, the number of animals disposed on each day);
- iv. The depopulation method utilized;
- v. The disposal method utilized;
- vi. The disposal location, including the location of any incineration ash residues and/or final composted materials;
- vii. A summary of the federal support provided, including any indemnification payments, subsidies, assets of the National Veterinary Stockpile, and/or other emergency assistance provided;
- viii. Any monitoring, testing, or sampling protocol put in place to monitor releases of environmental contaminants from the disposal location.

2. In addition, Petitioners request that, within 18 months, APHIS make the mass carcass management database permanent by initiating a rulemaking to:

A. Require APHIS to create and publish online an electronically searchable and sortable database with information about any assistance pertaining to mass carcass management provided by APHIS in connection with any mass animal health emergency. The rule shall mandate that the information be published as quickly as possible or within one business day of receipt, whichever is earlier. The information provided in such database for each grant of assistance shall include, but is not limited to:

- i. The owner of the animals;
- ii. The number and species of animals depopulated;

⁹ See EPA, *Exposure Assessment of Livestock Carcass Management Options During Natural Disasters*, at 7 (Feb. 2017) (Follow “URL/Downloads” hyperlink), https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NHSRC&TIMSType=&count=10000&dirEntryId=335655&searchAll=&showCriteria=2&simpleSearch=0.

¹⁰ EIS at I-9.

- iii. The date(s) of depopulation and disposal (and, if disposal occurred on multiple days, the number of animals disposed on each day);
- iv. The depopulation method utilized;
- v. The disposal method utilized;
- vi. The disposal location, including the location of any incineration ash residues and/or final composted materials;
- vii. A summary of the federal support provided, including any indemnification payments, subsidies, assets of the National Veterinary Stockpile, and/or other emergency assistance provided;
- viii. Any monitoring, testing, or sampling protocol put in place to monitor releases of environmental contaminants from the disposal location.

IV. FACTUAL BACKGROUND

A. Slaughterhouses Have Become Coronavirus Hot Spots, Leading to a Backlog of Industrially-Raised Farm Animals.

Since early 2020, the COVID-19 pandemic has swept the globe. As of June 26, almost 9.5 million cases of COVID-19 had been confirmed worldwide, including 484,249 deaths.¹¹ In the United States, nearly 2.4 million people have been diagnosed with the virus, and more than 121,809 people have died.¹² COVID-19 remains a highly infectious disease with no known cure. Although the spread of coronavirus infections slowed in some places in late May, the crisis is not yet over. Infections recently spiked sharply across the South and West,¹³ and the World Health Organization (WHO) has warned that the world is entering a “new and dangerous phase” of the COVID-19 pandemic.¹⁴

Slaughterhouses across the country have become coronavirus hot spots, and slaughterhouse workers are suffering disproportionately. As of June 26, at least 253 slaughterhouses had confirmed cases of COVID-19.¹⁵ At least 28,303 slaughterhouse workers have tested positive for COVID-19, and 102 workers have died.¹⁶ And these numbers are

¹¹ See *Coronavirus Dashboard*, WHO, <https://covid19.who.int> (last visited June 26, 2020).

¹² See *Cases of Coronavirus Disease (COVID-19) in the U.S.*, Ctrs. for Disease Control & Prevention, <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html> (last visited June 26, 2020).

¹³ Nathaniel Weixel, *Fauci Gives Congress COVID-19 Warning*, The Hill (June 23, 2020), <https://thehill.com/policy/healthcare/504197-fauci-gives-congress-covid-19-warning?userid=436652>.

¹⁴ See Julie Bosman, *W.H.O. Warns of ‘Dangerous Phase’ of Pandemic as Outbreaks Widen*, N.Y. Times (June 19, 2020), <https://www.nytimes.com/2020/06/19/us/coronavirus-new-dangerous-phase.html?action=click&module=Top%20Stories&pgtype=Homepage>.

¹⁵ See Leah Douglas, *Mapping Covid-19 Outbreaks in the Food System*, Food & Env’t Reporting Network (Apr. 22, 2020, updated June 19, 2020), <https://thefern.org/2020/04/mapping-covid-19-in-meat-and-food-processing-plants/>.

¹⁶ *Id.*

continuing to climb.¹⁷ According to Tyson Foods, one of the only large U.S. meat producers that is voluntarily disclosing information about coronavirus infections, 18% of the company’s employees in Northwest Arkansas—nearly 700 people—had tested positive for the virus as of June 19.¹⁸ More than one-third of the workers have tested positive at each of two Tyson slaughterhouses in Iowa and Indiana.¹⁹ On June 21, China’s General Administration of Customs announced that it was halting imports from a Tyson slaughterhouse in Arkansas following an outbreak of coronavirus cases at the facility.²⁰

Federal slaughterhouse inspectors with USDA’s Food Safety and Inspection Service (FSIS) also have become ill and died of COVID-19, as a result of exposure in slaughterhouses, shortages of personal protective equipment, and FSIS’s early prohibitions against inspectors’ use of face masks inside slaughterhouses.²¹ (The prohibitions appear to have been in conflict with an FSIS directive requiring that FSIS “provid[e] employees with proper personal protective equipment . . . and remov[e] employees . . . from unsafe conditions as necessary for protection.”²²) As of May 5, 197 FSIS field employees were absent from work due to COVID-19

¹⁷ See Rachel Axon et al., *Coronavirus Outbreaks Climb at U.S. Meatpacking Plants Despite Protections, Trump Order*, USA Today (June 6, 2020), <https://www.usatoday.com/story/news/investigations/2020/06/06/meatpacking-plants-cantshake-covid-19-cases-despite-trump-order/3137400001/>.

¹⁸ See *Tyson Foods, Inc. Releases Covid-19 Test Results at Northwest Arkansas Facilities*, Tyson Foods, Inc. (June 19, 2020), <https://www.tysonfoods.com/news/news-releases/2020/6/tyson-foods-inc-releases-covid-19-test-results-northwest-arkansas>.

¹⁹ See Eric Schlosser, *America’s Slaughterhouses Aren’t Just Killing Animals*, The Atlantic (May 12, 2020), <https://www.theatlantic.com/ideas/archive/2020/05/essentials-meatpeacking-coronavirus/611437/>.

²⁰ See Jason Slotkin, *China Suspends Poultry Imports from Tyson Foods Plant in Arkansas*, NPR (June 21, 2020), <https://www.npr.org/sections/coronavirus-live-updates/2020/06/21/881408578/china-suspends-poultry-imports-from-tyson-foods-plant-in-arkansas>.

²¹ See Schlosser, *supra* note 19 (explaining that, “in the early days of the pandemic, [FSIS] not only failed to give protective equipment to its inspectors, but also prohibited them from wearing masks inside meatpacking plants—concerned that the wrong message might be sent about the risk of COVID-19. On April 9, the agency said that inspectors could wear masks on the job, if the meatpacking company that owned the plant gave them permission to do so. Inspectors were encouraged to find their own masks and promised a \$50 reimbursement for ‘the purchase of face coverings or materials to make face coverings.’ One month later, after meatpacking plants had been widely criticized as hot spots for spreading COVID-19, the USDA finally began to provide masks to its inspectors”).

²² U.S. Dep’t Agric., *FSIS Directive Basic Occupational Safety and Health Program* (2016), <https://www.fsis.usda.gov/wps/wcm/connect/cfa047f5-f01c-49f2-80c7-63ee08dd914d/4791.1.pdf?MOD=AJPERES>.

diagnoses, and another 120 were under self-quarantine due to exposure.²³ At least four inspectors infected with the virus have died.²⁴

As slaughterhouse inspectors and workers have fallen ill, slaughterhouses have operated at reduced capacity or closed altogether, resulting in a backlog of millions of industrially-raised animals ready for slaughter.²⁵ This backlog is especially concerning because industrial farm animal production follows a “just-in-time” system,²⁶ under which slaughterhouses can process only animals of a certain target size. Once the animals grow larger than that target size, they no longer “fit within [the] equipment used on processing plant production lines” and cannot be processed in those plants.²⁷

According to the Economic Research Service, as of mid-May, pork processing had decreased by at least 11%, beef by 21%, chicken by 2%, and turkey by 8.3%, as compared to production rates from the same period in 2019.²⁸ In fact, these decreases in processing volumes likely are more dramatic than they appear. Over the past few years, FSIS and the meat industry have implemented certain “efficiency” initiatives to speed up processing times—thereby increasing capacity—at pig and chicken slaughterhouses.²⁹ As a result of these efficiency

²³ See Greg Cima, *Slaughter Delays Lead to Depopulation*, J. Am. Veterinary Med. Ass’n (June 15, 2020), <https://www.avma.org/javma-news/2020-06-15/slaughter-delays-lead-depopulation>; see also Mike Dorning, *Fourth USDA Inspector Dies From Virus Amid Meat Plant Outbreaks*, Bloomberg News (May 13, 2020), <https://www.bloomberg.com/news/articles/2020-05-14/fourth-usda-inspector-dies-from-virus-amid-meat-plant-outbreaks>.

²⁴ See Mike Dorning, *Fourth USDA Inspector Dies From Virus Amid Meat Plant Outbreaks*, Bloomberg News (May 13, 2020), <https://www.bloomberg.com/news/articles/2020-05-14/fourth-usda-inspector-dies-from-virus-amid-meat-plant-outbreaks>.

²⁵ See, e.g., *Pandemic Disrupts Processing Capacity, Drives Slaughter Numbers Down*, Am. Farm Bureau Fed’n (Apr. 28, 2020), <https://www.fb.org/market-intel/pandemic-disrupts-processing-capacity-drives-slaughter-numbers-down> (identifying reporting that “at least 18 plants have been closed down due to issues with COVID-19 over the previous two months” and “estimate[ing] that at times over the previous few weeks, pork processing capacity has been reduced by as much as 20% and beef processing capacity has been reduced by as much as 10%”); Greg Cima, *Slaughter Delays Lead to Depopulation*, J. Am. Veterinary Med. Ass’n (June 15, 2020), <https://www.avma.org/javma-news/2020-06-15/slaughter-delays-lead-depopulation> (identifying reporting that, “[b]y May 8, at least 30 slaughter and processing plants had closed at some point because of COVID-19 outbreaks, affecting 45,000 workers and reducing pork slaughter capacity 40% and beef slaughter capacity 25%”).

²⁶ See Letter from Kim Reynolds, Governor of Iowa, et al., to Vice President & Members of the Coronavirus Task Force (Apr. 27, 2020) <https://www.grassley.senate.gov/sites/default/files/Iowa%20group-2020-covid-pork-letter-1.pdf>; see also NPPC Letter at 4.

²⁷ NPPC Letter at 4.

²⁸ See Greg Cima, *Slaughter Delays Lead to Depopulation*, J. Am. Veterinary Med. Ass’n (June 15, 2020), <https://www.avma.org/javma-news/2020-06-15/slaughter-delays-lead-depopulation>

²⁹ See Modernization of Swine Slaughter Inspection; 84 Fed. Reg. 52,300 (Oct. 1, 2019), <https://www.federalregister.gov/documents/2019/10/01/2019-20245/modernization-of-swine-slaughter-inspection>; see also FSIS, *Criteria for Consideration of Waiver Requests from Young Chicken Slaughter*

initiatives, processing capacity in 2020 would have been expected to *exceed* processing capacity in 2019, and thus the present shortfalls likely are especially severe. Without more information about the disposal of farm animal carcasses, however, it is impossible to know how many animals have been killed as a result of these shortfalls.

The recent efficiency initiatives also contribute to a greater likelihood of additional slaughterhouse shutdowns. This is because increases in line-speeds, together with a reduction in the number of federal inspectors,³⁰ require workers to process animals in a shorter amount of time, making it more difficult to socially distance. Indeed, according to the Centers for Disease Control and Prevention (CDC), “[c]hanges in production practices (*e.g.*, line speed *reductions*) may be necessary to maintain appropriate distancing among employees.”³¹

In April alone, FSIS approved 15 line-speed waiver requests from large poultry plants, allowing those plants to accelerate their processing lines by 25 percent.³² More than half of those 15 plants have experienced COVID-19 outbreaks, with one plant reporting a COVID-19-related worker fatality and another closing shortly after receiving its waiver due to the rampant spread of the virus.³³ Coinciding with these changes, reports indicate that poultry plants with line-speed waivers are at least 10 times more likely than the industry as a whole to have COVID-19 cases among workers.³⁴

In addition, FSIS continues to roll out its new inspection system for pig slaughterhouses, which—among other things—entirely removes line-speed caps and shifts some responsibilities from federal inspectors to plant employees. Petitioners would like to see USDA discontinue its

Establishments to Operate at Line Speeds Up to 175 Birds Per Minute, FSIS Constituent Update (Feb. 23, 2018), <https://www.fsis.usda.gov/wps/portal/fsis/newsroom/meetings/newsletters/constituent-updates/archive/2018/ConstUpdate022318>; Petition To Permit Waivers of Maximum Line Speeds for Young Chicken Establishments Operating Under the New Poultry Inspection System; Criteria for Consideration of Waiver Requests for Young Chicken Establishments To Operate at Line Speeds of Up to 175 Birds per Minute, 83 Fed. Reg. 49,048 (Sept. 28, 2018), <https://www.federalregister.gov/documents/2018/09/28/2018-21143/petition-to-permit-waivers-of-maximum-line-speeds-for-young-chicken-establishments-operating-under>.

³⁰ *Id.*

³¹ Memorandum from Michael Grant, CDC Nat’l Ins. for Occupational Safety & Health, et al., to Joshua Clayton, South Dakota Department of Health 7 (Apr. 22, 2020), https://covid.sd.gov/docs/smithfield_recs.pdf (emphasis added).

³² See Nat’l Employment Law Project, *USDA Allows Poultry Plants to Raise Line Speeds, Exacerbating Risk of COVID-19 Outbreak and Injury*, 1 (2020), <https://s27147.pcdn.co/wp-content/uploads/Policy-Brief-USDA-Poultry-Line-Speed-Increases-Exacerbate-COVID-19-Risk.pdf>.

³³ *Id.*

³⁴ See Sky Chadde & Kyle Bagenstose, *USDA let Poultry Plants put Workers Close Together Even as They Got Sick From Coronavirus*, USA Today (Apr. 24, 2020), <https://www.usatoday.com/story/news/2020/04/24/usda-let-poultry-plants-move-fastercrowd-lines-covid-coronavirus-spread-meat-packing-workers/3013615001/>.

practice of increasing line-speeds and approving line-speed waiver requests,³⁵ but USDA has yet to do so. Especially when combined with ongoing worker illnesses resulting from the COVID-19 pandemic, increased line-speeds and line-speed waivers create a perfect storm, increasing the likelihood of additional shutdowns and delays.

Also increasing the likelihood of additional shutdowns and delays are the incentives and threats that the meat industry has employed to keep slaughterhouse workers on the job, despite risks of contracting and spreading coronavirus.³⁶ For instance, in early June, Tyson Foods reverted to its pre-coronavirus worker attendance policy,³⁷ under which workers can be penalized and even fired for missing work due to illness.³⁸ Incentives and threats that prevent sick workers from staying home can lead to additional outbreaks and slow-downs, putting workers and communities at greater risk.

³⁵ See Letter from A Better Balance, et al., to Nancy Pelosi, et al., Speaker, U.S. H.R. (May 4, 2020), https://www.foodandwaterwatch.org/sites/default/files/20.05.04_21_groups_urge_congress_to_direct_usda_to_stop_higher-speed_slaughter.pdf (requesting that Congress implement a moratorium on the higher line-speed slaughter and processing of poultry, swine, and cattle).

³⁶ See Jonathan Dyal, et al., *COVID-19 Among Workers in Meat and Poultry Processing Facilities – 19 States, April 2020*, 69 *Morbidity & Mortality Weekly Report* 557, 557 (May 8, 2020), <https://www.cdc.gov/mmwr/volumes/69/wr/mm6918e3.htm> (“Among workers, socioeconomic challenges might contribute to working while feeling ill, particularly if there are management practices such as bonuses that incentivize attendance.”); see also Liam Niemeyer, *Coronavirus Concerns Rise as Ohio Valley Meatpacking Workers Fall Sick*, WV Public Broadcasting (Apr. 10, 2020), <https://www.wvpublic.org/post/coronavirus-concerns-rise-ohio-valley-meatpacking-workers-fall-sick#stream/0> (reporting that some meat companies have offered bonuses tied to worker attendance); Polly Mosendz et al., *U.S. Meat Plants are Deadly as Ever, With No Incentive to Change*, *Bloomberg Businessweek* (June 18, 2020), <https://www.bloomberg.com/news/features/2020-06-18/how-meat-plants-were-allowed-to-become-coronavirus-hot-spots> (describing a COVID-19 outbreak at a JBS meatpacking plant in Cactus, Texas and reporting that “the CDC warned JBS on April 20 to stop offering inducements for workers to come in, but JBS ultimately didn’t follow the agency’s advice”).

³⁷ See Deena Shanker & Jen Skerritt, *Tyson Reinstates Policy that Penalizes Absentee Workers*, *Bloomberg* (June 2, 2020), <https://www.bloomberg.com/news/articles/2020-06-03/tyson-reinstates-policy-that-penalizes-absentee-workers>; see also Jerald Brooks & Lakesha Bailey, *We’re Feeding America, but We’re Sacrificing Ourselves*, *N.Y. Times* (June 15, 2020), <https://www.nytimes.com/2020/06/15/opinion/coronavirus-tyson-poultry.html?action=click&module=Opinion&pgtype=Homepage>.

³⁸ See Polly Mosendz et al., *U.S. Meat Plants are Deadly as Ever, With No Incentive to Change*, *Bloomberg Businessweek* (June 18, 2020), <https://www.bloomberg.com/news/features/2020-06-18/how-meat-plants-were-allowed-to-become-coronavirus-hot-spots> (describing that “The nation may now be experiencing a second wave of the virus outbreak, with case counts mounting in Texas, Arizona, and other red states where meatpacking is more common. On June 5, JBS’s Cactus location sent workers home with 10-pound boxes of chicken tenders. The state had 1,693 new COVID-19 cases that day”).

B. The Meat Industry Has Responded to Problems at Slaughterhouses by Killing Millions of Farm Animals.

The animal agricultural industry is highly consolidated and vertically integrated. Currently, just four corporations control 85% of beef processing, three corporations control 63% of pig processing, and half of all chicken growers report they have just one or two buyers for their birds.³⁹ In addition to maintaining control over processing, major meat companies often own animals during all stages of production, and contract with livestock growers to raise those animals prior to slaughter.

Without prompt access to slaughterhouses, meat companies and livestock growers have found themselves faced with three choices: (1) hold animals on the industrial livestock operations where they are raised indefinitely, (2) identify alternate channels for slaughter, or (3) kill animals and dispose of their carcasses, even if they cannot be processed into food. The meat industry has explained that the first choice is unsatisfactory because animals may outgrow slaughter equipment and, in any case, the “just-in-time” system operates such that a new generation of farm animals is already waiting to take the existing generation’s place.⁴⁰ According to the National Pork Producers Council (NPPC), the second choice, identifying alternate channels for slaughter, “isn’t a solution to the supply bottleneck challenge faced by pork producers,” in part because “local butchers and other alternative channels simply cannot absorb the number of hogs backed up.”⁴¹ Thus, meat companies and growers apparently have concluded that the majority of animals must be killed—or, in industry parlance, depopulated—even if they cannot be used for food.⁴²

Meatpackers began raising alarm bells about the growing animal backlog as early as April.⁴³ On April 26, John Tyson, the chairman of Tyson Foods, took out full page ads in major

³⁹ See U.S. Dept. of Agric., *Grain Inspection, Packers and Stockyards Administration, 2016 Annual Report: Packers and Stockyards Program* (2016), https://www.gipsa.usda.gov/psp/publication/ar/2016_psp_annual_report.pdf; see also Philip H. Howard, *Corporate Concentration in Global Meat Processing: The Role of Feed and Finance Subsidies*, in *Global Meat: Social and Environmental Consequences of the Expanding Meat Industry*, at 31 (2019); James M. MacDonald, *Technology, Organization, and Financial Performance in U.S. Broiler Production*, U.S. Dept. of Agric., (June 2014), <https://www.ers.usda.gov/publications/pub-details/?pubid=43872>.

⁴⁰ See Letter from Kim Reynolds, Governor of Iowa, et al., to Vice President & Members of the Coronavirus Task Force (Apr. 27, 2020) <https://www.grassley.senate.gov/sites/default/files/Iowa%20group-2020-covid-pork-letter-1.pdf>; see also NPPC Letter at 4.

⁴¹ Lisa Held, *Struggling Farmers Are Selling Midwest Hogs Ad Hoc and Online*, Civil Eats (June 8, 2020), <https://civileats.com/2020/06/08/struggling-farmers-are-selling-midwest-hogs-ad-hoc-and-online/>.

⁴² See Michael Corkery & David Yaffe-Bellany, *Meat Plant Closures Mean Pigs Are Gassed or Shot Instead*, N.Y. Times (May 14, 2020), <https://www.nytimes.com/2020/05/14/business/coronavirus-farmers-killing-pigs.html>.

⁴³ See Tom Polansek & P.J. Huffstutter, *Piglets Aborted, Chickens Gassed as Pandemic Slams Meat Sector*, Reuters (April 27, 2020) <https://www.reuters.com/article/us-health-coronavirus-livestock-insight/piglets-aborted-chickens-gassed-as-pandemic-slams-meat-sector-idUSKCN2292YS> (Anecdotally

newspapers including the New York Times, Washington Post, and Arkansas Democrat-Gazette, warning that “millions of animals – chickens, pigs and cattle – will be depopulated because of the closure of our processing facilities.”⁴⁴ By late June, depopulation efforts were ongoing in leading agricultural states across the country, including Minnesota,⁴⁵ North Carolina, Iowa, and Colorado.⁴⁶ Poultry producers have already euthanized more than 10 million hens.⁴⁷ The pork industry has warned that it could euthanize more than 10 million pigs by September.⁴⁸ And, as explained above, coronavirus infections recently spiked across the South and West, indicating that the crisis is far from over.

C. APHIS Is Assisting the Meat Industry as it Depopulates Industrial Animal Feeding Operations and Disposes of Farm Animal Carcasses.

In April, APHIS established the NICC to “provide direct support to producers whose animals cannot move to market as a result of processing plant closures due to COVID-19.”⁴⁹ Among other activities, the NICC is “advis[ing] and assist[ing] on depopulation and disposal methods” and “[d]eploy[ing] assets of [APHIS’s] National Veterinary Stockpile (including captive bolt guns and cartridges, chutes and trailers, and personal protective equipment).”⁵⁰

explaining that even before closures were widespread, “packers are backed up every day, more and more”).

⁴⁴ Nathan Borney, *Tyson Chairman Warns of ‘Meat Shortages’ as Industry Faces Scrutiny for Worker Safety During Coronavirus*, USA Today (Apr. 27, 2020), <https://www.usatoday.com/story/money/2020/04/27/tyson-meat-shortages-coronavirus-covid-19/3034748001/>.

⁴⁵ See Liz Crampton, *Farmers Still Plagued by Hog Backlog*, Politico (June 19, 2020), <https://www.politico.com/newsletters/morning-agriculture/2020/06/19/farmers-still-plagued-by-hog-backlog-788665>.

⁴⁶ See, e.g., Tammy Grubb, *Coronavirus Outbreaks at Processors Force NC Farmers to Start killing 1.5M Chickens*, The News & Observer (May 23, 2020, last updated May 28, 2020) (North Carolina) <https://www.newsobserver.com/news/business/article242944156.html>; CNN Newsource, *2 Million Chickens Being Killed Because Processing Plants are Short-staffed*, The Denver Channel (Apr. 27, 2020) (Colorado), <https://www.thedenverchannel.com/news/national/coronavirus/2-million-chickens-being-killed-because-processing-plants-are-short-staffed>; Matthew Scully, *The Human Cost of ‘Culling’ Livestock and ‘Depopulating’ Farms*, Nat’l Rev. (May 7, 2020) (Iowa), <https://www.nation/2020/05/coronavirus-pandemic-human-cost-of-culling-livestock-depopulating-farms/>.

⁴⁷ See Sophie Kevany, *Millions of U.S. Farm Animals to be Culled by Suffocation, Drowning, and Shooting*, The Guardian (May 19, 2020), <https://www.theguardian.com/environment/2020/may/19/19/millions-of-us-farm-animals-to-be-culled-by-suffocation-drowning-and-shooting-coronavirus?fbclid=IwAR0l44gqUoLWzxVv-O5r1Uwm8sQAmWqQy8dFKaJTE1ikR8Y2vpgS0-VHhFc>

⁴⁸ See Audrey Conklin, *Coronavirus May Force Hog Farmers to Kill 10M Pigs by September*, Fox Business (May 17, 2020), <https://www.foxbusiness.com/markets/farmers-euthanize-10-million-pigs-coronavirus>; see also NPPC Letter at 3.

⁴⁹ APHIS NICC Press Release.

⁵⁰ *Id.*; see also APHIS Livestock Coordination Center, U.S. Dep’t of Agric., <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/livestock-coordination-center/livestock-coordination-center> (last visited June 10, 2020).

On May 8, NPPC wrote to the U.S. Department of Justice (DOJ) requesting a “Business Review Letter” to confirm that industry coordination in euthanizing and disposing of an estimated 700,000 hogs per week would not violate antitrust laws.⁵¹ According to NPPC, approximately 44% of pork-production capacity was offline as of April 29.⁵² NPPC determined that “a coordinated industry and governmental response is necessary to ethically and efficiently euthanize as few hogs as possible,” in part because “hog farmers generally lack the knowledge, equipment, and facilities needed to humanely euthanize large numbers of animals, and then dispose of them in a manner that mitigates the environmental impact.”⁵³ Thus, NPPC argued, “to ensure that animals are disposed of in an environmentally responsible manner, the NPPC, working *under the direction and supervision of the USDA* and state and local officials, must be prepared to provide clear and consistent guidance with regard to how producers should dispose of these animals.”⁵⁴

On May 15, DOJ responded to NPPC’s request and indicated that DOJ does not currently intend to pursue antitrust enforcement actions against hog producers who are “‘acting at [the NICC’s] direction in the context of a clearly defined federal program’ and in furtherance of that program.”⁵⁵ DOJ indicated that the response was consistent with its general policy against “challeng[ing] conduct aimed at addressing COVID-19 if it is (i) ‘compelled by an agreement with a federal agency or a clearly defined federal government policy’ and (ii) ‘supervised by a federal agency.’”⁵⁶ In applying this general policy to NPPC, DOJ relied on NPPC’s representations that “most of [NPPC’s planned] conduct will occur at the direction and under the supervision and coordination of the USDA—a government agency.”⁵⁷

D. Some Methods for Depopulation and Disposal Raise Serious Concerns for Animal Welfare, Public Health, and the Environment.

Meat industry representatives consider the depopulation and disposal of millions of animals nationwide to be “a grim necessity.”⁵⁸ As APHIS has acknowledged, “[p]sychological

⁵¹ NPPC Letter at 1,3.

⁵² *Id.* at 3–4.

⁵³ *Id.* at 3, 4.

⁵⁴ *Id.* at 5 (emphasis added).

⁵⁵ Letter from the Honorable Makan Delrahim, Assistant Att’y General for Antitrust, U.S. Dep’t of Justice, to Martin M. Toto, Att’y, White & Case LLP, at 4 (May 15, 2020), <https://www.justice.gov/opa/press-release/file/1276971/download> (citations omitted).

⁵⁶ *Id.* (citing Letter from the Honorable Makan Delrahim, Assistant Att’y General for Antitrust, U.S. Dep’t of Justice, to Lori A. Schechter, McKesson Corp., et al., at 8 (Apr. 4, 2020),

<https://www.justice.gov/atr/page/file/1266511/download>; Letter from the Honorable Makan Delrahim, Assistant Att’y General for Antitrust, U.S. Dep’t of Justice, to John G. Chou, Exec. Vice President, AmerisourceBergen, at 8 (Apr. 20, 2020), <https://www.justice.gov/atr/page/file/1269911/download>.

⁵⁷ *Id.* at 1.

⁵⁸ Matthew Scully, *The Human Cost of ‘Culling’ Livestock and ‘Depopulating’ Farms*, Nat’l Rev. (May 7, 2020), <https://www.nationalreview.com/2020/05/coronavirus-pandemic-human-cost-of-culling-livestock-depopulating-farms/>.

hazards arise from the emotional reaction evoked by massive volumes of carcasses,” among industry actors and neighbors alike.⁵⁹ In addition to these psychological risks—and the financial hardship that can result from the purposeless extermination of farm animals—depopulation and disposal can raise serious concerns for animal welfare, public health, and the environment. The risks associated with depopulation and disposal illustrate the importance of additional federal oversight and transparency.

Numerous methods for depopulation and disposal currently are available to the meat industry, and different methods have different implications for animal welfare, public health, and the environment.⁶⁰ As the National Pork Board explained during a presentation in April, the American Veterinary Medical Association’s Guidelines for the Depopulation of Animals (AVMA Guidelines)⁶¹ allow depopulation by gunshot, nonpenetrating captive bolt, penetrating captive bolt, electrocution, manual blunt force trauma, carbon dioxide, anesthetic overdose, ventilator shutdown, sodium nitrite, or use of injectable euthanasia agents.⁶² Although some of these depopulation techniques are “preferred,” while others are merely “permitted,” the Guidelines do not designate *any* techniques as “not recommended” for hog depopulation.⁶³

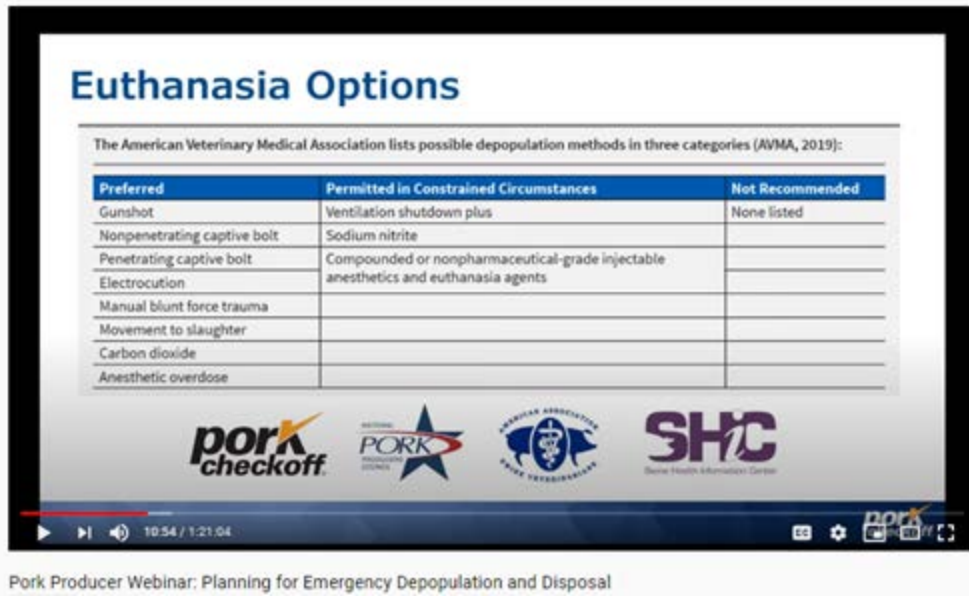
⁵⁹ EIS at 97.

⁶⁰ The AVMA Guidelines concede that “the emergency destruction of animals through depopulation techniques may not guarantee that the deaths the animals face are painless and distress free.” AVMA Guidelines at 4.

⁶¹ Both APHIS and the meat industry rely on the AVMA Guidelines. *See* USDA, “For Affected Producers,” *APHIS Livestock Coordination Center*, U.S. Dep’t of Agric., <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/livestock-coordination-center/livestock-coordination-center> (last visited June 10, 2020) (directing livestock producers to the AVMA Guidelines, among other resources); *see also, e.g., Pork Producer Webinar: Planning for Emergency Depopulation and Disposal*, Nat’l Pork Bd., (Apr. 26, 2020), <https://www.pork.org/public-health/what-you-need-to-know-about-covid-19/pork-industry-covid-19-webinars/> (incorporating information from the AVMA Guidelines).

⁶² *See Pork Producer Webinar: Planning for Emergency Depopulation and Disposal*, Nat’l Pork Bd., (Apr. 26, 2020), <https://www.pork.org/public-health/what-you-need-to-know-about-covid-19/pork-industry-covid-19-webinars/>.

⁶³ *Id.*; *see also* AVMA Guidelines at 45.



Indeed, the AVMA Guidelines designate only a handful of depopulation techniques as not recommended for any category of industrial livestock,⁶⁴ and some techniques that the AVMA Guidelines designate as *preferred*—such as smothering hens with water-based foam—have been condemned as inhumane by other authorities.⁶⁵ The AVMA Guidelines do not forbid any depopulation techniques.

Once animals have been euthanized, the meat industry currently has a variety of options for carcass disposal. As the National Pork Board explained during its April presentation, these options include burial and on-site incineration.⁶⁶

⁶⁴ See AVMA Guidelines at 36, 53, 54. Horses, aquatic animals, animals given outdoor access, or animals classified as “companion, lifestyle, or high-value” are not included in Petitioners’ summary.

⁶⁵ See Sophie Kevany, *Millions of U.S. Farm Animals to be Culled by Suffocation, Drowning, and Shooting*, *The Guardian* (May 19, 2020), <https://www.theguardian.com/environment/2020/may/19/millions-of-us.-farm-animals-to-be-culled-by-suffocation-drowning-and-shooting-coronavirus?fbclid=IwAR0I44gqUoLWzxVv-O5r1Uwm8sQAmWqOy8dFKaJTE1ikR8Y2vpgS0-VHhFc> (explaining that, although “[w]ater-based foaming is categorised as the ‘preferred method [for depopulating some birds] by the AVMA, . . . “[a] 2019 European Food Safety Authority journal report said it did not find water-based or firefighting foam acceptable because ‘death due to drowning in fluids or suffocation by occlusion of the airways’ is not seen as ‘a humane method for killing animals, including poultry’”).

⁶⁶ See *Pork Producer Webinar: Planning for Emergency Depopulation and Disposal*, Nat’l Pork Bd., (Apr. 26, 2020), <https://www.pork.org/public-health/what-you-need-to-know-about-covid-19/pork-industry-covid-19-webinars/>.



According to APHIS, burial and on-site incineration “have the greatest impacts to the environment” and, thus, “must only be used after carefully weighing risk factors.”⁶⁷ For instance, APHIS has acknowledged that “[t]he burial of carcasses may impact the quality of surface and ground water resources,” including drinking water, by leaching contaminants that migrate into water through the surrounding soil.⁶⁸ In addition, open-air burning releases “potentially high levels of air pollution, large amounts of potentially contaminated ash (dioxins, heavy metals), leachate, and unwanted heat.”⁶⁹ Despite these risks, APHIS currently allows the industry to use unlined burial and on-site incineration for carcass disposal.

Not only do depopulation and disposal methods raise serious concerns for animal welfare, public health, and the environment *individually*, certain depopulation and disposal techniques pose additional risks when used *in combination*. For example, if animals are shot with lead bullets and then buried in unlined pits, lead can migrate into the soil and contaminate nearby water and plants, putting people and wildlife at risk.⁷⁰ Experts agree that there is no safe level of exposure to lead.⁷¹

⁶⁷ EIS at vii.

⁶⁸ *Id.* at 5, 81.

⁶⁹ *Id.* at 44.

⁷⁰ See, e.g., Ctr. for Biological Diversity, et al., *Petition to the Environmental Protection Agency to Ban Lead Shot, Bullets, and Fishing Sinkers Under the Toxic Substances Control Act*, at 8 (2010), https://www.biologicaldiversity.org/campaigns/get_the_lead_out/pdfs/Final_TSCA_lead_ban_petition_8-3-10.pdf.

⁷¹ See, e.g., American Academy of Pediatrics, *Lead Exposure in Children* (2016), <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/Lead-Exposure-in-Children.aspx#:~:text=There%20is%20no%20safe%20level,Prevention%20recommends%20evaluation%20and%20intervention.>

Similarly, depopulation through suffocation by foam poses serious threats to people and the environment, especially if the resulting animal carcasses are buried in unlined pits. Foam is a mixture of air, detergent or surfactant, and water.⁷² Over time, foam breaks down, and its components can flow from farm animal depopulation sites into nearby water⁷³ and soil.⁷⁴ This contamination is especially troubling because some commonly used foams contain dangerous chemicals known as per- and polyfluoroalkyl substances (PFAS).⁷⁵ Once in the environment, PFAS spread quickly, resist degradation, and bioaccumulate in plants, animals, and humans.⁷⁶ Exposure to PFAS has been linked to cancer, elevated cholesterol, obesity, immune suppression, pre-eclampsia, impaired liver and kidney function, and endocrine disruption.⁷⁷ PFAS can be highly toxic even in small doses.⁷⁸ Senior CDC officials have warned that the presence and concentrations of PFAS chemicals in U.S. drinking water is “one of the most seminal public health challenges for the next decades.”⁷⁹ But APHIS currently allows the meat industry to bury animals suffocated with foam in unlined pits, providing a direct pathway to the contamination of groundwater and, potentially, well water.

E. Extreme Weather Events Can Exacerbate the Harms of Irresponsible Carcass Disposal, while also Causing Additional Mortalities.

Like depopulation methods, extreme weather events can increase the risks associated with mass carcass disposal. And extreme weather events are becoming increasingly frequent and severe due to climate change.⁸⁰ Indeed, experts anticipate that the 2020 Atlantic hurricane

⁷² See Shailesh Gurung et al., *Depopulation of Caged Layer Hens with a Compressed Air Foam System*, 8 *Animals* 11 (2018).

⁷³ See Ctr. for Food Sec. & Pub. Health at Iowa State Uni., *Water Based-Foam Depopulation: For Poultry During Animal Health Emergencies* (2016), http://www.cfsph.iastate.edu/Emergency-Response/Just-in-Time/15-Euthanasia_Water-based-Foam-For-Poultry-Depopulation_HANDOUT.pdf.

⁷⁴ See, i.e., *Aqueous Film Forming Foam (AFFF)*, State of Alaska, Dep’t of Env’tl. Conservation, <https://dec.alaska.gov/spar/csp/pfas/firefighting-foam/>.

⁷⁵ *Id.*

⁷⁶ See Hearing on “Examining the Federal Response to the Risks Associated with Per- and Polyfluoroalkyl Substances (PFAS)” Before the S. Comm. on Env’t & Pub. Works, 1 (2019) (Testimony of Linda S. Birnbaum, Director, Nat’l Inst. Env’tl. Health Sci. & Nat’l Toxicology Program Nat’l Insts. Health), https://www.niehs.nih.gov/about/assets/docs/hearing_on_examining_the_federal_response_to_the_risks_associated_with_per_and_polyfluoroalkyl_substances_pfas_508.pdf.

⁷⁷ See U.S. Dep’t of Health & Human Servs., Agency for Toxic Substances & Disease Registry, *Toxicological Profile for Perfluoroalkyls, Draft for Public Comment* (2018), <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>

⁷⁸ *Id.*

⁷⁹ Pat Rizzuto et al., *CDC Sounds Alarm on Chemical Contamination in Drinking Water*, Bloomberg Law (Oct. 17, 2017), <https://news.bloombergenvironment.com/environment-and-energy/cdc-sounds-alarm-on-chemical-contamination-in-drinking-water>.

⁸⁰ See U.S. Global Change Research Program, *Fourth National Climate Assessment: Impacts, Risks, and Adaptation in the United States, Volume II* (2018), http://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf; see also Gabriele Villarini & Gabriel Vecchi, *Projected Increases in North Atlantic Tropical Cyclone Intensity from CMIP5 Models*, 26

season, which extends from June 1 to November 30, will be unusually active, producing as many as 10 hurricanes, including 6 “major” hurricanes (category 3, 4, or 5)—that is, about twice as many extreme storms as the average season.⁸¹ As hurricane season reaches its peak in the midst of the COVID-19 crisis, severe storms could flood areas in which recently depopulated animals have been buried, posing additional risks to people and the environment, while also killing and triggering the depopulation of additional animals whose carcasses will require disposal. Thus, the potential for extreme weather must be considered in determining appropriate methods for the disposal of farm animal carcasses.

During the past twenty years, North Carolina has endured at least four hurricanes that caused significant flooding and led to the deaths of many farm animals: Hurricane Floyd in 1999,⁸² Hurricane Irene in 2011,⁸³ Hurricane Matthew in 2015,⁸⁴ and Hurricane Florence in 2018.⁸⁵ These storms have been catastrophic for neighboring communities and the environment. For instance, Hurricanes Florence and Matthew impaired water quality directly by flooding and breaching manure lagoons at animal feeding operations.⁸⁶ Hurricane Floyd “killed approximately 3 million poultry, 800 cattle, and 30,000 hogs in North Carolina.”⁸⁷ Although APHIS has acknowledged that “[u]nlined burial and open-air burning of carcasses during a mass animal health emergency are expected to have the greatest impacts to the environment,”⁸⁸ the Agency also recognizes that “many people decide[] to bury the carcasses [resulting from hurricanes and

J. Climate 3231 (2013); Enrico Scoccimarro et al., *Intense Precipitation Events Associated with Landfalling Tropical Cyclones in Response to a Warmer Climate and Increased CO₂*, 27 J. Climate 4642 (2014); Donald Wuebbles et al., *CMIP5 Climate Model Analyses: Climate Extremes in the United States*, 95 Am. Meteorological Soc’y J. 571 (2014); Brian A. Colle et al., *Historical Evaluation and Future Prediction of Eastern North American and Western Atlantic Extratropical Cyclones in the CMIP5 Models During the Cool Season*, 26 J. Climate 6882 (2013).

⁸¹ Nat’l Oceanic and Atmospheric Admin., *Busy Atlantic Hurricane Season Predicted for 2020: Multiple Climate Factors Indicate Above-Normal Activity is Most Likely* (May 21, 2020), <https://www.noaa.gov/media-release/busy-atlantic-hurricane-season-predicted-for-2020>.

⁸² See *Event Overview, Hurricane Floyd Storm Summary*, Nat’l Weather Serv., Nat’l Oceanic & Atmospheric Admin., <https://www.weather.gov/mhx/Sep161999EventReview> (last visited February 22, 2019).

⁸³ See *Event Overview, Hurricane Irene August 26-27, 2011*, Nat’l Weather Serv., Nat’l Oceanic & Atmospheric Admin., <https://www.weather.gov/mhx/Aug272011EventReview> (last visited February 22, 2019).

⁸⁴ See *Hurricane Matthew, October 8-9, 2016 Summary*, Nat’l Weather Serv., Nat’l Oceanic & Atmospheric Admin., <https://www.weather.gov/mhx/MatthewSummary> (last visited February 22, 2019).

⁸⁵ See Stacy R. Stewart & Robbie Berg, *National Hurricane Center Tropical Cyclone Report Hurricane Florence*, Nat’l Weather Serv., Nat’l Oceanic & Atmospheric Admin (2018), https://www.nhc.noaa.gov/data/tcr/AL062018_Florence.pdf.

⁸⁶ See Kendra Pierre-Louis, *Lagoons of Pig Waste Are Overflowing After Florence. Yes, That’s as Nasty as It Sounds*, N.Y. Times (Sept. 19, 2018), <https://www.nytimes.com/2018/09/19/climate/florence-hog-farms.html>.

⁸⁷ EIS at 34.

⁸⁸ *Id.* at vi.

other natural disasters] in unlined pits or trenches.”⁸⁹ Without additional oversight, there is no reason to suppose that the meat industry will behave differently this year, amidst the COVID-19 pandemic.

Like hurricanes, wildfires and droughts can compound the harms of inappropriate carcass disposal, while also causing additional mortalities. During wildfire events, farm animals can be killed by fire, smoke inhalation, burn infections, and heat stress; in addition, animals seriously injured by fires often are euthanized.⁹⁰ Previous wildfire seasons have led to significant farm animal losses: in 2017, devastating fires across the Great Plains killed about 2,500 cattle and 1,900 hogs in Texas, and injured or killed up to 80% of herds at ranches in Kansas.⁹¹ In April 2018, wildfires in Oklahoma killed more than 1,600 cattle.⁹² Fast-moving blazes caused by strong winds, which have characterized recent wildfire seasons, pose especially high risks for animal operations.⁹³ Travel restrictions related to the COVID-19 pandemic may limit emergency evacuation options, increasing the risk that wildfires will cause significant livestock mortalities. And experts already are predicting “above normal significant large fire potential[s]” until August of this year.⁹⁴ It is imperative that the meat industry prepare for the possibility that significant numbers of animals will die as a result of wildfires into account as it disposes of animal killed in connection with the COVID-19 pandemic.

V. ARGUMENTS IN SUPPORT OF REQUESTED ACTION

A. APHIS Has Authority to Adopt the Requested Rule.

Congress established USDA, in part, “to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture.”⁹⁵ As an agency within USDA, APHIS works “to provide leadership in ensuring the health and care of animals and plants, improve agricultural productivity and competitiveness, and contribute to the national

⁸⁹ *Id.* at 5.

⁹⁰ See, *i.e.*, Kay Ledbetter, *Wildfire Damage to Cattle may be More Than the Eye can See*, AgriLife Today (Apr. 19, 2011), https://texashelp.tamu.edu/wp-content/uploads/2016/02/Wildfire_damage_to_cattle_may_be_more_than_the_eye_can_see.pdf.

⁹¹ See Greg Cima, *Wildfires Kill Cattle, Pigs: Thousands of Animals Dead, Ranches Devastated*, J. Am. Veterinary Med. Ass’n (Apr. 12, 2017), <https://www.avma.org/javma-news/2017-05-01/wildfires-kill-cattle-pigs>; see also Jack Healy, *Burying Their Cattle, Ranchers Call Wildfires ‘Our Hurricane Katrina’*, N.Y. Times (Mar. 20, 2017), <https://www.nytimes.com/2017/03/20/us/burying-their-cattle-ranchers-call-wildfires-our-hurricane-katrina.html>.

⁹² See Donald Stotts, *Cattle Operation Losses from Wildfires Exceed \$26 million*, FarmProgress (May 8, 2018), <https://www.farmprogress.com/livestock/cattle-operation-losses-wildfires-exceed-26-million>.

⁹³ See, *i.e.*, Emma Bowman, *As California Wildfire Nears, A Family Raced to Save its Animals*, NPR (Nov. 1, 2019), <https://www.npr.org/2019/11/01/774773257/before-california-wildfire-devastates-farm-family-races-to-save-animals>.

⁹⁴ See Nat’l Interagency Fire Ctr., *National Significant Wildland Fire Potential Outlook* (2020), https://www.predictiveservices.nifc.gov/outlooks/monthly_seasonal_outlook.pdf.

⁹⁵ 7 U.S.C. § 2201.

economy and the public health.”⁹⁶ In pursuing this mission, APHIS “is committed . . . to promot[ing] and protect[ing] the integrity of the environment.”⁹⁷

The Animal Health Protection Act (AHPA) authorizes the Secretary of Agriculture (Secretary) to take remedial actions, including providing destruction and disposal services and compensation, with respect to any animal entering the country or moving through interstate commerce that “may carry, may have carried, or may have been affected with or exposed to any pest or disease of livestock.”⁹⁸ The Secretary has delegated this authority under the AHPA to APHIS.⁹⁹ In carrying out its responsibilities under the AHPA, APHIS may cooperate with other federal agencies, states, and Tribal nations.¹⁰⁰

Under the AHPA, APHIS’s authority is especially broad during “extraordinary emergenc[ies].”¹⁰¹ APHIS has interpreted its authority to encompass carcass management related to *any* mass animal health emergency, including one arising from a natural disaster.¹⁰² In December 2015, APHIS published a Final Programmatic Environmental Impact Statement (EIS) “analyz[ing] the environmental effects associated with various carcass management alternatives that could be implemented during a mass animal health emergency.”¹⁰³ The purpose of this EIS was “to enhance emergency preparedness, and to allow for greater use of *improved* carcass management options in addition to the traditional methods of unlined burial and open-air burning during mass animal health emergencies.”¹⁰⁴ In publishing this EIS, APHIS relied on its authority under the AHPA.¹⁰⁵

APHIS’s existing regulations prescribe methods of livestock depopulation and disposal, and mandate record-keeping in a variety of circumstances. For instance, APHIS requires that certain diseased pigs “be disposed of by burial, incineration, or other disposal means authorized by state law . . . in the presence of an APHIS representative.”¹⁰⁶ APHIS also requires that the

⁹⁶ Notice of Request for Extension of Approval of an Information Collection; Environmental Monitoring, 85 Fed. Reg. 31,135 (May 22, 2020).

⁹⁷ *Id.*

⁹⁸ 7 U.S.C. § 8306(a)(1)(B); *see id.* § 8306(d).

⁹⁹ 7 C.F.R. § 2.80(a)(37).

¹⁰⁰ 7 U.S.C. § 8310(a).

¹⁰¹ *Id.* § 8306(b)(1).

¹⁰² *See* EIS at 4; *see also id.* at 9 (asserting “APHIS’[s] authority to manage carcasses during a mass animal health emergency”)

¹⁰³ *Id.* at v.

¹⁰⁴ *Id.* (emphasis added).

¹⁰⁵ *See id.* at 8.

¹⁰⁶ 9 C.F.R. § 51.6; *see also id.* § 56.5 (explaining that APHIS and its state-agency counterpart will determine appropriate methods of disposal for poultry killed in connection with efforts to control avian influenza, and appropriate methods of disposal may include “[b]urial, incineration, composting, or rendering”).

disposal of certain diseased cattle be documented by a report or affidavit “that identifies the animals and describes their disposition . . . for information purposes only.”¹⁰⁷

On April 28, President Trump issued an Executive Order that directed USDA “to determine the proper . . . allocation of all the materials, services, and facilities necessary to ensure the continued supply of meat.”¹⁰⁸ Around the same time, as explained above, APHIS established the NICC to “advise and assist on [farm animal] depopulation and disposal methods.”¹⁰⁹ According to the Department of Justice, the “NICC will work with farmers and packers to facilitate hog depopulation,” including by “tell[ing] those producers where they should take . . . hogs to be depopulated.”¹¹⁰

APHIS’s authority encompasses the requested rulemaking. A decision to restrict the most environmentally harmful carcass disposal practices is consistent with APHIS’s commitment to promote and protect the integrity of the environment, its authority to manage animal health emergencies under the AHPA, its existing regulations prescribing certain disposal practices, and its stated intent to advise and assist with animal depopulation and disposal in the present instance. Similarly, a decision to provide the public with prompt notice about disposal is consistent with USDA’s information-sharing mission and APHIS’s existing regulations requiring record-keeping for information purposes.

Not only does APHIS have authority to enact the requested rules, the rules are consistent with the minimum federal supervision DOJ has identified as *necessary* to reduce the possibility that the meat industry’s coordinated depopulation and disposal efforts will violate antitrust laws. (Of course, the requested rules would not and could not insulate the industry from antitrust liability for anticompetitive activities.) As explained above, a handful of powerful corporations dominate meat production worldwide. The consolidation of power in the industry has long raised concerns, including in the context of the COVID-19 pandemic.¹¹¹ DOJ has indicated that it does not *currently* intend to challenge certain actions related to hog depopulation and disposal because producers “will be acting at [the] direction [of the NICC] in the context of a clearly defined federal program’ and in furtherance of that program,” and “their actions will be ‘at the direction

¹⁰⁷ *Id.* § 50.19.

¹⁰⁸ Delegating Authority Under the Defense Production Act With Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19, Exec. Order. No. 13,917, 85 Fed. Reg. 26,313, 26,314 (April 28, 2020).

¹⁰⁹ APHIS NICC Press Release.

¹¹⁰ Letter from the Honorable Makan Delrahim, Assistant Att’y General for Antitrust, U.S. Dep’t of Justice, to Martin M. Toto, Att’y, White & Case LLP, at 4 (May 15, 2020), <https://www.justice.gov/opa/press-release/file/1276971/download>.

¹¹¹ See Alex Gangitano, *Bipartisan Pair of Senators Request Antitrust Probe into Meatpacking Industry*, The Hill (Apr. 29, 2020), <https://thehill.com/homenews/senate/495197-hawley-baldwin-request-antitrust-investigation-into-meatpacking-industry>; see also David McLaughlin, *DOJ Subpoenas Meatpackers*, FarmProgress (June 5, 2020), <https://www.farmprogress.com/business/doj-subpoenas-meatpackers>.

and supervision of the USDA.”¹¹² By enacting the requested rules, APHIS will provide supervision necessary to reduce violations of antitrust laws and associated harm to consumers, while also helping to protect people and the environment.

B. APHIS’s Current Approach Creates an Urgent Need for the Requested Rule.

i. APHIS’s failure to prohibit the most environmentally harmful carcass disposal practices puts low-wealth communities and communities of color at greater risk of adverse health impacts.

Adverse outcomes from COVID-19 disproportionately burden rural communities, low wealth communities, and communities of color. These same communities also experience higher exposures to air and water pollution per capita, and bear a higher burden of disease. APHIS’s failure to prohibit the most environmentally harmful carcass disposal practices puts these communities at greater risk. The requested rules will benefit communities by immediately prohibiting the most harmful practices and ensuring that people living near carcass disposal locations have the information they need to protect themselves from additional adverse health impacts.

The people most burdened by environmental pollution are among those most vulnerable to COVID-19. People who live and work next to industrial facilities, for example, are more likely to suffer from chronic illnesses like diabetes and asthma.¹¹³ Individuals with underlying health conditions like diabetes and asthma are at greater risk of serious illness or death from COVID-19.¹¹⁴

Like other industries, industrial animal agriculture is a significant source of air and water pollution. Animals at concentrated animal feeding operations (CAFOs) produce lots of pollution, much of it coming from the tremendous quantities of fecal waste they generate every day, which contains harmful substances. CAFOs are a source of many water pollutants such as pathogenic bacteria including *E. coli* and *Cryptosporidium*, nitrogen, and phosphorous.¹¹⁵ People living near CAFOs are more likely to be exposed to infectious viral and bacterial agents. Concerning levels of antibiotic-resistant bacteria have been found in residential air samples downwind of

¹¹² Letter from the Honorable Makan Delrahim, Assistant Att’y General for Antitrust, U.S. Dep’t of Justice, to Martin M. Toto, Att’y, White & Case LLP, at 4 (May 15, 2020), <https://www.justice.gov/opa/press-release/file/1276971/download>.

¹¹³ See Env’tl. Justice Health All. et al., *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities* 2, 16–17 (2018), <https://new.comingcleaninc.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf>.

¹¹⁴ See Roni Caryn Rabin, *Coronavirus Threatens Americans with Underlying Conditions*, N.Y. Times (Mar. 12, 2020), <https://www.nytimes.com/2020/03/12/health/coronavirus-midlife-conditions.html>.

¹¹⁵ See, e.g. *Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality*, EPA, EPA 820-R-13-002, 5 (July 2013) (listing the health impacts of these pollutants); Comptroller & Auditor General, *The 2001 Outbreak of Foot and Mouth Disease*, Nat’l Audit Office (2002), <https://www.nao.org.uk/wp-content/uploads/2002/06/0102939.pdf>.

CAFOs.¹¹⁶ In one instance, researchers found nearly 140 strains of bacteria in air samples near a single CAFO, of which 121 strains were resistant to at least two different antibiotics.¹¹⁷

Air pollutants from CAFOs include ammonia (NH₃), hydrogen sulfide (H₂S), particulate matter (PM_{2.5} and PM₁₀) and bacteria.¹¹⁸ Exposure to these pollutants can induce respiratory problems and exacerbate pre-existing conditions, such as asthma.¹¹⁹ Residents in communities near CAFOs suffer from odor-induced headaches, runny noses, sore throats, excessive coughing, nausea, burning eyes, and other symptoms associated with CAFO air pollution.¹²⁰ In addition, air pollution from CAFOs is “strongly correlated” with infant mortality.¹²¹ Farmers and growers themselves often have a high incidence of respiratory related illnesses due to particulate matter,¹²² and additional pollution, such as that generated by carcass incineration, are also harmful to their health.

The health threats from this pollution have become extremely acute during the COVID-19 pandemic. Preliminary studies from across the world have consistently found higher mortality rates from COVID-19 in areas with more air pollution.¹²³ A Harvard University study examining more than 3,000 counties in the US found that even “a small increase in long-term exposure to PM_{2.5} leads to a large increase in the COVID-19 death rate.”¹²⁴ Experts hypothesize that the inflammation caused by pollution-related respiratory conditions causes severe responses to

¹¹⁶ See Shawn G. Gibbs et al., *Airborne Antibiotic Resistant and Nonresistant Bacteria and Fungi Recovered from Two Swine Herd Confined Animal Feeding Operations*, 1 J. Occupational & Env'tl. Hygiene 699 (2004).

¹¹⁷ See Amy Chapin et al., *Airborne Multidrug-Resistant Bacteria Isolated from a Concentrated Swine Feeding Operation*, 113 Env'tl. Health Persp. 137, 137-42 (2005).

¹¹⁸ See Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, Nat'l Ass'n of Local Bds. of Health (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

¹¹⁹ See Steve Wing et al., *Air Pollution and Odor in Communities near Industrial Swine Operations*, 116 Env'tl. Health Persp. 1362 (2008).

¹²⁰ *Id.*

¹²¹ Stacy Sneeringer, *Does Animal Feeding Operation Pollution Hurt Public Health? A National Longitudinal Study of Health Externalities Identified by Geographic Shifts in Livestock Production*, 91 Am. J. of Agric. Econ. 124, 130 (2009).

¹²² See Michael Greger & Gowri Koneswaran, *The Public Health Impacts of Concentrated Animal Feeding Operations on Local Communities*, 33 Family & Community Health 373 (2010), <https://www.humanesociety.org/sites/default/files/docs/public-impacts-factory-farms-on-communities.pdf>.

¹²³ See Alex Fox, *Air Pollution May Make COVID-19 Symptoms Worse*, Smithsonian Mag. (May 7, 2020), <https://www.smithsonianmag.com/smart-news/lockdown-clears-skies-research-links-air-pollution-pandemics-death-toll-180974814/>.

¹²⁴ Xiao Wu et al., *Exposure to Air Pollution and COVID-19 Mortality in the United States: A Nationwide Cross-sectional Study*, Harv. Uni. Dep't of Biostatistics (2020), <https://projects.iq.harvard.edu/covid-pm>.

COVID-19.¹²⁵ Importantly, beyond those direct disposal-related exposure pathways, research reveals that people living near industrial food animal production facilities often already have a baseline elevated risk for health conditions relevant to COVID-19 vulnerability.¹²⁶ One study of residents living near industrial hog operations in North Carolina, for example, found the residents to be at risk for several conditions that are known to be risk factors for severe COVID-19.¹²⁷ The study found that people living in close proximity to these facilities experience increased rates of death from diseases such as kidney disease, tuberculosis, and septicemia, even after controlling for socioeconomic and other factors such as smoking.¹²⁸ Even further, the same study established that African American and Indigenous residents are disproportionately represented in zip codes containing industrial hog operations.¹²⁹

Pollution burdens such as increased exposure to air pollution are not shared evenly throughout the U.S. population. Studies show that low wealth communities and communities of color shoulder a greater pollution burden than wealthier or whiter communities.¹³⁰ Research suggests that this may be a contributing factor to the racial disparities playing out in COVID-19 infection and mortality rates, where historically marginalized communities of color are suffering disproportionately from the impacts of COVID-19. The death rates from COVID-19, for example, are disproportionately higher for African Americans nationwide than for other racial groups, with one analysis showing a national death rate nearly double what would be representative based on population share.¹³¹ Hispanics/Latinos also make up a disproportionate percentage of total cases.¹³²

¹²⁵ See Alex Fox, *Air Pollution May Make COVID-19 Symptoms Worse*, Smithsonian Mag. (May 7, 2020), <https://www.smithsonianmag.com/smart-news/lockdown-clears-skies-research-links-air-pollution-pandemics-death-toll-180974814/>.

¹²⁶ See *Kidney Disease & COVID-19*, Nat'l Kidney Found., <https://www.kidney.org/coronavirus/kidney-disease-covid-19#does-kidney-disease-put-me-higher-risk>; see also *Q&A: Tuberculosis and COVID-19*, WHO (May 11, 2020), <https://www.who.int/news-room/q-a-detail/tuberculosis-and-the-covid-19-pandemic>; Marvin Zick, *Update: Can COVID-19 Cause Sepsis? Explaining the Relationship Between the Coronavirus Disease and Sepsis*, Global Sepsis All. (Apr. 7, 2020), <https://www.global-sepsis-alliance.org/news/2020/4/7/update-can-covid-19-cause-sepsis-explaining-the-relationship-between-the-coronavirus-disease-and-sepsis-cvd-novel-coronavirus>.

¹²⁷ See Julia Kravchenko et al., *Mortality and Health Outcomes in North Carolina Communities Located in Close Proximity to Hog Concentrated Animal Feeding Operations*, 79 N.C. Med. J. 278 (2018).

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ See Hiroko Tabuchi, *In the Shadows of America's Smokestacks, Virus Is One More Deadly Risk*, N.Y. Times (May 17, 2020), <https://www.nytimes.com/2020/05/17/climate/pollution-poverty-coronavirus.html>, see also Ihab Mikati, *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty*, 108 Am. J. Pub. Health 480 (2017).

¹³¹ See Maria Godoy & Daniel Wood, *What Do Coronavirus Racial Disparities Look Like State By State?*, NPR (May 30, 2020), <https://www.npr.org/sections/health-shots/2020/05/30/865413079/what-do-coronavirus-racial-disparities-look-like-state-by-state>.

¹³² *Id.*

Rural residents also face serious risks from the COVID-19 crisis. Rural areas face unique risks such as lower rates of employment in jobs where remote work is possible, more multi-generational households where those working outside the home can come into contact and spread the virus more easily to vulnerable members of the household, and reduced access to sick leave or adequate healthcare.¹³³ Indeed, while media attention largely has focused on the impact of COVID-19 in cities, the pandemic has spread rapidly throughout rural America where baseline health conditions are often lower than in other, more urban and sub-urban parts of the country.¹³⁴ There are also higher rates of smoking in rural areas,¹³⁵ and the population tends to be older,¹³⁶ both of which are contributing factors to more severe effects from COVID-19. Due to recent closures of hospitals and other essential services, rural areas are also experiencing reduced access to healthcare facilities.¹³⁷ Nearly two-thirds of rural hospitals do not have intensive care capabilities¹³⁸ and have dramatically fewer intensive care unit (ICU) beds and total number of beds overall.¹³⁹ Because of these limitations, many rural hospitals are ill-prepared to handle a large influx of high-need patients from a single outbreak, let alone several outbreaks in the area served by a single facility.

These risks are cumulative, and APHIS should ensure that the practices it allows do not exacerbate the risks faced by communities of color and lower wealth and rural communities or endanger their environment. In particular, because animals are typically killed and disposed of near their production sites—often large industrial animal feeding operations or CAFOs—

¹³³ See Eric Scigliano, *'It Really Is the Perfect Storm': Coronavirus Comes for Rural America*, Politico (Apr. 15, 2020), <https://www.politico.com/news/magazine/2020/04/15/coronavirus-rural-america-covid-19-186031>.

¹³⁴ See Ernest Moy, *Leading Causes of Death in Nonmetropolitan and Metropolitan Areas — United States, 1999–2014*, Ctrs. for Disease Control & Prevention, 66 Surveillance Summaries 1 (2017), <https://www.cdc.gov/mmwr/volumes/66/ss/ss6601a1.htm>; see also *About Rural Health*, Ctr. for Disease Control & Prevention, <https://www.cdc.gov/ruralhealth/about.html>.

¹³⁵ *Id.*

¹³⁶ See Amy Symens Smith & Edward Trevelyan, *The Older Population in Rural America: 2012-2016*, Population Division, U.S. Census Bureau (2019), <https://www.census.gov/content/dam/Census/newsroom/press-kits/2019/paa/paa-poster-older-population.pdf>.

¹³⁷ See Business Wire Press Release, *As Rural Hospital Closure Crisis Deepens, New Research from The Chartis Center for Rural Health Reveals Scope of Hospitals Vulnerable to Closure*, AP News (Feb. 11, 2020), <https://apnews.com/1f74397423df4cddafdc8beae37c7627>; see also The Chartis Ctr. for Rural Health, *The Rural Health Safety Net Under Pressure: Understanding the Potential Impact of COVID-19* (2020), https://www.chartis.com/resources/files/CCRH_Research_Update-Covid-19.pdf.

¹³⁸ See Noah Higgins-Dunn, *Small Towns and Rural Hospitals Brace for their Coronavirus Peak, Which Could be Weeks Away*, CNBC (May 3, 2020), <https://www.cnbc.com/2020/05/03/small-towns-and-rural-hospitals-brace-for-their-coronavirus-peak-which-could-be-weeks-away.html>.

¹³⁹ See The Chartis Ctr. for Rural Health, *The Rural Health Safety Net Under Pressure: Understanding the Potential Impact of COVID-19* (2020), https://www.chartis.com/resources/files/CCRH_Research_Update-Covid-19.pdf.

disposal generally takes place near to adjacent communities, and can pose substantial risks to those communities, as further discussed below.

Frontline public health workers are working overtime and facing enormous personal health risks; communities of color and low wealth communities, including communities neighboring industrial animal production operations like CAFOs are already disproportionately experiencing higher negative effects from COVID-19; and rural hospital closures combined with underlying population vulnerabilities such as a higher percentage of elderly residents has already put these communities at unimaginable risk. Mass disposal of farm animal mortalities, as overseen by APHIS, should not make these matters worse.

ii. Unlined burial poses serious risks to water quality and human health, especially in areas with high water tables and communities that predominantly rely on groundwater for their drinking water.

In addition to the preexisting health threats and vulnerabilities that rural communities, low wealth communities, and communities of color are already experiencing, including from COVID-19 itself, those same communities also now face health and safety risks due to mass depopulations of farm animal herds and flocks and disposal practices that currently allow for unlined mass burial events. As APHIS itself acknowledges, unlined burial is one of the most dangerous animal carcass disposal methods for human and environmental health (with the other being on-site incineration).¹⁴⁰ This is because of the significant threats burial poses to water quality and the safety of drinking water for surrounding communities—including because the burial of decaying animal carcasses produces and often leaches nitrate, ammonia, chloride, disease-causing agents, pharmaceuticals fed to the animals just before death,¹⁴¹ and other pollutants into the soil, with these compounds eventually finding their way into groundwater with long-lasting impacts to the surrounding environment.¹⁴² The risk of contaminated drinking water from animal carcass burial is of particular concern for rural communities, which disproportionately rely on groundwater as a drinking water source.¹⁴³

¹⁴⁰ See EIS at vii.

¹⁴¹ See Petition for Emergency Rulemaking from Animal Legal Defense Fund, et al., to Commissioner, U.S. Food And Drug Admin., Requesting the Suspension of Use of Ractopamine, at 12 (June 3, 2020), https://www.biologicaldiversity.org/programs/environmental_health/pdfs/2020-06-03-Ractopamine-Suspension-Petition--ALDF-FACT-Center.pdf (discussing that on-site burial of dead carcasses in unlined trenches and pits poses significant risks to the environment and public health).

¹⁴² See Hilda H. Hatzell, *Effects of Waste-disposal Practices on Ground-water Quality at Five Poultry (broiler) Farms in North-central Florida, 1992-93*, U.S. Dep't of the Interior, U.S. Geological Surv. (1995); see also Lee M. Myers et al., *Impact of Poultry Mortality pits on Farm Groundwater Quality*, Ga. Inst. of Tech. (1999); William F. Ritter & Anastasia E. M. Chirnside, *Impact of Dead Bird Disposal Pits on Ground-water Quality on the Delmarva Peninsula*, 53 *Bioresource Tech.* 105 (1995).

¹⁴³ See *Healthy Housing Reference Manual, Chapter 8: Rural Water Supplies and Water-Quality Issues*, Ctrs. for Disease Control & Prevention, <https://www.cdc.gov/nceh/publications/books/housing/cha08.htm>.

Burial sites may also lead to the spread of disease-causing agents from the buried carcasses. These may include anthrax and transmissible spongiform encephalopathy (TSE) agents, which are more likely to survive in the environment following burial of infected animals.¹⁴⁴ In field studies, burial of infected carcasses led to *Salmonella* contamination of surrounding soil within a week, and soil continued to test positive up to 15 weeks around the burial site.¹⁴⁵ In addition, because animal carcasses can carry antimicrobial-resistant pathogens from routine antibiotic use,¹⁴⁶ improper burial facilitates the movement of these pathogens into nearby communities and may lead to the further development of antibiotic-resistant bacteria.¹⁴⁷

Impacts from mass burial sites are additionally compounded by environmental and public health risks of manure management at poultry, swine and cattle CAFOs. For instance, *E. coli* and *Cryptosporidium* contamination in ground and surface waters may be affected by both animal manure and by burial of carcasses.¹⁴⁸

Areas with high water tables and sandy soils are at especially high risk of groundwater contamination, because these environments do not allow for the proper depth or cover of the burial pit, leading to leachates potentially entering drinking water sources. Extreme weather events such as hurricanes can raise the water table and increase risk of leachates entering surrounding soils and travelling through groundwater.¹⁴⁹ These risks are highly likely and relevant for current depopulation efforts as many CAFOs are located in coastal flood plains. Recent analysis of Hurricane Florence impacts estimates that at least 123 industrial hog operations and 40 poultry operations were located within 500 feet of the 100-year floodplain, and received 15+ inches of rain.¹⁵⁰ Burial practices at these operations are particularly likely to threaten the safety of drinking water sources for surrounding communities.

¹⁴⁴ See *Carcass Disposal: A Comprehensive Executive Summary*, Rev. Nat'l Agric. Biosecurity Ctr. Consortium, USDA APHIS Cooperative Agreement Project Carcass Disposal Working Grp. (2004), <http://www.newmoa.org/solidwaste/avian/CarcassDisposalExecutiveSummary.pdf>.

¹⁴⁵ See R. H. Davies, & C. Wray, *Seasonal Variations in the Isolation of Salmonella Typhimurium, Salmonella enteritidis, Bacillus cereus and Clostridium Perfringens from Environmental Samples*, 43 J. Veterinary Med. 119 (1996).

¹⁴⁶ See Ellen K. Silbergeld et al., *Industrial Food Animal Production, Antimicrobial Resistance, and Human Health*, 29 Ann. Rev. Pub. Health 151 (2008).

¹⁴⁷ See Julia R. Barrett, *Airborne Bacteria in CAFOs: Transfer of Resistance from Animals to Humans*, 113 Env'tl. Health Persp. A116 (2005); see also Mary J. Gilchrist, *The Potential Role of Concentrated Animal Feeding Operations in Infectious Disease Epidemics and Antibiotic Resistance*, 115 Env'tl. Health Persp. 313, 313-16 (2006).

¹⁴⁸ See Ceri L. Gwyther et al., *The Environmental and Biosecurity Characteristics of Livestock Carcass Disposal Methods: A Review*, 31 Waste Mgmt. 767 (2011).

¹⁴⁹ See Ning Ling et al., *Physically Based Assessment of Hurricane Surge Threat Under Climate Change*, 2 Nature Climate Change 462; (2012); see also EPA, *Exposure Assessment of Livestock Carcass Management Options During Natural Disasters*, at 7 (Feb. 2017) (Follow "URL/Downloads" hyperlink), https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NHSRC&TIMSType=&count=10000&dirEntryId=335655&searchAll=&showCriteria=2&simpleSearch=0.

¹⁵⁰ See Alex Formuzis, *Map: Florence Drenched Thousands of North Carolina CAFOs and Animal Waste Pits, Analysis of Sites Hit by Storm Reveals Potential Release of Billions of Gallons of Manure and Urine*,

Even in well-drained soils, complete decay in burial trenches can take upwards of two years, thus exposing the surrounding environment to disease-causing agents and contaminants for extended periods of time.¹⁵¹ Localized contamination may persist for a decade or more in wet soils with high seasonal water tables and slow groundwater flow.¹⁵²

Burial is recognized by multiple state agricultural extension agencies as having “the greatest number of environmental, public health and safety considerations” out of all dead livestock disposal methods.¹⁵³ For example, Virginia’s Department of Environmental Quality and Cooperative Extension consider on-site burial as the last recommended practice for “farmers/livestock owners who are not able to reuse, compost, or landfill their mortality per the hierarchy.”¹⁵⁴ Burial is placed last on the hierarchy of controls for depopulation efforts for the prevention of disease transmission,¹⁵⁵ and is ranked as the worst option among depopulation methods in terms of its impact on pollution and contamination of soil and vegetation.¹⁵⁶ For catastrophic mortality that may warrant mass burial sites, North Carolina Department of Agriculture similarly ranks “below ground burial” and “above ground burial” as the least recommended on-site options.¹⁵⁷

USDA’s Foreign Animal Disease Preparedness and Response Plan rates on-site burial as the least suitable among carcass management technologies based on public health, biosecurity, a failure to inactivate pathogens, and environmental sustainability concerns.¹⁵⁸ While the USDA decision tool recognizes these limitations, it fails to categorically exclude on-site burial as a

Envl. Working Grp., <https://www.ewg.org/release/map-florence-drenched-thousands-north-carolina-cafos-and-animal-waste-pits>.

¹⁵¹ See Qi Yuan et al., *Potential Water Quality Impacts Originating from Land Burial of Cattle Carcasses*, 456 – 457 *Sci. of the Total Env’t* 246 (2013).

¹⁵² See Rachel Freedman & Ron Fleming, *Water Quality Impacts of Burying Livestock Mortalities*, Presented to the Livestock Mortality Recycling Project Steering Committee, at 4 (2003), https://www.ridgetownc.com/research/documents/fleming_carcassburial.pdf.

¹⁵³ See *Livestock Mortalities And Disposal*, State Of Vt. Agency of Agric., Food & Markets, <https://agriculture.vermont.gov/animal-health-0/livestock-mortalities-and-disposal>; see also J. Craig Williams, *Livestock and Poultry Mortality Disposal in Pennsylvania*, Pennstate Extension (Updated Sept. 28, 2015), <https://extension.psu.edu/livestock-and-poultry-mortality-disposal-in-pennsylvania>.

¹⁵⁴ VirginiaTech et al., *On Farm Mortality Disposal Options for Livestock Producers*, at 4 (2009), https://www.deq.virginia.gov/Portals/0/DEQ/Water/VirginiaPollutionAbatement/AGMortalityGuidance/On_Farm_Mortality_Disposal_Options_for_Livestock_Producers_Pub_2909-1412.pdf.

¹⁵⁵ See J. M. Scudamore et al., *Carcass Disposal: Lessons from Great Britain Following the Foot and Mouth Disease Outbreaks of 2001*, 21 *Rev. Sci. Technique* 775 (2002); see also Simon J. T. Pollard et al., *Exposure Assessment of Carcass Disposal Options in the Event of a Notifiable Exotic Animal Disease: Application to Avian Influenza Virus*, 42 *Envtl. Sci. & Technology* 3145 (2008).

¹⁵⁶ See Gwyther et al., *supra* note 148.

¹⁵⁷ *NCDAC & CS Mass Animal Mortality Management Plan for Catastrophic Natural Disasters*, at 3 (2016), <https://files.nc.gov/ncdeq/Environmental+Assistance+and+Customer+Service/Storm+Debris/NCDACS-Mass-Animal-Mortality-Management-Plan-Oct-2016.pdf>.

¹⁵⁸ See U.S. Dep’t Agric. et al., *Emergency Carcass Management Desk Reference Guide, FAD PRoP Foreign Animal Disease Preparedness & Response Plan*, at 2-5 (2017), https://www.aphis.usda.gov/animal_health/carcass/docs/carcass-disposal-guide.pdf#page=12.

disposal management option due to potential counterbalancing rankings reflecting convenience. Additionally, despite recognizing these limitations and the availability of alternative technologies which are more protective of the environment, the USDA's carcass management decision cycle encourages users to consider on-site burial as an option if composting or open-air burning are not suitable.¹⁵⁹ Furthermore, specific guidance for on-site burial is inconsistent across state agencies, with varying degrees of protection against water contamination based on differing recommended burial depths and offsets from waterways.¹⁶⁰

iii. On-site incineration negatively impacts water quality and public health.

While unlined burial practices have the most immediate and direct impacts on water quality, animal carcass incineration practices also negatively impact water quality through downstream effects. Emissions of particulate matter, dioxins, poly-aromatic hydrocarbons (PAHs), and metals from incineration may be deposited on soil leading to further contamination and contributing to eventual runoff. PAHs emitted from burning enter aquatic systems and are toxic to aquatic animals. Hydrocarbons used in fuel for open-air burning also further contribute to groundwater contamination. These groundwater contaminants from animal burning practices pose risks to drinking water quality, particularly for rural communities who rely on groundwater sources. Several of these contaminants, including PAHs and dioxins, include carcinogenic compounds and are associated with a wide array of negative human health impacts.

In addition to direct impacts to water quality from incineration and deposition, disposal of resulting ash can contribute an additional pulse of pathogens, heavy metals, dioxins and furans to soil and waterways. Dioxins, furans and heavy metals from the ash can enter the food system through grazing animals or through human consumption of contaminated crops that can absorb the heavy metals and other pollutants released by improperly disposed ash.¹⁶¹ The large volumes of ash generated during mass depopulation efforts has made it challenging to accommodate proper disposal. For example, Virginia's Department of Environmental Quality reported 5000 tons of ash following incineration during the 2002 avian influenza outbreak.¹⁶² In the UK, 120,000 tons of ash were disposed at landfills following the 2001 foot and mouth disease outbreak.¹⁶³

In practice, pollutant concerns from depopulation may be in excess of those documented in the scientific literature due to inefficiencies in burning and the poorly-studied compounded

¹⁵⁹ *Id.* at 2-7.

¹⁶⁰ EIS at A-9.

¹⁶¹ See Gwyther et al., *supra* note 148.

¹⁶² See Gary A. Flory et al., *Evaluation of Poultry Carcass Disposal Methods Used During an Avian Influenza Outbreak in Virginia in 2002*, Va. Dept' of Env'tl. Quality & Va. Coop. Extension (2006), https://deq.virginia.gov/Portals/0/DEQ/Water/VirginiaPollutionAbatement/Evaluation_of_Poultry_Carcas_s_Disposal_Methods.pdf; see also *Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality*, EPA, EPA 820-R-13-002, at 5 (July 2013) (listing the health impacts of these pollutants).

¹⁶³ See Comptroller & Auditor General, *The 2001 Outbreak of Foot and Mouth Disease*, Nat'l Audit Office (2002), at 92, <https://www.nao.org.uk/wp-content/uploads/2002/06/0102939.pdf>.

impacts of multiple practices in the same area. For example, according to a report from the Virginia Department of Environmental Quality, due to challenges optimizing the number of carcasses incinerated at a given time during the avian influenza outbreak of 2002, there were issues with unintended decomposition and runoff of byproducts leading to contamination of waterways and algal growth. Thus, in addition to direct emissions of pollutants during burning, these practices also contributed to leachates contaminating waterways preceding incineration.

These problems may be exacerbated and compounded when burial and incineration co-occur in the same area. Neither incineration nor burial effectively deactivate prion diseases, suggesting that co-occurring practices can lead to accumulation of these disease agents. Both forms of disposal also contribute to nitrogen pollution, with the potential for deposition of N emissions from incineration compounding N in leachates from burial. Burial and burning similarly contribute to odor and air quality issues (carbon monoxide and nitrogen oxide emissions), which would compound with co-located practices.

iv. Unlined burial and on-site incineration threaten air quality, especially in areas with existing air quality issues.

Growing evidence indicates that high levels of air pollution are significantly exacerbating the conditions caused by the COVID-19 outbreak, and that long-term exposure to toxic air pollution is a large contributing factor to an increase in fatalities.¹⁶⁴ Furthermore, this pandemic is shining a light on the disproportionate and cumulative impacts pollution has on low wealth communities and communities of color, who are experiencing staggering rates of mortality from COVID-19. It is critical that APHIS do everything it can to ensure that farm animal mortality disposal practices do not further exacerbate these issues.

Animal carcass incineration practices including open-air burning and pyres, air curtain incineration, and fixed-facility incineration emit several toxic compounds, including carcinogens, and contribute to air and odor pollution. Each of these practices releases dioxins and furans, which are carcinogenic compounds associated with reproductive, developmental, and immune system problems, and which take several decades to decay.¹⁶⁵ These compounds can be inhaled in areas surrounding incineration or be consumed through contaminated water or food following their release during incineration.¹⁶⁶

Incineration also emits polychlorinated biphenyls (PCBs) and PAHs which include compounds that are carcinogenic.¹⁶⁷ PCB exposure is associated with negative impacts on

¹⁶⁴ See Xiao Wu et al., *Exposure to Air Pollution and COVID-19 Mortality in the United States: A Nationwide Cross-sectional Study*, Harv. Uni. Dep't of Biostatistics (2020), <https://projects.iq.harvard.edu/covid-pm>.

¹⁶⁵ See *Learn about Dioxin*, EPA, <https://www.epa.gov/dioxin/learn-about-dioxin>; see also EPA, *Dioxins and Furans*, <https://archive.epa.gov/epawaste/hazard/wastemin/web/pdf/dioxfura.pdf>.

¹⁶⁶ *Id.*

¹⁶⁷ See EPA, *Polycyclic Aromatic Hydrocarbons (PAHs)*, <https://www.epa.gov/sites/pro>

immune, reproductive and neurological system functions.¹⁶⁸ Similarly, long-term or chronic exposure to PAHs is associated with decreased immune function, cataracts, kidney and liver damage, respiratory problems, asthma-like symptoms, and lung function abnormalities.¹⁶⁹ Furthermore, PAH emissions undergo atmospheric reactions leading to the production of secondary compounds which can be more detrimental to human health than the original compounds.¹⁷⁰ These reactions are accelerated under high temperature and sunlight, making it particularly important to consider the full lifecycle of impacts of incineration emissions as current depopulation efforts continue through the summer.

Spikes in PAH emissions have been observed following emergency animal mortality events.¹⁷¹ Due to their contribution to breathing problems and decreased lung function,¹⁷² PAH and particulate matter emissions from burning may be of particular concern in the midst of the COVID-19 pandemic.

In addition to emissions of toxic compounds with direct human health impacts, animal carcass burning also negatively impacts environmental health. Nitrogen oxides from incineration contribute to greenhouse gas concentrations and generate smog and acid rain, with cascading impacts on environmental health.

Incineration is also a significant source of particulate matter emissions, with open-air burning through pyres producing approximately 3 pounds of particulate per pig, according to the National Pork Board.¹⁷³ In addition to the direct human health implications of particulate matter, which include heart attacks, premature death in people with lung disease, aggravated asthma,

[duction/files/2014-03/documents/pahs_factsheet_cdc_2013.pdf](#); see also *Polycyclic Aromatic Hydrocarbons (PAHs)*, Tox Town, <https://toxtown.nlm.nih.gov/chemicals-and-contaminants/polycyclic-aromatic-hydrocarbons-pahs>; *Polychlorinated Biphenyls (PCBs)*, *Learn about Polychlorinated Biphenyls (PCBs)*, EPA, <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs#healtheffects>.

¹⁶⁸ *Id.*

¹⁶⁹ See Hussein I. Abdel-Shafya & Mona S. M. Mansourb, *A Review on Polycyclic Aromatic Hydrocarbons: Source, Environmental Impact, Effect On Human Health and Remediation*, 25 Egyptian J. Petroleum 107 (2016); Albino Barraza-Villarreal et al., *Lung Function, Airway Inflammation, and Polycyclic Aromatic Hydrocarbons Exposure in Mexican Schoolchildren*, 56 J. Occupational Envtl. Med. 415 (2015).

¹⁷⁰ See K. Nikolaou et al., *Sources and Chemical Reactivity Of Polynuclear Aromatic Hydrocarbons in the Atmosphere — A Critical Review*, 32 Sci. of the Total Env't 103 (1984).

¹⁷¹ See Shui-Jen Chen, *Emission of Polycyclic Aromatic Hydrocarbons From Animal Carcass Incinerators*, 313 Sci. of the Total Env't 61 (2003).

¹⁷² See EPA, *Health and Environmental Effects of Particulate Matter*, <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm> (last visited June 28,2020); see also, EPA, *Polycyclic Aromatic Hydrocarbons Factsheet*, <https://www.epa.gov/north-birmingham-project/polycyclic-aromatic-hydrocarbons-pahs-fact-sheet> (last visited June 28,2020).

¹⁷³ *Pork Producer Webinar: Planning for Emergency Depopulation and Disposal*, Nat'l Pork Bd., (Apr. 26, 2020), <https://www.pork.org/public-health/what-you-need-to-know-about-covid-19/pork-industry-covid-19-webinars/>.

decreased lung function, and increased respiratory ailments,¹⁷⁴ particulate matter emissions can also contribute to haze. Rates of particulate matter emissions, as well as the release of metals, sulphur dioxide, and organic gases produced through burning, are not controlled during open-air burning, and are only partially mitigated under more controlled forms of incineration such as fixed-facility incineration.

Incineration activities also contribute to odor pollution. For example, air curtain incinerators operated by USDA used to dispose of livestock in Virginia during a 2002 avian influenza outbreak elicited odor complaints from residents according to a report by the Virginia Department of Environmental Quality.¹⁷⁵ These concerns would be expected to be exacerbated with open-air burning.

While incineration practices, and especially on-site practices such as open-air burning through pyres and air curtain incinerators, have the most immediate and direct impacts on air quality, other depopulation methods may also contribute to air pollution. Unlined burial of carcasses release gases associated with anaerobic decomposition, such as carbon dioxide, carbon monoxide, nitrogen oxides, sulfur dioxide, hydrogen chloride and fluoride, and methane.¹⁷⁶ These gases can build up and result in a rupture of the covering materials used during carcass disposal procedures.¹⁷⁷

C. APHIS Must Make Information about Carcass Disposal Publicly Available to Ensure Government Accountability.

Government accountability is necessary for maintaining properly functioning democratic government, which relies on public trust and is vital to the functioning of a democratic society. Public access to information, especially about health and safety, in turn, is essential to achieving public trust and accountability. The requested rules will help to ensure government accountability while also protecting people and the environment and advancing USDA and APHIS's own goals.

¹⁷⁴ See *Particulate Matter (PM) Pollution, Health and Environmental Effects of Particulate Matter (PM)*, EPA, <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm> (last visited June 25, 2020).

¹⁷⁵ See Gary A. Flory et al., *Evaluation of Poultry Carcass Disposal Methods Used During an Avian Influenza Outbreak in Virginia in 2002*, Va. Dept' of Env'tl. Quality & Va. Coop. Extension (2006), https://deq.virginia.gov/Portals/0/DEQ/Water/VirginiaPollutionAbatement/Evaluation_of_Poultry_Carcass_Disposal_Methods.pdf.

¹⁷⁶ See Bernard A. Engel et al., *Carcass Disposal: A Comprehensive Review, Chapter 14: Evaluating Environmental Impacts*, at 6 (2004), <https://krex.k-state.edu/dspace/bitstream/handle/2097/662/Chapter14.pdf?sequence=4#:~:text=Around%20and%20under%20the%20burial,may%20also%20contain%20biological%20agents.&text=For%20instance%2C%20open%20burning%20of,severe%20consequences%20on%20air%20quality>; see also Qi Yuan et al., *Methane and Carbon Dioxide Production From Simulated Anaerobic Degradation of Cattle Carcasses*, 32 *Waste Mgmt.* 939 (2012).

¹⁷⁷ *Id.*

USDA’s Office of Inspector General (USDA OIG) recently reiterated the importance of government accountability in the context of the COVID-19 pandemic.¹⁷⁸ Specifically, in a June 2020 report identifying the top pandemic-related challenges facing USDA, USDA OIG concluded that “USDA [n]eeds to [i]mprove [a]ccountability and [o]versight of its [p]rograms,” in part by producing records that are accurate, timely, and of good quality.¹⁷⁹ USDA OIG also concluded that “USDA [n]eeds to [s]trengthen [p]rogram [p]erformance and [p]erformance [m]easures,” because “[d]esigning, developing, and implementing programs that reliably achieve their intended results has been a recurring challenge for [USDA].”¹⁸⁰ The requested rules will help USDA improve accountability and strengthen performance, by ensuring that APHIS prohibits the most dangerous methods of carcass disposal and provides people with the information they need to stay safe. Thus, the requested rules are consistent with USDA’s internal goals for performance during the COVID-19 pandemic.

Maintaining meaningful government accountability is also crucial to protecting environmental health. Here, Petitioners are requesting that APHIS provide information related to the environmental implications of mass carcass disposal practices throughout the U.S. on an emergency basis as the COVID-19 crisis unfolds, and also to make this type of information available on a permanent basis for other emergency events in the future. APHIS’s role in assisting these mass carcass disposal practices and formalization of its long-held coordination role on behalf of the federal government through the NICC make the agency’s role as a hub for information an essential part of protecting environmental health through providing information to the public. APHIS is uniquely positioned to collect and provide the information around these practices that is needed to instruct current activities, protect environmental health from preventable pollution, and to inform future agency responses to emergency situations.

Government accountability is necessary to protect public health. Similar to the case of environmental health, the government is uniquely equipped to assess threats to public health and to assist the public in becoming aware of and responding to these threats. The duties of the Secretary of Agriculture include “improv[ing] the quality of life for people living in the rural and nonmetropolitan regions of the Nation.”¹⁸¹ The quality of life of residents of rural regions, as well as all members of the public at large, relies on the protections the government is supposed to provide, such as monitoring of industry activities and enforcement of regulations. APHIS’s mission has expanded over time to include “protection of public health and safety as well as natural resources,” which indicates that protection of the public health is not only relevant but

¹⁷⁸ See U.S. Dep’t Agric. Office of Inspector Gen., *USDA Management Challenges for Pandemic-Related Responsibilities* (2020), https://www.usda.gov/oig/webdocs/Pandemic-Related_MC.pdf.

¹⁷⁹ *Id.* at 1.

¹⁸⁰ *Id.* at 2.

¹⁸¹ 7 U.S.C. § 2204(a).

pertinent to APHIS's operations.¹⁸² The public should be able to hold APHIS accountable to ensure that APHIS is providing these protections.

Government accountability, especially through providing vital information, in efforts to protect the public from air, water, and waste pollution is particularly important to protect low wealth communities and communities of color, who are disproportionately impacted by these health hazards. Those communities deserve the same protection from harm as everyone else, but regardless, without the information Petitioners request made public, there is no way for the public to take protective actions to protect themselves. For example, people may choose to filter or test water wells located near burial sites, or those with respiratory conditions may take protective measures to avoid additional exposures from incineration. Other methods of euthanization carry other environmental health risks, and without information about the practices and disposal (as requested) the public is left unaware and unprotected. Even if APHIS takes the requested actions and bans the use federal funds for the identified actions, there are sites where animals have already been buried or harms have otherwise already been set in motion. In addition, the onset of flood, hurricane, and wildfire season underscore the need for a permanent rule to inform the public of the possible cumulative impacts of multiple events.

Finally, in addition to the direct benefits of transparency to informing agency action and supporting choices that benefit environmental health, studies show that additional oversight by agencies leads to more thoughtful behavior by potential polluters and reduces the amount of pollution being released.¹⁸³ If the government is not accountable for dutifully carrying out its policies, environmental health is likely to be harmed.

D. There is Good Cause to Publish the Requested Interim Final Rule Promptly, Concurrently with Public Notice and Comment, and to Make that Rule Effective Immediately.

Petitioners request that APHIS publish the requested interim final rule within 7 days, concurrently with public notice and comment, and make that rule effective immediately. APHIS has the authority to waive comment altogether; however, in the present situation, it is in the public interest to accept comment without delaying action. An agency may waive notice and comment “when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are

¹⁸² U.S. Dep't of Agric., *About APHIS* (June 2, 2020), <https://www.aphis.usda.gov/aphis/banner/aboutaphis>.

¹⁸³ See Louis W. Nadeau, *EPA Effectiveness at Reducing the Duration of Plant-Level Noncompliance*, 34 J. Envtl. Econ. & Mgmt. 54 (1997); see also James Alm & Jay Shimshack, *Environmental Enforcement and Compliance: Lessons from Pollution, Safety, and Tax Settings*, 10 *Found. & Trends in Microeconomics* 209 (2014); Wayne B. Gray & Jay P. Shimshack, *The Effectiveness of Environmental Monitoring and Enforcement: A Review of the Empirical Evidence*, 5 *Rev. of Envtl. Econ. & Pol'y* 3 (2011); Jay P. Shimshack, *The Economics of Environmental Monitoring and Enforcement*, 6 *Ann. Rev. Res. Econ.* 339 (2014).

impracticable, unnecessary, or contrary to the public interest.”¹⁸⁴ The good cause exception “excuses notice and comment in emergency situations, where delay could result in serious harm.”¹⁸⁵ Notice and comment is “impractical” in those situations “when an agency finds that due and timely execution of its functions would be impeded by the notice otherwise required,” such as when a rule “must be put in place immediately.”¹⁸⁶

There is good cause to waive notice and comment here. APHIS’s decision to advise and assist with the widespread depopulation and disposal of farm animals, without prohibiting the most dangerous methods of disposal or providing people with the information they need to stay safe, risks increasing the spread of disease and causing significant environmental pollution in the midst of a pandemic.¹⁸⁷ In addition, this decision has immediate consequences for public health. The disposal of farm animal carcasses is ongoing and the associated harm likely is unfolding in real time. Given the urgent need to prevent additional harm and to provide members of the public with notice of the risks they face, it is impracticable to delay publishing the requested interim final rule while soliciting comment.

Instead, APHIS should solicit public comment at the same time as it publishes the requested interim final rule and, if necessary, amend the rule as appropriate in response to comment. Providing advance notice and comment serves an important purpose, but given the extraordinary circumstances here, delaying issuance of the rule would be harmful. Public comment may generate additional suggestions that APHIS can incorporate into an amended rule to better protect people and the environment from the risks of pollution and disease. APHIS also has good cause to make this rule effective immediately upon publication.¹⁸⁸ Because of the “just-in-time” system in which the meat industry operates, and the industry’s perceived immediate need to depopulate animals, this rule must become effective without delay.

¹⁸⁴ 5 U.S.C. § 553(b)(B).

¹⁸⁵ *Chamber of Commerce v. SEC*, 443 F.3d 890, 908 (D.C. Cir. 2006) (citations omitted); *see also Riverbend Farms, Inc. v. Madigan*, 958 F.2d 1479, 1484 & n.2 (9th Cir. 1992) (“Emergencies, though not the only situations constituting good cause, are the most common”).

¹⁸⁶ *Util. Solid Waste Activities Grp. v. EPA*, 236 F.3d 749, 754 (D.C. Cir. 2001) (quoting U.S. Dep’t of Justice, *Attorney General’s Manual on the Administrative Procedure Act* 30–31 (1947)); *see also Nat’l Nutritional Foods Ass’n v. Kennedy*, 572 F.2d 377, 385 (2d Cir. 1978).

¹⁸⁷ *See Schneider v. Chertoff*, 450 F.3d 944, 949 & n.4 (9th Cir. 2006) (observing that the court “do[es] not doubt the necessity of immediate implementation” of a rule serving an “immediate public health need”).

¹⁸⁸ *See* 5 U.S.C. § 553(d)(3). While the standards for good cause under section 553(b) and 553(d) are not identical, *see also Am. Fed’n of Gov’t Emp., AFL-CIO v. Block*, 655 F.2d 1153, 1156 (D.C. Cir. 1981), they are related inquiries. *See also U.S. v. Gavrilovic*, 551 F.2d 1099, 1104 (8th Cir. 1977) (surveying the APA’s legislative history and finding “[l]egitimate grounds” for an immediate effective date to include “urgency of conditions coupled with demonstrated and unavoidable limitations of time,” and that an agency’s primary consideration is the “convenience or necessity of the people affected”) (citations and internal quotation marks omitted); *see also Schneider*, 450 F.3d at 949 & n.4.

This request is reasonable and achievable; agencies have demonstrated the ability to respond to the COVID-19 crisis with emergency rules. For example, on April 22, EPA published an interim final rule amending air emission monitoring quality assurance requirements for facilities unable to meet normal requirements during the pandemic.¹⁸⁹ That rule requires that facilities report to EPA information related to environmental practices, and it commits EPA to making the information it collects available publicly.¹⁹⁰ A similarly prompt response is appropriate here.

Petitioners request that APHIS respond to this Petition promptly. As 5 U.S.C. § 555(b) provides: “With due regard for the convenience and necessity of the parties or their representatives and within a reasonable time, each agency shall proceed to conclude a matter presented to it.”¹⁹¹ The requested interim final rule would impose a trivial burden or inconvenience on regulated entities. The rule is necessary in response to APHIS’s open invitation to companies to depopulate and dispose of farm animal carcasses without clear instructions about how to navigate the confusing patchwork of federal and state guidance to best protect people and the environment. And the requested rule is straightforward and uncomplicated. Under the circumstances, 7 days is a reasonable amount of time for APHIS to resolve this Petition.

VI. CONCLUSION

APHIS’s current approach to overseeing the depopulation and disposal of farm animals puts people and the environment at risk. APHIS acknowledges that unlined burial and on-site incineration pose significant threats to people and the environment. APHIS also acknowledges that the meat industry often defaults to these disposal practices during emergencies. However, APHIS has done nothing to prevent the industry from disposing of animals through unlined burial or on-site incineration during the COVID-19 pandemic, even as the industry kills tens of millions of animals. Neither has APHIS taken any action to ensure that people living near carcass disposal locations have the information they need to protect themselves, now and in the future. These failures put all people in jeopardy, especially those living in overburdened communities already at high risk from COVID-19. As the government agency that has assumed responsibility for managing animal carcasses during emergencies, APHIS can and must do better. Petitioners urge APHIS to enact the requested rules without delay.

¹⁸⁹ See Continuous Emission Monitoring; Quality-Assurance Requirements During the COVID-19 National Emergency, 85 Fed. Reg. 22,362-01 (Apr. 22, 2020), <https://www.govinfo.gov/content/pkg/FR-2020-04-22/pdf/FR-2020-04-22.pdf>.

¹⁹⁰ *Id.* at 22,371.

¹⁹¹ 5 U.S.C. § 555(b).

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ENCLOSURES