

Behind Closed Doors - The Fettered Lives of Farm Animals:
Deficits of Legal Protection Afforded to Farm Animals In Natural Disasters
Daria Bednarczyk
Vermont Law School

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*“Man serves the interests of no creature except himself.”*¹
- George Orwell, *Animal Farm*

I. INTRODUCTION

“Wherever you stand on eating animals, I think we agree that making their lives hell is too high a price for cheap food.”² North Carolina is home to many Concentrated Animal Feeding Operations (CAFOs), several of which are located on a 100-year floodplain and therefore perpetually at risk of flooding when hurricane season strikes.³ Due to exemptions protecting CAFOs from legal accountability, these large-scale farms are not required to have contingency plans for their animals in the event of natural disaster or an extreme weather event.⁴ A grave consequence of CAFOs housing countless animals in tight quarters on land prone to flooding is the preventable death of animals living on these enormous farms.

Climate change is on the rise and the intensity and duration of hurricanes will continue to escalate.⁵ North Carolina has already felt the effects of climate change with increased “warmer, wetter, and more humid days.”⁶ Annual precipitation is increasing, with 2018 being the wettest documented year in the past century.⁷ If laws and regulations concerning animals raised on CAFOs do not improve, then the number of animals impacted by storms will increase.

Animals are left defenseless when disasters strike because of severe overcrowding due to the size of factory farms. This paper will examine the vulnerability of farmed animals confined

¹ George Orwell, *Animal Farm* 21 (1946).

² Paul Solotaroff, *Animal Cruelty Is the Price We Pay for Cheap Meat*, ROLLING STONE (Dec. 10, 2013), <https://www.rollingstone.com/interactive/feature-belly-beast-meat-factory-farms-animal-activists/#>.

³ The Atlantic hurricane season runs from June 1st through November 30th. *Atlantic and Eastern Pacific Hurricane Season Normal Activity*, NOAA, <https://www.nhc.noaa.gov/climo/> (visited May 17, 2022).

⁴ Tala DiBenedetto, *Encouraging Risky CAFOs in the Age of Climate Change*, FARM BILL LAW ENTER. (Oct. 4, 2019), <http://www.farmbilllaw.org/2019/10/04/cafosandclimate/>.

⁵ *Climate Change Is Making Hurricanes Stronger, Researchers Find*, TIMES (May 18, 2020), <https://www.nytimes.com/2020/05/18/climate/climate-changes-hurricane-intensity.html>.

⁶ *Climate Change in North Carolina*, N.C. CLIMATE OFFICE, <https://climate.ncsu.edu/learn/climate-change/> (visited Apr. 14, 2022).

⁷ *Id.*

in CAFOs in North Carolina due to the state's considerable number of CAFOs and the states' susceptibility to hurricanes. With climate change and epic storms on the rise, farm animals will continue to be the silent and forgotten victims of hurricanes, accounting for the largest percentage of animal fatalities during storms – that is, if nothing changes regarding their protection.

As a nation, we rely greatly on our country's animal advocates to enact changes for the welfare of farm animals, which are long overdue. This paper argues that farm animals are the least protected beings in the country on the federal, state, and local level. If CAFOs are not held accountable for the lack of emergency planning and their mistreatment of animals, then CAFOs will continue to fly under the radar because of agricultural exceptionalism.⁸

Farm animals are especially vulnerable in extreme weather events, and without protections in place to safeguard them from harm, then livestock will continue to be overlooked as nothing more than commodities during hurricane season. This paper aims to inform new animal advocates of the abuse and deficits of legal protection afforded to farm animals on a daily basis. If we as advocates do not demand that CAFOs be held accountable for the suffering they cause animals to produce cheap food products, then farm animals will continue to be the most underserved and vulnerable victims at the hands of the humans who exploit them.

This paper will begin with an overview of farming practices before introducing the reader to the American CAFO. It will then explain the harmful practices that occur on factory farms followed by a depiction of CAFOs in North Carolina. The paper next will explain how climate

⁸ Agricultural exceptionalism is “a belief system that fuels a range of exemptions or laws protecting agriculture from the purview of the public, including in the areas of environmental law, animal law, and property law...but also in trade law, employment law, and many other areas.”

Charlotte E. Blattner & Odile Ammann, *Agricultural Exceptionalism and Industrial Animal Food Production: Exploring the Human Rights Nexus*. 15(2) JOURNAL OF FOOD LAW & POLICY 92 (2020).
<https://scholarworks.uark.edu/jflp/vol15/iss2/9>.

change puts farm animals' lives at risk due to a lack of intervention that would protect their lives when disasters strike. The paper will then present the dangers of factory farms as they relate to both humans and animals, followed by a discussion of farm protection and storm recovery succeeding a storm. This paper will conclude with current legislation and suggestions for moving forward to improve the welfare of farm animals as the earth's climate changes.

II. BIG AG: CAFOS AND THEIR HARMFUL PRACTICES

a. DEFINING CAFOS

Today, when most people hear the word "farm," they picture cows grazing on lush green grass, roosters crowing at the crack of dawn, big red barns filled with happy animals, and green tractors plowing fields. However, this imagery is far from the reality of what today's farms truly look like.

Beginning in the mid-1900s, most farm animals raised for human consumption were being housed at "concentrated animal feeding operations" (CAFOs).⁹ Other names for these farming operations include: animal factories, factory farms, hog motels, industrial farms, mega farms, and poop factories.¹⁰

Industrial agricultural facilities have altered the conventions of agribusiness, causing concern for many U.S. citizens.¹¹

Agribusiness itself claims that happy animals produce higher quality products.¹²

California's 'Real California Milk' commercials claim that "[g]reat cheese comes from happy

⁹ JoAnn Burkholder, et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, 115(2) ENV'T HEALTH PERSPECTIVES 308 (Feb. 1, 2007) <https://doi.org/10.1289/ehp.8839>.

¹⁰ *Why Are CAFOs Bad?*, SIERRA CLUB (Nov. 15, 2021), <https://www.sierraclub.org/michigan/why-are-cafos-bad#water>.

¹¹ Brodt, S., et al. (2011). *Sustainable Agriculture* NATURE NEWS, <https://www.nature.com/scitable/knowledge/library/sustainable-agriculture-23562787/>.

¹² *Do Happier Cows Make for Happier Consumers?*, FORBES (Apr. 3, 2019), <https://www.forbes.com/sites/charlesrtaylor/2019/04/03/do-happier-cows-make-for-happier-consumers/?sh=74861e06100c>.

cows. Happy cows come from California.”¹³ Animals confined on CAFOs don’t get to live in sunshine, graze on pasture, or take part in natural behaviors. Animals on CAFOs live miserably, confined in tight, dank quarters, exploited for human consumption on a colossal scale.

Dr. Temple Grandin, an animal behavior scientist provides “as every butcher knows, stress in the last hours and minutes causes serious damage to meat. But there’s growing evidence that animals who have lived calm and natural lives, kept out of trucks and away from goads, will also provide much better eating.”¹⁴ Animal advocates are working tirelessly to expose what life on factory farms is like with the hopes of improving their handling and welfare when on the farm.

b. THE HORROR AND HARM OF CAFO PRACTICES

The United States has an estimated population of 332 million, and rising.¹⁵ A growing population is increasing the demand for eggs, meat, and dairy products.¹⁶ Mega farms have replaced historically smaller, family-owned farms to keep up with societal pressure and an elastic market. As defined by Merriam-Webster, factory farming is “a farm on which large numbers of livestock are raised indoors in conditions intended to maximize production at minimal cost.”¹⁷

¹³ *Judge Rejects 'Happy Cow' Lawsuit*, LOS ANGELES TIMES (Mar. 27, 2003), <https://www.latimes.com/archives/la-xpm-2003-mar-27-fi-cows27-story.html>.

People for the Ethical Treatment of Animals (PETA) filed several lawsuits over this campaign for misrepresentation of how Real California Milk’s cows are treated. *People for Ethical Treatment of Animals, Inc. v. California Milk Producers Advisory Bd.*, 125 Cal.App.4th 871, 22 Cal. Rptr. 3d 900 (Cal. Ct. App. 2005).

¹⁴ Alex Renton, *Happy Meat*, THE GUARDIAN (Oct. 19, 2007), <https://www.theguardian.com/lifeandstyle/wordofmouth/2007/oct/19/happymeat>.

¹⁵ *U.S. and World Population Clock*, U.S. CENSUS BUREAU, <https://www.census.gov/popclock/> (visited June 5, 2022).

¹⁶ *U.S. Population Estimated at 332,403,650 on Jan. 1, 2022*, U.S. DEP’T OF COM. (Jan. 6, 2022), <https://www.commerce.gov/news/blog/2022/01/us-population-estimated-332403650-jan-1-2022>.

¹⁷ *Factory Farm Definition*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/factory%20farm> (visited June 5, 2022).

Animals on factory farms are kept indoors for the duration of their lives, spending a minimum of forty-five days or more in intensive confinement.¹⁸

Mega farms are unremittingly putting small family farms out of business. As Earl Butz, Secretary of Agriculture under former President Nixon in the 1970s remarked to small family farmers, “get big or get out.”¹⁹ An identical sentiment was echoed by Sonny Perdue, agriculture Secretary under former President Trump at the 2019 World Dairy Expo in Wisconsin where he stated, “In America the big get bigger and the small go out.”²⁰ The mentality to continuously increase the size of American farms will put an end to any remaining emblematic family farms. If nothing is done to regulate the expansion of factory farms, large-ag will inevitably take over and monopolize the agricultural industry with their harmful and unsustainable practices. With continued persistence, animal and environmental activists can advocate for stricter regulations of CAFOs to prevent factory farms from dominating the agricultural industry.

CAFOs implement many questionable practices considered customary, however, if the same procedures were performed on companion animals, they would be branded as animal cruelty. Problematic practices occurring on factory farms include: thumping of piglets for size control,²¹ force feeding ducks and geese for foie gras,²² tail docking pigs, sheep, and dairy

¹⁸ *Animal Feeding Operations (AFOs)*, EPA, <https://www.epa.gov/npdcs/animal-feeding-operations-afos> (visited Mar. 6, 2022).

¹⁹ Alana Semuels, *American Farmers Are in Crisis. Here's Why*, TIME (Nov. 20, 2019), <https://time.com/5736789/small-american-farmers-debt-crisis-extinction/>.

²⁰ *Sonny Perdue to Farmers: Go Big or Just Go*, STAR TRIBUNE (Oct. 4, 2019), <https://www.startribune.com/sonny-perdue-to-farmers-go-big-or-just-go/562216182/>.

²¹ To remove non-viable runts and promote size uniformity.

Ari Solomon, *This Little Piggy Got Slammed Against Concrete* HUFFPOST (Feb. 25, 2013), https://www.huffpost.com/entry/this-little-piggy-got-sla_b_2294769.

²² This is done to fatten duck and geese livers for foie gras.

Welfare Implications of Foie Gras Production, AM. VETERINARY MED. ASS'N (May 7, 2014), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-foie-gras-production>.

cows,²³ teeth clipping piglets,²⁴ dehorning and disbudding cattle,²⁵ castration,²⁶ debeaking,²⁷ maceration of unneeded male chicks,²⁸ extreme confinement,²⁹ breaking up families,³⁰ cannibalism,³¹ and poultry who are unintentionally boiled alive as slaughter lines speed up.³²

Shockingly, the aforementioned practices are not the extent of the atrocities often taking place at CAFOs. Many of these practices are often overlooked, and the farms regularly pass inspection standards; allowing them to continue operations as usual.

The intensive confinement at CAFOs prevents animals from freely moving around and prohibits them from participating in normal behaviors. For example, egg-laying hens are commonly confined in battery cages. These are “small wire enclosures crowding up to ten hens in single units that are frequently stacked in egg production.”³³ This is an inherently cruel practice where birds are extremely restricted and unable to spread their wings without hitting the

²³ Mhairi A. Sutherland & Cassandra B. Tucker, *The Long and Short of it: A Review of Tail Docking in Farm Animals*, 135 APPLIED ANIMAL BEHAVIOUR SCI., 179–191 (2011).

²⁴ *Welfare Implications of Teeth Clipping, Tail Docking and Permanent Identification of Piglets*, AM. VETERINARY MED. ASS'N (July 15, 2014), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-teeth-clipping-tail-docking-and-permanent-identification-piglets>.

²⁵ *Welfare Implications of Dehorning and Disbudding Cattle*, AM. VETERINARY MED. ASS'N (July 15, 2014), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-dehorning-and-disbudding-cattle>.

²⁶ *Welfare Implications of Castration of Cattle*, AM. VETERINARY MED. ASS'N (July 15, 2014), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-castration-cattle>.

²⁷ *Welfare Implications of Beak Trimming*, AM. VETERINARY MED. ASS'N (Feb. 7, 2010), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-beak-trimming>.

²⁸ “[O]ne of the most jaw-dropping, least-known facts of American food production: to keep the egg industry running efficiently, hatcheries kill hundreds of millions of newborn male chicks every year.” *By 2020, Male Chicks May Avoid Death By Grinder*, NAT'L GEOGRAPHIC (June 13, 2016), <https://www.nationalgeographic.com/culture/article/by-2020--male-chicks-could-avoid-death-by-grinder>.

²⁹ Extreme confinement can lead to spread of diseases among cage-mates. *Inhumane Practices on Factory Farms*, ANIMAL WELFARE INST., <https://awionline.org/content/inhumane-practices-factory-farms> (visited June 5, 2022).

³⁰ Early separation of calves from their mothers.

Cattle, ANIMAL WELFARE INST., <https://awionline.org/content/cattle> (visited June 5, 2022).

³¹ *US Hogs Fed Pig Remains, Manure to Fend Off Deadly Virus*, FOX NEWS (Dec. 14, 2015), <https://www.foxnews.com/health/us-hogs-fed-pig-remains-manure-to-fend-off-deadly-virus-return>.

³² *Chickens, Turkeys Being Boiled Alive As Processing Lines Speed Up*, DAILY NEWS (Oct. 30, 2013), <https://www.dailynews.com/2013/10/30/chickens-turkeys-being-boiled-alive-as-processing-lines-speed-up/>.

³³ *Welfare Concerns Associated with Intensive Farm Animal Confinement Methods: Battery Cages, Gestation Crates, and Veal Crates*, at 1, HUMANE SOC'Y VETERINARY MED. ASS'N., https://www.hsvma.org/assets/pdfs/hsvma_veterinary_report_welfare_concerns_intensive_confinement_methods.pdf (visited June 1, 2022).

cage or their cage-mates.³⁴ Pregnant sows are also frequently restricted in gestation crates. These are enclosures just slightly larger than the sow itself “to allow the sows to lie on their side without their udders protruding from the stall,” and preventing her from ever being able to turn around.³⁵ Similarly, veal calves are prematurely taken from their mothers and often tethered and confined alone in small crates before slaughter.³⁶

To accommodate intensive confinement, CAFOs regularly perform “painful mutilations like cutting off the horns of cattle, cutting off the beaks of chickens, and docking the tails of sheep, pigs, and dairy cattle”³⁷ to prevent the animals from harming themselves and one another. Many of these mutilations are very often done without any anesthetic or pain relief.³⁸

Lack of transparency about the atrocities that occur behind farm doors has concerned many Americans. Fearing exposure, mega farms have become tight-lipped and guarded. This has forced animal activists to go undercover to expose the barbarisms occurring in big-ag. In response to undercover investigators, many states have imposed “Ag-Gag” laws. These laws aim to silence whistleblowers by punishing them for documenting animal cruelty occurring on factory farms.³⁹ These laws not only keep citizens in the dark about modern-day farming practices, but they also prevent consumers from knowing the truth about the products they are purchasing and consuming. Many meat and dairy producers green-wash and humane-wash

³⁴ *Everything You Should Know About Battery Cages*, THE HUMANE LEAGUE (Dec. 3, 2020), <https://thehumaneleague.org/article/battery-cages>.

³⁵ *Welfare Implications of Gestation Sow Housing*, AM. VETERINARY MED. ASS’N (Nov. 19, 2015), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-gestation-sow-housing>.

³⁶ *Welfare Implications of Veal Calf Husbandry*, AM. VETERINARY MED. ASS’N (Oct. 13, 2008), <https://www.avma.org/resources-tools/literature-reviews/welfare-implications-veal-calf-husbandry>.

³⁷ *Inhumane Practices on Factory Farms*, ANIMAL WELFARE INST., <https://awionline.org/content/inhumane-practices-factory-farms> (visited May 8, 2022).

³⁸ Jason K. Ahola, *Animal Welfare Implications of Beef Industry Practices Including Dehorning, Castration, and Branding*, at 59 (Nov. 2015), UNI. OF NEB., <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1325&context=rangebeefcowsymp>.

³⁹ *Ag-Gag Laws - Why Are Ag-Gag Laws Harmful?*, ANIMAL LEGAL DEF. FUND (Sept. 13, 2021), <https://aldf.org/issue/ag-gag/>.

consumers into believing that products they are purchasing are more sustainable and environmentally sound than they are.⁴⁰

A 2013 Rolling Stone article titled “In the Belly of the Beast” discusses the experiences of undercover animal activists on factory farms. The article reveals the brutalities that farm animals face on a daily basis. The following quote articulates the reality of factory farming:

In its scrutiny of Big Meat – a cartel of corporations that have swallowed family farms, moved the animals indoors to prison-style plants in the middle of rural nowhere, far from the gaze of nervous consumers, and bred their livestock to and past exhaustion – the Humane Society (and outfits like PETA and Mercy for Animals) is performing a service that the federal government can’t, or won’t, render: keeping an eye on the way American meat is grown. That’s rightfully the job of the U.S. Department of Agriculture, but the agency is so short-staffed that it typically only sends inspectors out to slaughterhouses, where they check a small sample of pigs, cows and sheep before they’re put to death. That hour before her end is usually the only time a pig sees a government rep; from the moment she’s born, she’s on her own, spending four or five years in a tiny crate and kept perpetually pregnant and made sick from breathing in her own waste while fed food packed with growth-promoting drugs, and sometimes even garbage.⁴¹

c. CONTENTIOUS CONSEQUENCES OF CAFOs

The presence of CAFOs has generated considerable indignation in citizens throughout the U.S. and overseas.⁴² CAFOs adversely impact animals, humans, and the environment by requiring massive amounts of grain and water to feed and hydrate their animals. The water and feed needed to satiate the animals has led to deforestation⁴³ and added pressure on the U.S. water

⁴⁰ *Lawsuits Over 'Misleading' Food Labels Surge as Groups Cite Lax U.S. Oversight*, TIMES, <https://www.nytimes.com/2021/09/07/science/food-labels-lawsuits.html> (visited May 19, 2022).

⁴¹ Slotaroff, *supra* note 2.

⁴² *Factory Farming in China and the Developing World*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/explore/savingearth/factory-farming-in-china-and-the-developing-world-a-growing-threat> (visited June 1, 2022).

⁴³ Paige Stanley et al., CAFOs and the Farm Bill, (Berkeley), <https://food.berkeley.edu/wp-content/uploads/2018/08/CAFO-presentation-FINAL.compressed.pdf> (visited June 1, 2022).

supply.⁴⁴ It has been found that it takes 1,800 gallons of water per pound of beef produced,⁴⁵ which is arguably unsustainable.

CAFOs are also detested for the health risks they impose on the communities surrounding them.⁴⁶ In areas nearby factory farms, water, soil, and air quality is compromised by deforestation, eutrophication, soil erosion, and greenhouse gas emissions.⁴⁷ High density farming produces immense amounts of animal manure — it is believed that CAFOs produce as much as five hundred million tons of manure each year.⁴⁸ This amount of waste is challenging to dispose of, and as a result, CAFOs have turned to storing manure on their properties.

Factory farms are categorized by how they store their waste, with three categories of waste storage. Poultry farms use “dry waste systems”⁴⁹ where the waste drops from the animal cages and onto the floor before being scraped out of the building before getting transferred to composting or storage sites.⁵⁰ On feedlot farms, animals are kept outside where their waste collects on the ground where it is likely to seep into the soil and eventually make its way into waterways. The third type of CAFO is cow and hog farms where manure is stored in “lagoons”.⁵¹ These are man-made earthen ponds filled with animal feces that gets diluted by “building

⁴⁴ *Water Use in Confined Animal Feeding Operations (CAFOs) in Minnesota: Who's Keeping Track?* (2019). Graduate Student Theses, Dissertations, & Professional Papers. 11365.

<https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=12430&context=etd>.

⁴⁵ *The Water Footprint of Beef: Industrial vs. Pasture-Raised*, WATER FOOTPRINT CALCULATOR (Nov. 30, 2018), <https://www.watercalculator.org/footprint/water-footprint-beef-industrial-pasture/>.

⁴⁶ Jon Devine & Valerie Baron, *CAFOs: What We Don't Know Is Hurting Us*, NRDC (Sept. 23, 2019), <https://www.nrdc.org/resources/cafos-what-we-dont-know-hurting-us>.

⁴⁷ Burkholder, et al., *supra* note 9.

⁴⁸ *Coalition Sues EPA for Failing to Address Factory Farm Air Pollution*, THE HUMANE SOC'Y OF THE U.S. (Jan. 28, 2015), <https://www.humanesociety.org/news/coalition-sues-epa-failing-address-factory-farm-air-pollution>.

⁴⁹ Burkholder, et al., *supra* note 9.

⁵⁰ *Id.*

⁵¹ Robbin Marks, *Cesspools of Shame*, NRDC (July, 2001), <https://www.nrdc.org/sites/default/files/cesspools.pdf>.

washwater, rainfall, water wastage, and surface runoff.”⁵² These manure systems negatively impact the surrounding environment.

d. DEATH BY MANURE PIT

Death by manure lagoons is not uncommon. In August of 2021, three brothers in Ohio died after being overcome by toxic fumes emitting from their family farms manure pit.⁵³ A similar instance occurred in 2015, in the state of Iowa, when father and son farmers died from exposure to noxious fumes emanating from their hog farm’s manure pit – as mentioned in the news article, this was the second father and son duo to die from the inhalation of toxic manure pit gases that month.⁵⁴ Another incident occurred in 2007 when four family members and a farm worker were killed by the emissions emanating from a manure pit in Shenandoah Valley, Virginia.⁵⁵ These examples demonstrate the real dangers of manure lagoons.

As stated by water quality and manure management professor at Iowa State University, Daniel Andersen, “it takes just a few seconds for a routine repair job to turn deadly when working around the pits.”⁵⁶ Such deaths are an indicator of how dangerous working on large scale farms is. It is unsettling to think of how many undocumented injuries occur on factory farms with most employees on CAFOs being migrant workers, too afraid to speak up about hazardous working conditions in fear of retaliation, or deportation.⁵⁷

⁵² *Anaerobic Lagoon*, CLIMATE POLICY WATCHER (Feb. 24, 2022), <https://www.climate-policy-watcher.org/industrial-wastes/anaerobic-lagoon.html>.

⁵³ *3 Brothers Die After Passing Out from Fumes in Manure Pit*, KKTU (Aug. 13, 2021), <https://www.kktv.com/2021/08/13/3-brothers-die-after-passing-out-fumes-manure-pit/>.

⁵⁴ Grant Rodgers & Donnelle Eller, *Iowa Father, Son Die from Manure Pit Fumes*, USA TODAY (July 28, 2015), <https://www.usatoday.com/story/news/nation/2015/07/28/iowa-father-son-die-manure-pit-fumes/30811157/>.

⁵⁵ *Cleaning Up the Air, Down On The Farm*, THE PEW CHARITABLE TRUSTS (Mar. 21, 2008), <https://www.pewtrusts.org/en/about/news-room/opinion/2008/03/21/cleaning-up-the-air-down-on-the-farm>.

⁵⁶ *4 Deaths in Midwest Manure Pits in One Month*, SAFETY NEWS ALERT (July 30, 2015), <https://www.safetynewsalert.com/4-deaths-in-midwest-manure-pits-in-one-month/>.

⁵⁷ Roman Keeney, *Community Impacts of CAFOs: Labor Markets*, at 2, <https://www.extension.purdue.edu/extmedia/ID/ID-362-W.pdf> (visited June 1, 2022).

e. WATER QUALITY

Waste from factory farms contains harmful materials including ammonia, heavy metals, antibiotic-resistant bacteria, chemicals used to care for livestock, hormones, milkhouse waste, silage leachate, and various cleaning agents.⁵⁸ All of these contaminants degrade and pollute the local water supply, soil quality, and air quality, ultimately contaminating the whole ecosystem.⁵⁹

High levels of phosphorous and nitrogen in CAFO waste often lead to algal outbreaks called Harmful Algal Blooms (HABs) in surrounding bodies of water.⁶⁰ HABs occur when nutrients collect in excessive amounts, leading to an overgrowth of algae called cyanobacteria. These bacteria produce toxins that negatively impact human health and the environment. For example, as stated by the Environmental Protection Agency (EPA), “[t]he overgrowth of algae consumes oxygen and blocks sunlight from underwater plants. When the algae eventually die, the oxygen in the water is consumed. The lack of oxygen makes it impossible for aquatic life to survive.”⁶¹ Depleted oxygen leads to dead zones, killing considerable amounts of fish and harming wildlife.⁶²

Nitrates from factory farm runoff also impact local drinking water, leading to serious health problems. In 1962, a federal standard was set for nitrates in drinking water at 10 milligrams per liter.⁶³ This standard was put in place to prevent methemoglobinemia or “blue

⁵⁸ Burkholder, et al., *supra* note 9.

⁵⁹ Wynne Davis, *Overflowing Hog Lagoons Raise Environmental Concerns in North Carolina*, NPR (Sept. 22, 2018), <https://www.npr.org/2018/09/22/650698240/hurricane-s-aftermath-floods-hog-lagoons-in-north-carolina>.

⁶⁰ Valerie Baron, *Big Ag Is Hiding in Plain Sight and It's Making Us Sick*, NRDC (Sept. 23, 2019), <https://www.nrdc.org/experts/valerie-baron/factory-farms-what-we-dont-know-hurting-communities>.

⁶¹ *The Effects: Dead Zones and Harmful Algal Blooms*, EPA, <https://www.epa.gov/nutrientpollution/effects-dead-zones-and-harmful-algal-blooms> (visited May 6, 2022).

⁶² Zachary Haslick, *Harmful Algal Blooms*, NRDC (June 1, 2021), <https://www.nrdc.org/harmful-algal-blooms>.

⁶³ Donnelle Eller, *Nitrates in Drinking Water May Be Tied to 300 Cases of Cancer in Iowa Each Year, Study Shows*, DES MOINES REG. (June 27, 2019), <https://www.desmoinesregister.com/story/money/agriculture/2019/06/20/nitrates-iowas-drinking-water-may-tied-cancer-study-says/1487951001/>.

baby syndrome,” a potentially deadly illness where babies’ red blood cells are unable to carry oxygen, making babies sick.⁶⁴ Drinking water exhibiting elevated levels of nitrates can also result in various forms of cancers in animals and humans.⁶⁵ Therefore, in areas where nitrate levels in water may be excessive following the breach of CAFOs waste pits, individuals should avoid drinking tap water, eating foods requiring water, and avoid making baby formula with contaminated water. A 2016 study by the United States Geological Survey found that nitrate levels near agricultural operations in the North Carolina coastal plain commonly exceed 10 mg/L⁶⁶ (which exceeds the federal standard).⁶⁷ The USGS documented that the higher levels of nitrate were primarily found in shallow groundwater that supplies more than fifty percent of North Carolinians’ drinking water source.⁶⁸

f. SOIL QUALITY

When animal waste is spread on a land area, the contaminants in the manure can overwhelm the environment and lead to soil erosion. Manure has a high salt content and when it is applied to land, the salt can “become toxic to plants and deteriorate soil quality by reducing permeability and generally impacting physical condition. Trace elements in manure can impact plants, aquatic organisms, and terrestrial organisms.”⁶⁹ This especially becomes a problem when rain falls and the contaminants affect the local water supply via runoff.

g. AIR QUALITY

⁶⁴ Susan Cosier, *A Sickening Swill*, NRDC (Dec. 5, 2014), <https://www.nrdc.org/onearth/sickening-swill>.

⁶⁵ *Nitrate* (July 2021), <https://progressreport.cancer.gov/prevention/nitrate>.

⁶⁶ Stephen Harden, *Assessing the Effects of Agricultural Practices on Water Quality in the North Carolina Coastal Plain*, N.C. STATE UNI. (Feb. 16, 2016), <https://wrri.ncsu.edu/docs/pastevents/cwrc022016/Stephen%20Harden.pdf>.

⁶⁷ *National Primary Drinking Water Regulations*, EPA, <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations> (visited June 5, 2022).

⁶⁸ *Groundwater*, N.C. ENV’T EDUC., <https://www.eenorthcarolina.org/resources/your-ecological-address/groundwater> (visited May 19, 2022).

⁶⁹ Carol M Browner et al., *Environmental Assessment of Proposed Revisions to the National Pollutant Discharge Elimination System Regulation and the Effluent Guidelines for Concentrated Animal Feeding Operations*, EPA, xi (Jan. 2001), https://www3.epa.gov/npdes/pubs/cafo_proposed_env_assess_ch1-3.ngpdf.

Air quality is also compromised by CAFOs, which emit malodors and pollutants including ammonia, hydrogen sulfide, particulate matter, and volatile organic compounds.⁷⁰ The pollutants are discharged from the farm’s waste lagoons, animal housing facilities, and manure used to fertilize fields.⁷¹ In North Carolina, hog operators are permitted to store untreated animal waste in cesspits which is distributed onto their fields by spraying it into the air and used as fertilizer.⁷²

Spraying waste into the air threatens human health. Studies conducted on factory farm workers and community members living near CAFOs have found that aside from respiratory issues, there is evidence that “psychophysiological changes may occur as a result of exposure to malodorous compounds.”⁷³ Unsurprisingly, despite CAFOs having numerous negative impacts on water, soil, air and quality, “the vast majority of CAFOs are not currently regulated under major federal environmental laws such as the Clean Air Act or the Clean Water Act.”⁷⁴

h. ANIMAL WELFARE’S FIVE FREEDOMS

The five freedoms are globally accepted standards for animal welfare. These five protections articulate the living conditions that captive animals should not be subjected to. The five freedoms are:

1. Freedom from thirst, hunger, and malnutrition
2. Freedom from discomfort and exposure
3. Freedom from pain, injury, and disease

⁷⁰ Richard Jones et al., *Eleven Years After Agreement, EPA Has Not Developed Reliable Emission Estimation Methods to Determine Whether Animal Feeding Operations Comply with Clean Air Act and Other Statutes*, EPA, 2 (Sept. 19, 2017), https://www.epa.gov/sites/default/files/2017-09/documents/epa_20170919-17-p-0396.pdf (visited June 1, 2022).

⁷¹ *Id.*

⁷² *New Swine Waste Permit Fails to Protect Communities & Water*, NRDC (Apr. 16, 2019), <https://www.nrdc.org/experts/valerie-baron/new-swine-waste-permit-fails-protect-communities-water-0>.

⁷³ Dick Heederik et al., *Health Effects of Airborne Exposures from Concentrated Animal Feeding Operations*, 115 ENV’T HEALTH PERSPECTIVES 298–302 (2007).

⁷⁴ DiBenedetto, *supra* note 4.

4. Freedom from fear and distress
5. Freedom to express normal behavior.⁷⁵

However, the living conditions on CAFOs make it impossible for farm animals to achieve even one of the five freedoms. The five freedoms have had a positive impact on animal welfare internationally ever since their creation, often being used as a foundation for drafting animal care protocols and standards including the Association of Shelter Veterinarians (ASV) Guidelines for Standards of Care in Animal Shelters.⁷⁶

Nevertheless, modern day farming practices make these five freedoms unattainable. In addition to being unachievable, they are also vague and therefore open to interpretation. Dr. David Mellor, leading animal welfare researcher, expresses the shortcomings of the five freedoms and suggests revising animal welfare standards to afford animals with “lives worth living” as opposed to the current basic freedoms of existence.⁷⁷

- i. TOLL ON FARMERS

Animals are not the only victims found on factory farms. Societal pressure is to blame for the horrendous conditions on mega farms. It would be unjust not to mention that individuals working on CAFOs are not inherently cruel people seeking out ways to harm animals. Often, workers at these farms are migrant workers from vulnerable communities, desperate for work to care for their families.⁷⁸

Conditions on factory farms are labor intensive, dirty, and high stress. Daily exposure to such hectic environments’ place both the workers and the animals at risk for various health

⁷⁵ David J. Mellor, *Updating Animal Welfare Thinking: Moving Beyond the “Five Freedoms” Towards “A Life Worth Living,”* 6 *Animals* 21 (2016).

⁷⁶ *Shelter Vets Aim to Raise Level of Care for Millions of Animals*, AM. VETERINARY MED. ASS’N (Jan. 1, 2011), <https://www.avma.org/javma-news/2011-01-15/shelter-vets-aim-raise-level-care-millions-animals>.

⁷⁷ Mellor, *supra* note 220.

⁷⁸ Keeney, *supra* note 126.

issues including Salmonella⁷⁹, *E. coli*⁸⁰, and Staphylococcus⁸¹ which all have the ability to transfer from animals to humans.

Many CAFO workers are undocumented and therefore do not report unsafe working conditions in fear of retaliation.⁸² Intensive labor and long days must take an emotional toll on these employees. Due to long work hours, immigration status, and lack of insurance or financial stability to pay for health care, farm workers often ignore medical issues; behavioral and mental health included.⁸³ A 2016 study released by the Centers for Disease Control and Prevention (CDC) found that individuals working in “farming, fishing and forestry occupations experienced a rate of suicide that was nearly five times that of the general population.”⁸⁴ This is representative of how CAFOs negatively impact both animals and humans alike.

III. BIG STORMS: HOW EXTREME WEATHER MAKES CAFO PRACTICES EVEN MORE DEADLY

a. WHEN HURRICANES HIT CAFOS

Common industrial farming practices contribute to countless farm animals perishing in natural disasters. Intensive confinement, the number of animals, and overcrowding makes evacuating these animal facilities impossible.

⁷⁹ *Get the Facts About Salmonella*, U.S. FOOD AND DRUG ADMIN. (July 28, 2020), <https://www.fda.gov/animal-veterinary/animal-health-literacy/get-facts-about-salmonella#infected>.

⁸⁰ *E. coli* Infection, CTR. FOR DISEASE CONTROL AND PREVENTION (July 8, 2019), <https://www.cdc.gov/healthypets/diseases/ecoli.html>.

⁸¹ Andreas F. Haag et al., *Staphylococcus aureus in Animals*, 7 *Microbiology Spectrum* (2019).

⁸² Athena Ramos et al., *Perception of Job-Related Risk, Training, and Use of Personal Protective Equipment (PPE) Among Latino Immigrant Hog CAFO Workers in Missouri: A Pilot Study*, 2 *Safety*, 25 (2016).

⁸³ The Farm Aid Hotline provides famers with support 1-(800)-FARM-AID.

The National Suicide Prevention Lifeline provides confidential emotional support for people in distress 1-(800)-273-8255.

⁸⁴ *A Deeper Look at the CDC Findings on Farm Suicides*, NAT’L FARMERS UNION (Nov. 27, 2018), <https://nfu.org/2018/11/27/cdc-study-clarifies-data-on-farm-stress/>.

Overcrowding at CAFOs impedes the evacuation of animals in the event of a natural disaster. Large CAFOs commonly house tens of thousands of animals, some even over 100,000.⁸⁵ Nonsensically, many of these farms are located “directly in flood zones.”⁸⁶

Few, if any, can house animals at this scale in the event of an emergency. Even if there were a place to rehouse factory farm animals in preparation for a natural disaster, the amount of time it would take to evacuate them would be too time consuming given how quickly natural disasters strike.

b. UNDERREPORTING OF ANIMAL DEATHS FOLLOWING STORMS

Unfortunately, in many instances, the death of animals following storms is either underreported, or not reported at all. Currently, there is minimal scholarship exploring as to why animal deaths are infrequently documented. The consequence of this is that it is difficult to fully understand the magnitude of animal lives lost following natural disasters.

Additionally, access to CAFOs during storms can be problematic due to their location on private property. In situations of severe flooding, it becomes impossible to gain entrance to gauge the severity of devastation and animal lives lost behind the locked doors of CAFOs. This fact was witnessed by filmmaker Kelly Guerin. Following Hurricane Florence, Guerin spent time in heavily impacted areas of North Carolina filming the destruction of the storm, documenting the flooded farms, some surrounded by floating carcasses of drowned birds.⁸⁷ Mega farms in North Carolina reported a minimal loss of inventory (livestock) following Florence; however,

⁸⁵ Carrie Hribar & Mark Schultz, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, NAT'L ASS'N OF LOCAL BD. OF HEALTH, (2010), https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

⁸⁶ *Why Millions of Farm Animals Drowned During the Hurricanes*, ASPCA (Oct. 24, 2018), <https://www.aspc.org/news/why-millions-farm-animals-drowned-during-hurricanes>.

⁸⁷ Barbara J. King, Opinion, *As Florence Kills Pigs and Millions of Chickens, We Must 'Open Our Hearts'*, NPR (Sept. 24, 2018), <https://www.npr.org/sections/thesalt/2018/09/24/650437498/opinion-as-florence-kills-pigs-and-millions-of-chickens-we-must-open-our-hearts>.

this is difficult to believe considering the seismic destruction and massive number of animals regularly housed in CAFOs. To enact effective change, we need to become more cognizant of the innocent animals lost to hurricanes. Most people would not discount the fear that their companion animals feel when they are scared, and farm animals are no different. They have the ability to feel fear just like any other being. The perpetual destruction and loss of animal lives on CAFOs following hurricanes is unacceptable. We need to strive for a more inclusive mind frame and afford farmed animals the safety and security that they deserve when serving man.

c. THE CASE OF NORTH CAROLINA CAFOs

North Carolina is of particular interest due to the state's large number of CAFOs and the states' vulnerability to hurricanes. Agriculture is the state's largest economy where it is said that pigs outnumber people forty to one, and birds outnumber the pigs.⁸⁸ In the 2020, North Carolina's agriculture industry generated approximately \$10.1 billion in cash receipts⁸⁹, about 5.1% of the state's Gross Domestic Product (GDP).⁹⁰ The state's largest 'commodities'⁹¹ (animals) include broiler chickens, turkeys, and hogs.⁹²

⁸⁸ *Unchecked Growth of Industrial Animal Farms Spurs Long Fight for Environmental Justice in Eastern NC*, N.C. HEALTH NEWS (Oct. 20, 2021), <https://www.northcarolinahealthnews.org/2021/10/20/environmental-justice-and-industrial-farming-in-eastern-nc/>.

⁸⁹ North Carolina was the tenth top agriculture producing state in 2020 following IN, WI, IL, MN, KS, TX, NE, IA, and CA (the top agriculture producing state).

Cash Receipts by Commodity State Ranking, USDA, https://data.ers.usda.gov/reports.aspx?ID=17844#Pb39cecc65d6b24f7881196ce4e67fab33_2_251iT0R0x4 (visited June 5, 2022).

⁹⁰ *North Carolina: State Facts*, UNI. OF ARK., <https://economic-impact-of-ag.uada.edu/north-carolina/> (visited Mar. 6, 2022).

⁹¹ Animals raised for food are often referred to as commodities.

Animal Products, USDA, <https://www.ers.usda.gov/topics/animal-products/> (visited Jun 3, 2022).

⁹² Heederik, *supra* note 73.

North Carolina is the fourth most hurricane-prone state.⁹³ With three hundred and one miles of coastline,⁹⁴ and being made up of low-laying barrier islands,⁹⁵ the state is prone to hurricanes, storm surges, and coastal storms. North Carolina's susceptibility to storms places its farm animals at risk of injury or death following major weather events. The state has been directly impacted by fifty-six hurricanes,⁹⁶ twelve of which have been considered to be major storms with winds speeds of at least one hundred and eleven miles.⁹⁷

d. HURRICANE DENNIS & HURRICANE FLOYD

The most devastating storm to hit North Carolina to-date was Hurricane Floyd in 1999, which is often referred to as "The Flood of the Century" and "The 500 Year Flood."⁹⁸ In early September 1999, heavy rainfall from Hurricane Dennis caused flooding in Mid-Atlantic states and North Carolina.⁹⁹ Compounded by Hurricane Floyd, the eastern United States (specifically North Carolina) experienced devastating flooding following both storms.¹⁰⁰

Together, Dennis and Floyd resulted in the death of an estimated 2,400,000 chickens, 500,000 turkeys, and 100,000 hogs.¹⁰¹ Pictures of the destruction show farm animals stranded upon rooftops, seeking higher ground and shelter from flood waters. Other images depict a more

⁹³ Brandon Griggs, *No Other State Gets Hit by Hurricanes as Often as Florida*, CNN (Sept. 11, 2017), <https://www.cnn.com/2017/09/11/us/hurricanes-landfall-by-state-trnd/index.html>.

⁹⁴ Dinah Voyles Pulver, *North Carolina at Greater Risk of Hurricanes in Record-Setting Storm Season*, ASHEVILLE CITIZEN TIMES (Aug. 27, 2020), <https://www.citizen-times.com/story/news/2020/08/27/gda-hurricane-landfalls-2020-nc-pash/42340029/>.

⁹⁵ Ben Finley, *Why Is North Carolina So Vulnerable to Hurricanes?*, WHSV (Sept. 11, 2018), <https://www.wHSV.com/content/news/Why-is-North-Carolina-so-vulnerable-to-hurricanes-492977221.html>.

⁹⁶ *Hurricane Statistics*, N.C. STATE CLIMATE OFFICE, <https://products.climate.ncsu.edu/weather/hurricanes/statistics/> (visited Mar. 6, 2022).

⁹⁷ Pulver, *supra* note 77.

⁹⁸ *Flood History Take a Look Back at the Floods that Impacted North Carolina*, N.C. FLOOD INS., <https://northcarolinafloodinsurance.org/flood-history> (visited Mar. 6, 2022).

⁹⁹ *Hurricane Dennis*, NAT'L WEATHER SERV. (Sept. 8, 1999), <https://www.weather.gov/akq/dennis>.

¹⁰⁰ *Hurricane Floyd*, NAT'L WEATHER SERV. (Jan. 14, 2016), <https://www.weather.gov/mhx/Sep161999EventReview>.

¹⁰¹ *Hurricane Floyd: September 16, 1999*, NAT'L WEATHER SERV. (July 23, 2019), <https://www.weather.gov/ilm/Floyd>.

disturbing scene, waters littered with hundreds if not thousands of drowned animals who fell victim to the storms.

Before the severe flooding hit the state, it is reported that several farmers shot their animals rather than letting them drown, knowing that they had no chance of escape or survival.¹⁰² The magnitude of the storms left vulnerable animals with little chance of survival, one resident claimed to have witnessed various animals fighting for space on the porch of a home in an attempt to escape the flood waters.¹⁰³ This resident's experience illustrates how severe flooding effects defenseless farm animals following major storms.

The Washington Post described the devastation "in many places in this immense flood zone in eastern North Carolina, an incredible stench fills the air as the bloated bodies of drowned hogs and immense piles of dead turkeys and chickens wait to be scooped into dump trucks and fed into incinerators."¹⁰⁴ Heavy rainfall flooded factory farms resulting in a "witch's brew,"¹⁰⁵ causing environmental and health concerns for local residents, animals, and wildlife.

Although most drowned animal carcasses were either submerged or inaccessible due to obstructed roads, health officials had to find a way to dispose of the countless animals.¹⁰⁶ Incinerators were brought in from out of state and were used around the clock, burning between three and four thousand pounds of animal remains per hour.¹⁰⁷ There was an urgency to incinerate the bloated carcasses before hatching flies could spread bacteria to people and other animals.¹⁰⁸ The disposal process of animal remains is a carcass management method that

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Sue Anne Pressley, In North Carolina, Floyd Leaves a Toxic Legacy, Post (Sept. 22, 1999), <https://www.washingtonpost.com/wp-srv/national/longterm/hurricane/stories/floyd092299.htm>.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ NAT'L FARMERS UNION, *supra* note 84.

generates air emissions and ash, both of which are harmful to human health and the environment if not managed properly.¹⁰⁹

e. HURRICANE MATTHEW

Hurricane Matthew¹¹⁰ made landfall in the southeastern United States in October 2016. North Carolina in particular was significantly impacted by Matthew's strong winds and rainfall which resulted in millions of farm animals drowning as a result of the storm's flooding. The states' poultry was the most impacted with losses upwards of five million birds.¹¹¹ Poultry tends to be the most impacted when major weather events affect the state¹¹² since North Carolina is home to poultry giants Tyson, Sanderson Farms, Inc., and Perdue Farms.¹¹³

The Washington Post reported that following Hurricane Matthew, farmers were left to clean up thousands of drowned animal carcasses after the storm washed over the state's factory farms.¹¹⁴ Hurricane Matthew forced the states' factory farms to briefly shut down, causing the daily U.S. slaughter of hogs to drop by more than fifty-thousand head in just one day.¹¹⁵ This statistic highlights the enormous size of industrial agriculture operations.

¹⁰⁹ *Carcass Management Course Off-site Incineration Module*, USDA, at 20, https://www.aphis.usda.gov/animal_health/carcass/docs/training/8-off-site-incineration.pdf (visited June 1, 2022).

¹¹⁰ Hurricane Matthew was called "the most powerful storm of 2016." Tim Armstrong, *Hurricane Matthew in the Carolinas: October 8, 2016*, NAT'L WEATHER SERV. (Sept. 29, 2017), <https://www.weather.gov/ilm/Matthew>.

¹¹¹ *Millions of North Carolina Chickens Die in Hurricane Matthew Floods*, REUTERS (Oct. 12, 2016), <https://www.reuters.com/article/us-storm-matthew-poultry/millions-of-north-carolina-chickens-die-in-hurricane-matthew-floods-state-idUSKCN12C2J6>.

¹¹² Laura Bult, *Floodwaters from Hurricane Matthew Killed Millions of Farm Animals in North Carolina*, N.Y. DAILY NEWS (Oct. 14, 2016), <https://www.nydailynews.com/news/national/hurricane-matthew-killed-millions-animals-north-carolina-article-1.2831057>.

¹¹³ North Carolina produced an estimated nine million one hundred and eighty thousand broilers and two hundred and thirty thousand turkeys for human consumption in 2019. *North Carolina Agricultural Statistics 2020*, USDA, https://www.nass.usda.gov/Statistics_by_State/North_Carolina/Publications/Annual_Statistical_Bulletin/AgStat2020.pdf (visited June 5, 2022).

¹¹⁴ Kirk Ross & Darryl Fears, *Flooded North Carolina Farms Are Likely Littered with Drowned Livestock*, POST (Oct. 12, 2016), <https://www.washingtonpost.com/news/animalia/wp/2016/10/11/flooded-north-carolina-farms-are-likely-littered-with-drowned-livestock/?postshare=2911476224393106>.

¹¹⁵ *Hurricane Matthew Trims U.S. Hog Slaughter*, REUTERS (Oct. 10, 2016), <https://www.reuters.com/article/smithfield-hurricane-hogs-idUSL1N1CG1LM>.

Animals who were not killed by drowning were at risk of infection or asphyxiation. Infections occur when surviving animals are forced to stand atop waste and the decomposing carcasses of their cage mates.¹¹⁶ Asphyxiation on the other hand primarily affects poultry who are at risk of suffocation if the power goes out on factory farms where proper ventilation is necessary for survival. Poultry feces contains high levels of ammonia¹¹⁷ whose hazards are exacerbated by heat and moisture (a problem exacerbated as our climate changes and average temperatures increase). A study by Nowak et al found that “[l]ong-term exposure and inhalation of odorous compounds from poultry manure can be harmful to farm workers and the surrounding residents as well as animals.”¹¹⁸ This assertion validates the dangers associated with the mass farming of poultry.

f. HURRICANE FLORENCE

In early September 2018, Hurricane Florence made landfall in the Carolinas.¹¹⁹ Heavy flooding and strong winds tore across the state, leaving behind catastrophic damage. Inaction by many farmers in affected area resulted in losses of up to 4,100,000 birds (chickens and turkeys) and 5,500 pigs.¹²⁰ North Carolina’s Department of Agriculture reported that animals died by drowning in their cages.¹²¹

Following every major storm, the need for factory farms to implement disaster evacuation and response plans is evident. However, as previously described, there are no

¹¹⁶ As deceased animals decay, various gases from sewage and the carcasses are released into the atmosphere, impacting the health of surrounding communities. DiBenedetto, *supra* note 4.

¹¹⁷ P.A. Moore et al., *Evaluation of Chemical Amendments to Reduce Ammonia Volatilization from Poultry Litter*, 75 *POULTRY SCI.*, 315–320 (1996)

¹¹⁸ Adriana Nowak et al., *Cytotoxicity of Odorous Compounds from Poultry Manure*, 13 *INT’L JOURNAL OF ENV’T RSCH. AND PUB. HEALTH* 1046 (2016).

¹¹⁹ *Historical Hurricane Florence, September 12-15, 2018*, NAT’L WEATHER SERV. (Jan. 10, 2019), <https://www.weather.gov/mhx/Florence2018>.

¹²⁰ Semuels, *supra* note 19.

¹²¹ Shane Croucher, *Hurricane Florence: Animal Death Toll Reaches Millions*, *NEWSWEEK* (Sept. 19, 2018), <https://www.newsweek.com/hurricane-florence-death-toll-animals-livestock-north-carolina-1127919>.

protections afforded to animals living on CAFOs, which account for the largest percentage of animal fatalities during major disasters.

g. HURRICANES AND MANURE LAGOONS

When hurricanes strike, CAFO lagoons regularly overflow and spread pollution over surrounding areas. An example of this occurred following Hurricane Floyd in 1999 when several manure lagoons in North Carolina overflowed.¹²² When a manure lagoon is breached, the waste mixes with floodwaters and causes the impacted areas to become inundated with polluted water.¹²³ The contaminated water poses a health risk to human residents, animals, and the environment.

Following Floyd, and the breach of many North Carolina manure lagoons, the state realized that it needed to change how manure lagoons were regulated. Without change, people, animals, and the local ecosystem would continue to be adversely affected by overflowing waste lagoons in inevitable future storms. In response, the state bought out several of the factory farms located in the 100-year floodplains via the “Swine Floodplain Buyout Program”¹²⁴ with the hopes of thwarting future health and environmental risks following heavy rainfall.¹²⁵ Unfortunately, similar instances have occurred since then. For example, following Hurricane Florence of 2018, it was determined that at least fifty hog waste lagoons overflowed due to heavy rainfall.¹²⁶ When this occurred, drinking water, crops, commodities, and the environment were again compromised.¹²⁷

¹²² *Hurricane Florence: Carolina Pig Waste Lagoons Overflow*, BBC NEWS (Sept. 19, 2018), <https://www.bbc.com/news/world-us-canada-45578485>.

¹²³ TIMES, *supra* note 40.

¹²⁴ Jen Kendrick, *Hurricane Matthew Impact Was Minimal for Our Industry, and Buyout Program Continues*, NC PORK COUNCIL (2018), <https://www.ncpork.org/buyout/>.

¹²⁵ TIMES, *supra* note 40.

¹²⁶ *Id.*

¹²⁷ *Id.*

h. CLIMATE CHANGE WILL MAKE THIS WORSE

Shifts in average temperatures have increasingly become a topic of interest beginning in the late 1980s and early 1990s.¹²⁸ Climate change shifted away from a mainly unexplored topic of concern to being front page news. During this time acid rain, deforestation, and a depleting ozone layer became prominent global issues.¹²⁹ Greenhouse gases (GHG) are another topic of concern contributing to climate change and global warming. Greenhouse gas emissions trap heat in the Earth's atmosphere and warm the planet.¹³⁰ The main GHGs of concern are carbon dioxide, methane, nitrous oxide, fluorinated gases, and water vapor.¹³¹

Changes in the world's climate will result in greater amounts of rainfall and more volatile storms. An article published by the New York Times stated that researchers are unaware of the interconnections of climate change and storm intensification, however, there is an apparent trend.¹³² If our climate's warming temperature is not addressed, future storms will inevitably result in stronger, wetter, and more widespread storms.¹³³

Agricultural activities are a major contributor of GHGs. Farms emits methane and nitrous oxide through enteric fermentation and manure treatment sprayed into the atmosphere.¹³⁴ The amount of GHGs emitted by agricultural practices have been found to be more than "all our cars, trucks, trains, and airplanes combined."¹³⁵

¹²⁸ Andrew Revkin, *Thirty Years Ago Today, Global Warming First Made Headline News*, PBS (June 23, 2018), <https://www.pbs.org/wgbh/nova/article/thirty-years-ago-today-global-warming-first-made-headline-news/>.

¹²⁹ *Id.*

¹³⁰ Melissa Denchak, *Greenhouse Effect 101*, NRDC (July 16, 2019), <https://www.nrdc.org/stories/greenhouse-effect-101#gases>.

¹³¹ *Id.*

¹³² *What We Know About Climate Change and Hurricanes*, TIMES (Aug. 29, 2021), <https://www.nytimes.com/2021/08/29/climate/climate-change-hurricanes.html>.

¹³³ *Id.*

¹³⁴ *Agriculture*, EPA, at 5-1, https://www.epa.gov/sites/default/files/2018-01/documents/2018_chapter_5_agriculture.pdf. (visited June 5, 2022).

¹³⁵ Jonathan Foley, *A Five-Step Plan to Feed the World*, NAT'L GEOGRAPHIC, <https://www.nationalgeographic.com/foodfeatures/feeding-9-billion/> (visited Mar. 6, 2022).

Climate change has impacted North Carolina and its residents with more intense flooding following major storms.¹³⁶ The continued emission of GHGs from human activities like large-scale farming will continue to result in the state experiencing a warmer and wetter environment (posing a threat to CAFOs).

If climate change continues on its current track, it could result in extreme precipitation becoming a common meteorological trend for the state of North Carolina. According to the National Oceanic and Atmospheric Administration (NOAA) and the National Weather Service (NWS), 2018 was North Carolina's wettest year on record with a total rainfall of almost one hundred and forty inches of rain (partially due to Hurricane Florence).

Flooding of this magnitude will continue to threaten the lives of animal's imprisoned at CAFOs. This is a primary example of why CAFOs need to be regulated and mandated to implement disaster plans in their daily operations. If no action is taken, then increased rainfall will put North Carolina's more than 2000 CAFOs at risk in future storms.¹³⁷

i. CONSEQUENCES OF NO INTERVENTION

With irreversible human-induced climate change on the rise, the effects of global warming will continue to exacerbate over time.¹³⁸ A major effect of climate change is the variation in precipitation patterns. As noted by the Environmental Protection Agency (EPA), "climate change can affect the intensity and frequency of precipitation. Warmer oceans increase the amount of water that evaporates into the air. When more moisture-laden air moves over land

¹³⁶ *New N.C. Climate Change Report Says the Time to Act Is Now*, N.C. HEALTH NEWS (June 16, 2020), <https://www.northcarolinahealthnews.org/2020/06/16/new-n-c-climate-change-report-says-the-time-to-act-is-now/>.

¹³⁷ *Unchecked Growth of Industrial Animal Farms Spurs Long Fight for Environmental Justice in Eastern NC*, N.C. HEALTH NEWS (Oct. 20, 2021), (<https://www.northcarolinahealthnews.org/2021/10/20/environmental-justice-and-industrial-farming-in-eastern-nc/>).

¹³⁸ *The Effects of Climate Change*, NASA (Aug. 26, 2021), <https://climate.nasa.gov/effects/>.

or converges into a storm system, it can produce more intense precipitation.”¹³⁹ Because of climate change, the U.S. may expect to see longer hurricane seasons with stronger storms, higher seas levels, and coastlines more susceptible to storms and flooding.¹⁴⁰ More intense storms will result in increased flooding, especially on the floodplains where CAFOs are located; inevitably resulting in unremitting losses of animal lives on CAFOs. To keep the local community safe, CAFOs need stricter regulations and accountability to keep them from threatening local citizens and animals with their hazardous practices.

IV. UNDERSTANDING AMERICAN CAFOs AND FEDERAL LAWS

This treatment of animals is accepted by Congress as is exhibited by the government’s failure to protect farm animals from this abuse. The laws purported to safeguard farmed animals fail to provide even basic protections. The ambiguous language used in the acts intended to protect farm animals make it difficult to prove that harm has been inflicted and that cruelty laws have been violated.

The Twenty-Eight-Hour Law, the Humane Methods of Slaughter Act, the Animal Welfare Act, PETS Act, and the PACT Act all fail in protecting our nation’s livestock. Cody Carlson, an animal-rights activist who left animal investigations to attend law school, describes his experience of working at a factory farm: “If you haven’t been in a hen plant, you don’t know what hell is.”¹⁴¹ To better protect farm animals raised for food, fiber, and other agricultural purposes, legal changes are needed.

¹³⁹ *Climate Change Indicators: Heavy Precipitation*, EPA, <https://www.epa.gov/climate-indicators/climate-change-indicators-heavy-precipitation> (visited Mar. 6, 2022).

¹⁴⁰ Finley, *supra* note 78.

¹⁴¹ *Id.*

As point sources pursuant to the Clean Water Act (CWA),¹⁴² CAFOs are not exempt from the Act. According to the CWA,¹⁴³ CAFOs are subject to National Pollutant Discharge Elimination System (NPDES) permitting because they are “point sources” of pollution.¹⁴⁴ Point sources are “prohibited from discharging pollutants to the water of the U.S. except as authorized by an NPDES permit.”¹⁴⁵ Significantly, not all feeding operations require NPDES permits.¹⁴⁶ Livestock and poultry operations defined as CAFOs however, have a “Duty to Apply” for a NPDES permit.¹⁴⁷

The Clean Air Act (CAA) was enacted in 1970 to regulate air emissions from mobile and stationary sources.¹⁴⁸ The CAA was aimed at establishing National Ambient Air Quality Standards (NAAQS) “to protect public health and public welfare and to regulate emissions of hazardous air pollutants.”¹⁴⁹ As this section of the paper demonstrates, CAFOs required stricter standards to protect the public from the pollutants that CAFOs release into the atmosphere. Sections III(b) and (d) of the CAA give the EPA the authority to regulate emissions from CAFOs by listing them as a source category of polluters. To date, CAFOs have not been regulated by the EPA due to a contentious 2005 agreement with CAFOs. In exchange for “emissions data from

¹⁴² *Summary of the Clean Water Act*, EPA, <https://www.epa.gov/laws-regulations/summary-clean-water-act> (visited May 19, 2022).

¹⁴³ *Id.*

¹⁴⁴ *NPDES Compliance Inspection Manual*, at 365 (2017), EPA (2017),

<https://www.epa.gov/sites/default/files/2017-03/documents/npdesinspect-chapter-15.pdf>.

¹⁴⁵ *National Pollutant Discharge Elimination System (NPDES)*, EPA, <https://www.epa.gov/npdes/npdes-permit-basics> (visited May 19, 2022).

¹⁴⁶ Richard K. Koelsch, *Fact Sheet #2: Do I Need a NPDES Permit for My Livestock or Poultry Operation*, at 1 (Oct. 2003), UNI. OF NEB.,

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1023&context=biosysengpres>.

¹⁴⁷ *Id.*

¹⁴⁸ 42 U.S.C. §7408 (1970).

¹⁴⁹ *Summary of the Clean Air Act*, EPA, <https://www.epa.gov/laws-regulations/summary-clean-air-act> (visited June 5, 2022).

thirty CAFOs, animal feeding operations were granted immunity from CAA liability to *all participants*.¹⁵⁰ This agreement has since shielded CAFOs from liability under the CAA.¹⁵¹

a. LIVESTOCK INDEMNITY PROGRAM

The Agricultural Act of 2014 (Pub.L.113-79), also known as the 2014 Farm Bill, authorized the Livestock Indemnity Program (LIP). The LIP is managed by the Farm Service Agency (FSA), which is a part of the United States Department of Agriculture (USDA). It is a financial recovery program intended to provide “benefits to livestock producers for livestock deaths in excess of normal mortality caused by adverse weather or by attacks by animals reintroduced into the wild by the Federal Government”¹⁵² The program is retroactive, covering qualified livestock losses as far back as October 1, 2011.¹⁵³ Payouts for the LIP are equivalent to seventy-five percent of the value of the animals on the day prior to their day of death.¹⁵⁴

To qualify for LIP payouts, livestock owners must have been the legal owner of the injured or killed livestock on the date of their injury or death, and the animals must have been injured or died as a result of a covered loss.¹⁵⁵ If the livestock was injured, it must have been injured as a direct result of a covered loss and were therefore sold at a reduced amount.¹⁵⁶

According to the USDA, adverse weather events are a covered loss under the LIP.¹⁵⁷

¹⁵⁰ *Biden Should Bet the Farm*, ABA, https://www.americanbar.org/groups/environment_energy_resources/publications/aq/20210519-biden-should-bet-the-farm/ (visited May 17, 2022).Error! Hyperlink reference not valid.

¹⁵¹ Efforts have been made to challenge the EPA to use its CAA authority to regulate harmful CAFOs emissions. In the case *Massachusetts v. EPA*, 549 U.S. 497 (2007), it was held that the CAA allows the EPA to regulate greenhouse gas emissions since they qualify as air pollutants.

¹⁵² *Livestock Indemnity Program (LIP)*, USDA, https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2022/fsa_lip_livestockIndemnityprogram_factsheet_2022_final_v3.pdf (visited Mar. 6, 2022). Excess of normal mortality is not defined.

¹⁵³ *Livestock Indemnity Program (LIP)*, BENEFITS.GOV, <https://www.benefits.gov/benefit/5978> (visited Mar. 6, 2022).

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ NASA, *supra* note 138.

Livestock eligible for compensation must have been raised for commercial use on a farming operation on the date of their injury or death. Animals not raised for commercial use on a farming operation are not covered by the program.¹⁵⁸ By compensating farmers for the losses of their livestock in the event of a storm, there is no question as to why there is little effort to transport animals to higher ground in preparation for an impending storm. It is easier for farmers to receive compensation when their commodities (the animals) are accounted for and locked in their cages to helplessly wait out the storm. Disaster assistance programs like the LIP provide financial compensation to those causing both environmental and physical harm to the communities around them.¹⁵⁹

i. CONCERNS WITH FARM COVERAGE / PROTECTION

Valid arguments can be made by animal advocates that although farmers are afforded with options to protect their livestock in the event of a storm, insurance companies and indemnity programs perpetuate animal welfare and environmental issues. Farm coverage and protection bolster the problem by ensuring that CAFOs can continue their operations following a storm at a nominal loss whereas natural disasters will often force small family farms to shut down.

Essentially, without carcasses, farmers cannot get reimbursed for any lost livestock. This removes any incentive for farmers to ‘open the barn’ doors giving their animals the chance to survive. If farmers released their animals before a storm, they would risk losing compensation for any lost animals.

b. CURRENT LAWS

¹⁵⁸ *Id.*

¹⁵⁹ DiBenedetto, *supra* note 4.

“All animals are equal, but some animals are more equal than others.”¹⁶⁰

-George Orwell

Federally, animals are not protected by law when living on factory farms.¹⁶¹ Every year, more than ten billion land animals¹⁶² are raised and killed for food in the United States,¹⁶³ and farm animals account for about ninety-five percent of those animals killed for human consumption.¹⁶⁴ Despite our nation’s extensive reliance on these animals as a food source (and for fiber), farm animals are afforded very few legal protections to ensure their health and safety while confined on factory farms (especially when natural disasters strike). As stated by executive director and partner at Milbank LLP (and professor of animal law at Columbia Law School and NYU Law School), David Wolfson, “it seems that there is no active state or federal involvement in the inspection of farms for cruelty to animals raised for food or food production.”¹⁶⁵

On the federal level, legal protection is only afforded to some farm animals once they leave the farm and are being moved to their next location. Even then farm animals are often deprived of basic necessities and comfort including food, water, and bedding during their transportation.¹⁶⁶ In the words of former U.S Senator, Robert Byrd:

Federal law is being ignored. Animal cruelty abounds. It is sickening. It is infuriating. Barbaric treatment of helpless, defenseless creatures must not be tolerated even if these animals are being raised for food--and even more so, more

¹⁶⁰ George Orwell, *Animal Farm* 123 (1946).

¹⁶¹ David J. Wolfson, *Beyond the Law: Agribusiness and the Systemic Abuse of Animals*, at 124, (1995), ANIMAL LAW LEGAL CTR., http://nationalaglawcenter.org/wp-content/uploads/2013/06/wolfson_beyond.pdf.

¹⁶² The exact number of aquatic animals killed each year for consumption is unknown due to being measured by tonnage rather than by individual lives. *2022 U.S. Animal Kill Clock Animal Clock*, <https://animalclock.org/> (visited June 5, 2022).

¹⁶³ *Livestock and Meat Domestic Data*, USDA (Apr. 27, 2022), <https://www.ers.usda.gov/data-products/livestock-meat-domestic-data/livestock-meat-domestic-data/#Livestock%20and%20poultry%20slaughter>.

Animals included in this number are raised for meat, dairy, and eggs.

¹⁶⁴ Gaverick Matheny & Cheryl Leahy, *Farm-Animal Welfare, Legislation, and Trade*, 70:325 DUKE UNI. 325 (2007). <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1415&context=lcp>.

¹⁶⁵ Wolfson, *supra* note 148, at 150.

¹⁶⁶ *Legal Protections for Farm Animals During Transport*, ANIMAL WELFARE INST., at 1, <https://awionline.org/sites/default/files/uploads/documents/21LegalProtectionsTransport.pdf> (visited June 1, 2022).

so. Such insensitivity is insidious and can spread and is dangerous. Life must be respected and dealt with humanely in a civilized society.¹⁶⁷

The following sections of the paper will discuss several federal laws intended to protect animals that tend to fail certain farmed animals.

i. TWENTY-EIGHT HOUR LAW

The twenty-eight-hour law of 1873 was enacted to address the transportation of animals across state lines. Enforced by the United States Department of Agriculture (USDA), the law provides that animals cannot be transported by “a rail carrier, express carrier, or common carrier (except by air or water)” for more than twenty-eight hours¹⁶⁸ without being unloaded for “feeding, water, and rest.”¹⁶⁹ This law however, is not applied to transportation of poultry since they are not specifically mentioned¹⁷⁰, theoretically exempting them from its protection.¹⁷¹

ii. POULTRY PRODUCTS INSPECTION ACT

The Poultry Products Inspection Act (PPIA) of 1957 was enacted to “regulate the processing and distribution of poultry products.”¹⁷² The Act verifies that poultry products are suitable for human consumption.¹⁷³ The PPIA prohibits transporting, importing, selling, and buying dead, dying, disabled, or diseased poultry and poultry products that died in anyway other

¹⁶⁷ Congressional Record, *Cruelty to Animals* (2001), <https://www.govinfo.gov/content/pkg/CRECB-2001-pt9/html/CRECB-2001-pt9-Pg12654.htm>.

¹⁶⁸ Animals can be confined for transport for up to 36 consecutive hours if requested by the owner. 49 U.S.C. § 80502(2)(B).

¹⁶⁹ *Id.* § 80502 (2018).

¹⁷⁰ 9 C.F.R. § 89.1 (a) outlines feeding recommendations by species covered by the Twenty-Eight Hour Law with no mention of poultry.

¹⁷¹ *Twenty-Eight Hour Law*, NAT'L AGRIC. LIBRARY, <https://www.nal.usda.gov/animal-health-and-welfare/twenty-eight-hour-law> (visited May 6, 2022).

¹⁷² 21 U.S.C.A. § 452.

¹⁷³ 21 U.S.C.A. § 451 – 473.

than by slaughter.¹⁷⁴ This Act offers poultry with some minimal (yet inadequate) protection at slaughter.¹⁷⁵

iii. THE HUMANE METHODS OF SLAUGHTER ACT

In 1958, Congress passed The Humane Methods of Slaughter Act (HMSA) with the intention of “preventing needless suffering” of livestock by rendering them insensible to pain prior to handling and being slaughtered.¹⁷⁶ As stated in the Act, this is achieved by “[a] single blow or gunshot or an electrical, chemical or other means that is rapid and effective, before being shackled, hoisted, thrown, cast, or cut.”¹⁷⁷

The Act applies to cattle, calves, horses, mules, sheep, swine, and other livestock; however, the Act does not specifically mention poultry. The absence of poultry can be interpreted as them being exempt from the Act’s protection akin to the twenty-eight-hour law.¹⁷⁸ A lack of protection and enforcement of the humane slaughter of poultry has resulted in approximately one million poultry being “unintentionally boiled alive each year in U.S.

¹⁷⁴ 21 U.S.C.A. § 460.

¹⁷⁵ A 2020 report by the Animal Welfare Institute (AWI) outlines habitual mistreatment of birds raised for slaughter and the USDA’s inadequate responses to the need for stricter regulations pertaining to the handling of birds. Dena Jones, *The Welfare of Birds at Slaughter in the United States*, Animal Welfare Inst. (Nov. 2020), https://awionline.org/sites/default/files/publication/digital_download/20TheWelfareBirdsSlaughter.pdf.

¹⁷⁶ The Humane Methods of Livestock Slaughter Act of 1958, Pub L 85-765, 72 Stat 862 (1958), was amended by the Humane Methods of Slaughter Act of 1978, Pub L 95-445, 92 Stat 1069 (1978).

¹⁷⁷ “[O]r by slaughtering in accordance with the ritual requirements of the Jewish faith or any other religious faith that prescribes a method of slaughter whereby the animal suffers loss of consciousness by anemia of the brain caused by the simultaneous and instantaneous severance of the carotid arteries with a sharp instrument and handling in connection with such slaughtering.” 7 USC § 1902 (2000).

¹⁷⁸ *Levine v. Vilsack*, 587 F.3d 986 (9 Cir. 2009).

slaughterhouses.”¹⁷⁹ This matter is becoming more severe with increases in slaughter speed lines.¹⁸⁰

iv. THE ANIMAL WELFARE ACT

The Animal Welfare Act (AWA) was signed into law in 1966.¹⁸¹ Originally called the “Laboratory Animal Welfare Act,” the purpose of this Act was to protect the welfare of animals used in research facilities, and to address public outcry concerning the intensification of stolen pets being sold to laboratories for use as test subjects.¹⁸² Amended five times since its enactment,¹⁸³ the Act has refined the required standards of care, and broadened coverage to protect the welfare of a greater number of animals, however, this does not include farmed animals. The Act’s definition of ‘animal’ excludes livestock or poultry “used or intended for use as food or fiber, or livestock or poultry used or intended for use for improving animal nutrition, breeding, management, or production efficiency, or for improving the quality of food or fiber.”¹⁸⁴

Legislations’ varying definitions of the word ‘animal’ and exemptions for agricultural practices perpetually exclude farm animals from legal protection.

v. THE PETS ACT

¹⁷⁹ *USDA Plan to Speed Up Poultry-Processing Lines Could Increase Risk of Bird Abuse*, Post (Oct. 29, 2013), https://www.washingtonpost.com/politics/usda-plan-to-speed-up-poultry-processing-lines-could-increase-risk-of-bird-abuse/2013/10/29/aeeffe1e-3b2e-11e3-b6a9-da62c264f40e_story.html.

¹⁸⁰ Jessica A. Chapman, Ingrid Seggerman, & Delcianna J. Winders, *Slaughterhouse Deregulation: A View of the Effects on Animals, Workers, Consumers, and the Environment*, AM. BAR ASS’N (Aug. 25, 2021), https://www.americanbar.org/groups/tort_trial_insurance_practice/publications/the_brief/2020-21/summer/slaughterhouse-deregulation-view-effects-animals-workers-consumers-environment/.

¹⁸¹ *Animal Welfare Act History Digital Collection*, USDA, <https://www.nal.usda.gov/legacy/awic/legislative-history-animal-welfare-act-introduction> (visited May 5, 2022).

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ 7 U.S.C. § 2132(g) (2020). Not only does the AWA exclude farmed animals from its protections, it also does not provide legal protection to cold-blooded animals or fish.

Passed in 2006, the Pet Evacuation and Transportation Standards Act (PETS Act) was established in response to the immense loss of animal lives and public furor following Hurricane Katrina.¹⁸⁵ The Act authorizes the Federal Emergency Management Agency (FEMA) to provide funding to local and state governments to construct, operate, and maintain pet-friendly emergency shelters, and other emergency actions needed to provide emergency aid to companion and service animals.¹⁸⁶ The Act also permits FEMA to compensate local and state governments for any costs associated with the rescue, care, and shelter of animals following a natural disaster recognized by FEMA.¹⁸⁷ Like the above three acts, the PETS Act excludes farm animals from its protection, only applying to companion animals, service animals, and animals defined as ‘household’ pets by FEMA.¹⁸⁸

vi. THE PACT ACT

Passed in 2019, then President Trump, signed the Prevent Animal Cruelty and Torture Act (PACT Act). This Act expanded and closed the loopholes found in the Animal Crush Video Prohibition Act signed by President Obama in 2010, making certain acts of animal cruelty involved in or affecting interstate commerce a federal felony.

Specifically, the Act “bans the intentional crushing, burning, drowning, suffocating, impalement or other serious harm to conduct in which one or more living non-human mammals, birds, reptiles, or amphibians is purposely crushed, burned, drowned, suffocated, impaled, or otherwise subjected to serious bodily injury”¹⁸⁹ as well as “animal crush videos.”¹⁹⁰ The law

¹⁸⁵ PETS Act (FAQ), AM. VETERINARY MED. ASS’N, <https://www.avma.org/pets-act-faq> (visited Mar. 5, 2022).

¹⁸⁶ The Pets Act: Companion Animals Affected by Natural Disasters, ANIMAL LEGAL DEF. FUND, <https://aldf.org/article/the-pets-act-companion-animals-affected-by-natural-disasters/> (visited May 4, 2022).

¹⁸⁷ 21 U.S.C.A. § 452.

¹⁸⁸ Pets Evacuation and Transportation Standards Act of 2006, 42 U.S.C. § 5121 (2006).

¹⁸⁹ Preventing Animal Cruelty and Torture Act, H.R. 724, 116th Cong. § 2 (2019).

¹⁹⁰ *Id.*

does not apply to customary veterinary practices, agricultural husbandry, or other types of animal management such as the slaughter of animals for food.¹⁹¹

c. SUMMATION OF FEDERAL ANIMAL PROTECTION LAWS

Demonstrated by the aforementioned acts, there are currently no federal laws dictating how animals raised for food should be treated while they live on factory farms. In the event that a farm animal is being harmed, more often than not, one must turn to state or local laws for protection. The next section of the paper will give an overview of current state animal protection laws touching on both their successes and their shortcomings.

V. FARM PROTECTION AND ITS DOWNFALLS

It would be unjust to say that farmers are left with no options to protect their livestock in the event of a natural disaster. Several insurance companies offer livestock / farm / ranch / cattle insurance policies. For example, Prince Insurance Group offers insurance policy options to farmers to protect their livestock in the event of an unforeseen catastrophe.¹⁹² However, these plans are rife with problematic language and not all policies insure livestock in all adverse weather events. Covered perils are limited to each insurance company's list of liabilities. Often riders, or insurance policy extensions, need to be added onto a plan to provide coverage to livestock in severe weather events.¹⁹³

¹⁹¹ *Id.*

¹⁹² *Farm Livestock Popular Plans*, PRINCE INS. GROUP, <https://prince-insurance.com/tag/farm-livestock-insurance/> (visited Mar. 6, 2022).

¹⁹³ Kate Cox & H. Claire Brown, *Hurricane Harvey Breaks Records While a Million Cattle Stand in the Floodplains*, THE COUNTER (Aug. 29, 2017), <https://thecounter.org/texas-cattle-hurricane-harvey/>.

Livestock insurance comes in several forms including individual, blanket, herd, and limited coverage.¹⁹⁴ The type of coverage purchased depends on what the farmer wants to insure. Limited coverage for instance covers a specific list of incidents including weather events and natural disasters.¹⁹⁵ These policies do not necessarily include the removal of deceased livestock following a covered loss. To get coverage for carcass removal, farmers need to purchase additional ‘Dead body removal’ coverage.¹⁹⁶

Insurance policies for livestock can be purchased for farms as a whole (including equipment), all animals located on the farm, only high-valued animals, or species-based coverage.¹⁹⁷ Ihry Insurance Agency Inc. and The Hartford, for example, offer clients the option to purchase poultry, swine, equine, and cattle insurance policies. Other options for livestock insurance coverage include “compensation for loss due to interruptions in power supply, mechanical break downs or contaminated feed supply, and coverage that pays any penalties for the loss of livestock specified in third party contracts.”¹⁹⁸

An example of problematic language used to sell farm or livestock insurance is tactlessly demonstrated by Prince Insurance Group, which asserts “this type of insurance is all about protecting your investment in livestock. If your livestock is injured or killed in an accident, you’ll be covered.”¹⁹⁹ Farm animals are a farmer’s livelihood and they are habitually viewed and referred to as “commodities” rather than living, sentient beings capable of feeling pain, fear,

¹⁹⁴ *The Insurance Station*, THE INS. STATION RSS, <https://www.insurancestationinc.com/animalmortalityinsurance/> (visited May 4, 2022).

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Farm and Ranch Insurance Coverage*, AMERICAN FAMILY INS., <https://www.amfam.com/Insurance/Farm-Ranch/Coverages?tid=megamenuinsurancefarm> (visited June 5, 2022).

¹⁹⁸ *Livestock Insurance*, IHRY INS., <https://ihryins.com/livestock-insurance/> (visited May 4, 2022).

¹⁹⁹ TIMES, *supra* note 40.

love, and curiosity.²⁰⁰ Rather than being regarded as conscious beings,²⁰¹ they are portrayed as dispensable products. Prince Insurance Group, which also sells farm and livestock insurance, provides farmers with ‘tips to avoid risks’ with their livestock:

It’s critical to avoid risk by ensuring the right assets at the right amounts. The insurance value of your livestock is usually the price you paid for them, but this amount can increase if your animal performs incredibly well or has highly valuable offspring. You wouldn’t insure a dollhouse for the same amount as a mansion, would you?²⁰²

It’s no wonder that farm animals are viewed as expendable commodities with this type of language. By compensating farmers for the loss of livestock in weather events and natural disasters, insurance companies remove the necessity for farmers to implement emergency and disaster planning on their farms. Though well intentioned, farm and livestock insurance perpetuate the damaging connotations associated with animal welfare.

a. STATE LAWS

In remarks prepared for the National Commission on Industrial Farm Animal Production Meeting on September 11, 2006, Michele Merkel of the Environmental Integrity Project highlighted the EPA’s lacking enforcement of the CWA and the CAA against CAFOs.²⁰³ Merkel states “[s]ome of the states with the highest numbers of CAFOs have permitted the fewest numbers of CAFOs under the CWA.”²⁰⁴ Merkel’s statement also mentions that rather than enforcing the CAA statutes (Emergency Planning and Community Planning and Community Right-to-Know-Act (EPCRA) and Comprehensive Environmental Response, Compensation, and

²⁰⁰ *Yes, Animals Think and Feel. Here’s How We Know*, NAT’L GEOGRAPHIC (July 15, 2015), <https://www.nationalgeographic.com/animals/article/150714-animal-dog-thinking-feelings-brain-science>.

²⁰¹ *Id.* (“[P]eople do not want animals to be conscious because it makes it easier for us to do things to animals that would be hard to do if we knew they were unhappy and suffering.”).

²⁰² *TIMES*, *supra* note 40.

²⁰³ Michele Merkel, *EPA and State Failures to Regulate CAFO’s Under Federal Environmental Laws*, ENVTL. INTEGRITY PROJECT, https://environmentalintegrity.org/pdf/publications/EPA_State_Failures_Regulate_CAFO.pdf (visited June 6, 2022).

²⁰⁴ *Id.*

Liability Act (CERCLA)) against CAFOs, the EPA has instead “negotiated an administrative consent agreement with the industry.”²⁰⁵ This has allowed factory farms to voluntarily sign the agreement²⁰⁶ in exchange for “immunity from past and future violations under the CAA, EPCRA, and CERCLA in exchange for monitoring at a limited number of facilities and payment of a small fine.”²⁰⁷ This demonstrates how factory farms are not held accountable for their pollutive practices.

The first form of animal protection in the United States originated in colonial Massachusetts in 1641 with the enactment of the “Body of Liberties,” a legal code established by the colonists.²⁰⁸ Sections ninety-two and ninety-three of the code forbade “any Tirranny or Crueltie towards any brute Creature which are usuallie kept for man's use” and required regular rest breaks and nourishment for “cattel” being used to travel long distances.”²⁰⁹ The enactment of such protections demonstrate that humans have long been concerned with animal welfare to some level. Sadly however, following this legal code, no specific legislation afforded animals with protections for approximately two hundred years.²¹⁰

Today, animal cruelty is a crime in all fifty states.²¹¹ South Dakota was the last state to make animal cruelty a felony in 2014.²¹² The degree of prosecution for animal cruelty crimes

²⁰⁵ *Id.*

²⁰⁶ *Animal Feeding Operations Consent Agreement and Final Order*, FEDERAL REGISTER (July, 12, 2005), <https://www.federalregister.gov/documents/2005/07/12/05-13672/animal-feeding-operations-consent-agreement-and-final-order>.

²⁰⁷ Haslick, *supra* note 62.

²⁰⁸ *The Massachusetts Body of Liberties* (1641), HANOVER COLL. (Aug. 1996), <https://history.hanover.edu/texts/masslib.html>.

²⁰⁹ *Id.*

²¹⁰ *Beyond the Law: Agribusiness and the Systemic Abuse of Animals*, ANIMAL LAW LEGAL CTR. (Jan. 1, 1996), <https://www.animallaw.info/article/beyond-law-agribusiness-and-systemic-abuse-animals>.

²¹¹ *The Senate Unanimously Passes a Bill that Makes Animal Cruelty a Federal Felony* CNN, (Nov. 6, 2019), <https://www.cnn.com/2019/11/05/politics/senate-pact-act-animal-cruelty-felony/index.html>.

²¹² *Top 10 Legislative Victories for Animals in 2014*, ASPCA (Dec. 30, 2014), <https://www.asPCA.org/news/top-10-legislative-victories-animals-2014>.

varies from state to state.²¹³ Each state constructs its own definition as to what constitutes a protected animal and what kinds of actions are regarded as acts of animal abuse or cruelty in their state.

At the state level, most animal laws are concerned with the protection of companion animals.²¹⁴ Depending on a given states' definition of what constitutes a companion animal, the animal cruelty law(s) may only protect cats and dogs, or it may extend to other animals including birds, horses, or even in some instances, marine animals.²¹⁵

One shortcoming of state animal protection and cruelty laws is that they often exclude livestock from their definition of "animal."²¹⁶ This typically omits them from some states anti-cruelty statutes.²¹⁷ For example, the State of Utah does not currently include livestock under its definition of animal.²¹⁸

Another downfall of state animal cruelty laws is that certain farm animal husbandry practices labeled as "accepted, common, customary, or normal" are not covered by state anti-cruelty statutes.²¹⁹ These practices are not defined by the legislature but are used in daily farming

²¹³ *Laws that Protect Animals*, ANIMAL LEGAL DEF. FUND (Oct. 29, 2020), <https://aldf.org/article/laws-that-protect-animals/>.

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Legal Protections for Animals on Farms*, at 2, ANIMAL WELFARE INST., <https://awionline.org/sites/default/files/uploads/documents/FA-AWI-LegalProtections-AnimalsonFarms-110714.pdf> (visited Jun 5, 2022).

²¹⁷ *Animal Neglect Facts: State and Local Law*, ANIMAL LEGAL DEF. FUND (Nov. 20, 2020), <https://aldf.org/article/animal-neglect-facts/animal-neglect-facts-state-law/>.

²¹⁸ UTAH CODE ANN. § 76-9-301.

²¹⁹ Wolfson, *supra* note 148, at 123.

procedures²²⁰ and so as stated by the ALDF, the “industry is allowed to police itself” by determining what establishes a “customary” farming practice.²²¹

b. RIGHT TO FARM LAWS

Alongside state animal cruelty laws, every state also has right to farm laws (RTF).²²² These laws provide farmers with protection from nuisance lawsuits. Typically, these nuisance lawsuits include complaints from neighbors and local citizens about dust, chemical use, odor, noise, and water pollution coming from farms.²²³ Although all fifty states have similar laws in place, the wording of each state’s statute varies with regards to specific details according to the state.²²⁴ Right to farm laws may act as a defense against grievances from neighbors complaining about nuisances stemming from CAFO practices.²²⁵ These laws make it difficult to hold factory farms accountable for their harmful practices.

c. CUSTOM FARMING PRACTICE REGULATIONS

Legal protection afforded to farm animals on the federal and state level can be viewed as generally absent, however, some states have strengthened regulations pertaining to the everyday abuse of farm animals. According to the Animal Welfare Institute (AWI), fourteen states have restrictions or bans on intensive confinement.²²⁶ Most laws specifically address the use of battery

²²⁰ This fact is supported by David J. Wolfson in his publication *Beyond the Law: Agribusiness and the Systemic Abuse of Animals*

David J. Wolfson, *Beyond the Law: Agribusiness and the Systemic Abuse of Animals* (1995), ANIMAL LAW LEGAL CTR., http://nationalaglawcenter.org/wp-content/uploads/2013/06/wolfson_beyond.pdf.

²²¹ *Customary Cruelty in the Farm Industry: When Animal Abuse Is Legal*, ANIMAL LEGAL DEF. FUND (Apr. 3, 2015), <https://aldf.org/article/customary-cruelty-in-the-farm-industry-when-animal-abuse-is-legal/>.

²²² *States’ Right-To-Farm Statutes*, NAT’L AGRIC. LAW CTR., <https://nationalaglawcenter.org/state-compilations/right-to-farm/> (visited May 5, 2022).

²²³ *Id.*

²²⁴ *Id.*

²²⁵ Madeline Skaller, *Protecting the Right to Harm: Why State Right to Farm Laws Should Not Shield Factory Farms from Nuisance Liability*, 27 SAN JOAQUIN AGRIC. L.R. (2017-2018).

<http://www.sjcl.edu/images/stories/sjalr/volumes/V27N1C6.pdf>.

²²⁶ *Farm Animal Anti-Confinement Legislation*, ANIMAL WELFARE INST., <https://awionline.org/content/farm-animal-anti-confinement-legislation> (visited Jun 5, 2022).

cages used for egg-laying hens, gestation crates for pregnant sows, and confinement crates for calves raised for veal.²²⁷ This section describes the replacement of small family farms with harmful large-scale factory farms and their abusive practices.

VI. SMALL CHANGES WITH BIG IMPACT: THE POWER OF LOCAL EFFORTS TO PROTECT ANIMALS

American consumers deserve food transparency. A survey conducted by YouGov in 2018, found that sixty-three percent of American consumers admitted that their food purchases are impacted by how companies treat their animals; however, forty-three percent of respondents said that they seldom check the brands of the products that they buy.²²⁸ If Americans want to enact change for farm animals, then it is up to them to educate themselves on how they make their purchases. If enough consumers purchased meat and dairy products from ethical and sustainable companies, then other brands would be forced to change their practices in order to remain in the competitive market.

With the human population on the rise, water, soil, and air quality problems caused by CAFOs will continue to intensify. However, this could be mitigated if more people incorporated plant-based food into their diets and reduced meat consumption. If our population lessened their meat intake by just a quarter, we could reduce GHG emissions by eighty-two million metric tons.”²²⁹

A growing human population will inevitably place pressure on food corporations if nothing is done to address present-day issues. As a society, however, we have the option to

²²⁷ *Id.*

²²⁸ Jamie Ballard, *Americans Care About Animal Welfare When Buying Meat*, YOUgov (Nov. 26, 2018), <https://today.yougov.com/topics/food/articles-reports/2018/11/26/ethical-meat-price-quality-animal-rights>.

²²⁹ Jillian Mock & John Schwartz, *What If We All Ate a Bit Less Meat?*, TIMES (Aug. 21, 2019), <https://www.nytimes.com/2019/08/21/climate/what-if-we-all-ate-a-bit-less-meat.html>.

implement changes in how we choose to eat. By decreasing meat, dairy, and egg intake, Americans could greatly decrease animal suffering, human suffering, and environmental issues associated with CAFOs while simultaneously heightening their personal health by simply changing their diets.

a. MOVING FORWARD / SUGGESTIONS

Given the enormous death toll of farmed animals as a direct result of natural disasters, intervention is imperative for their ultimate survival. The most practical ways to employ change is to embolden concerned citizens to make use of ballot initiatives, revision of the current Farm Bill, and changes in the American diet. This section describes intervention methods that can be implemented to improve the welfare of farm animals on CAFOs in the United States.

Ballot initiatives are ways for citizens to propose, amend, or repeal state laws by collecting certain number of signatures from registered voters.²³⁰ Americans have used ballot initiatives as a way to increase the protection for animals since the 1920s.²³¹ The first time a ballot initiative was successful in improving living conditions for farm animals was in Florida on November 5, 2002.²³² This initiative aided in placing a limitation the use of gestation crates housing pregnant sows. Over half of Florida's voters supported this initiative.²³³ Since then, three other states²³⁴

²³⁰ *States with Initiative or Referendum*, BALLOTPEDIA, https://ballotpedia.org/States_with_initiative_or_referendum (visited Mar. 6, 2022).

²³¹ *Ballot Measure/Initiative/Referendum History – Animal Protection Issues*, Humane Soc'y, <https://www.humanesociety.org/sites/default/files/docs/ballot-initiatives-chart.pdf> (visited June 6, 2022).

²³² *Florida's Historic Ban on Gestation Crates*, ANIMAL RIGHTS FOUND. OF FLA. (June 27, 2019), <http://arff.org/gestation-crates>.

²³³ *Pork Producers Are in Full Squeal Over California's Farm Animal Rules. You Should Tune Them Out*, LOS ANGELES TIMES (Feb. 23, 2022), <https://www.latimes.com/business/story/2022-02-23/pork-producers-are-in-full-squeal-over-californias-farm-animal-rules-tune-them-out>.

²³⁴ Twenty-six states have initiative processes at the statewide level meaning that those states have the power to change welfare standards for farm animals via ballot initiatives. *States with Initiative or Referendum*, BALLOTPEDIA, https://ballotpedia.org/States_with_initiative_or_referendum (visited May 4, 2022).

including Arizona, California²³⁵, and Massachusetts have utilized ballot initiatives to improve the living conditions and treatment of farm animals.²³⁶ This demonstrates that it is possible for citizens to enact change concerning the welfare of farm animals.

Another viable, yet challenging action would be to reform the current Farm Bill.²³⁷ An omnibus, multilayer-law, the Farm Bill allows politicians to set priorities with regards to food and agricultural programs for a term of five years.²³⁸ By revising the Farm Bill, legislature can compel CAFOs to strengthen their accountability as it pertains to their conduct impacting animals, people, and the environment. Once reauthorization begins, Congress seeks out feedback from stakeholders to acquire information on how to amend the Bill. After drafts of the revised Farm Bill have been voted on and passed, the bill is then sent to the president to be signed before being sent to the USDA for implementation.

If CAFOs continue to not be held accountable for their actions, they will certainly not be coerced to follow the laws that they are expected to abide by. This paper has demonstrated the myriad ways that factory farms negatively impact our society. Although concerned citizens have cried out for help to regulate CAFOs, they are rarely prosecuted for cruelty against animals and for their destruction to humans and the environment.²³⁹ This fact stresses why Americans need to

²³⁵ In 2018, California passed Prop 12 which established minimum space requirements for calves raised for veal, breeding pigs, and egg-laying hens. It also banned the sale of veal from calves, pork from breeding pigs, and eggs from hens when the animals are confined to areas below minimum square-foot requirements.

California Proposition 12, Farm Animal Confinement Initiative, BALLOTPEDIA, [https://ballotpedia.org/California_Proposition_12,_Farm_Animal_Confinement_Initiative_\(2018\)](https://ballotpedia.org/California_Proposition_12,_Farm_Animal_Confinement_Initiative_(2018)).

²³⁶ *Legal Protections for Farm Animals During Transport*, at 9, ANIMAL WELFARE INST., <https://awionline.org/sites/default/files/uploads/documents/21LegalProtectionsTransport.pdf> (visited Jun 1, 2022).

²³⁷ H.R.2 – Agriculture Improvement Act of 2018.

²³⁸ *History of the United States Farm Bill*, LIBRARY OF CONG., <https://www.loc.gov/ghe/cascade/index.html?appid=1821e70c01de48ae899a7ff708d6ad8b&bookmark=What+is+the+Farm+Bill> (visited Jun 1, 2022).

²³⁹ Slotaroff, *supra* note 2.

be persistent and continue to urge legislators to “protect communities from CAFO pollution and hold the agriculture industry accountable for its impacts under the law.”²⁴⁰

Finally, a change in diet could also alleviate pain and suffering experienced by farm animals on CAFOs. By boycotting factory farms, GHG emissions would decrease, and the numbers of animals killed for consumption would also be reduced. Tangible change does not require individuals to commit to a full vegetarian or vegan diet. The word “flexitarian” or “casual vegetarianism,”²⁴¹ is gaining traction in today’s culture as a semi-vegetarian diet. By simply reducing meat, dairy, and egg intake, consumers have the power to solve several problems faced by our nation including “heart disease, animal cruelty, high food prices, and environmental destruction.”²⁴² Once our society understands the countless destructive impacts that are associated with high levels of meat consumption, they may be keener on moderating their intake of animal products. Incorporation of more plant-based foods and a decrease in meat, dairy, and egg consumption into the average American diet could help offset the negatives impacts of CAFOs by funneling less capital and demand into big-ag.

VII. CONCLUSION

“Man is the only creature that consumes without producing. He does not give milk, he does not lay eggs, he is too weak to pull the plough, he cannot run fast enough to catch rabbits. Yet he is lord of all the animals. He sets them to work, he gives back to them the bare minimum that will prevent them from starving, and the rest he keeps for himself.”

— George Orwell, *Animal Farm*²⁴³

Climate change is on the rise, suggesting that the United States can expect to experience more catastrophic storms. Without sufficient legal intervention, farm animals will continue to be

²⁴⁰ Jon Devine & Valerie Baron, *CAFOs: What We Don't Know Is Hurting Us*, at 5, (Sept. 23, 2019), NRDC, <https://www.nrdc.org/resources/cafos-what-we-dont-know-hurting-us>.

²⁴¹ Emer Delaney, *What Is A Flexitarian Diet?*, BBC GOOD FOOD (July 4, 2018), <https://www.bbcgoodfood.com/howto/guide/what-flexitarian-diet>.

²⁴² *Could Flexitarianism Save the Planet?*, THE GUARDIAN (Jan. 19, 2019), <https://www.theguardian.com/environment/2019/jan/19/could-flexitarianism-save-the-planet>.

²⁴³ George Orwell, *Animal Farm* 19 (1946).

the forgotten victims of natural disasters. It is prudent that animal advocates band together to teach family members, friends, colleagues, young advocates, and legislators about the barbaric treatment farmed animals are subjected to on a daily basis for human consumption. Their suffering will only be exacerbated when adverse weather events strengthened by climate change strike North Carolina's most vulnerable floodplain regions.

With a growing population and amplified demand for food in an elastic market, transformation to the operation and the existence of CAFOs is imperative to obviate farm animals from incessantly being the targets of abuse and mistreatment to at the hands of exploitative humans. Agricultural exceptionalism and CAFOs negatively impact animals, humans, and the environment. They are “an environmental catastrophe and an economic catastrophe. And for too many people, it is a personal catastrophe.”²⁴⁴

All change begins at the local level; collectively, as a society, we need to urge lawmakers to take appropriate action by affording all animals with the legal protections that they deserve, regardless of species and use. Although animals are unable to vote, it does not imply that their wellbeing should be disregarded in the political process.²⁴⁵ In the words of actor and animal advocate, Joaquin Phoenix, “it takes nothing away from a human to be nice to an animal.”²⁴⁶ Together as animal advocate's, we need to be patient and persistent — true change occurs one step at a time. As musician Paul McCartney asserted, “If slaughterhouses had glass walls, everyone would be vegetarian.”²⁴⁷

²⁴⁴ King, *supra* note 87.

²⁴⁵ *Working with Legislators*, ANIMAL LEGAL DEF. FUND, <https://aldf.org/article/working-with-legislators/> (visited Apr 23, 2022).

²⁴⁶ *13 Inspiring Celebrity Quotes on Why Veganism Is the Bomb*, MERCY FOR ANIMALS (Apr. 30, 2021), <https://mercyforanimals.org/blog/13-inspiring-celebrity-quotes-on-why-veganism/>.

²⁴⁷ *If Slaughterhouses Had Glass Walls, Everyone Would Be Vegetarian*, PAUL MCCARTNEY (July 11, 2016), <https://www.paulmccartney.com/news-blogs/charity-blog/if-slaughterhouses-had-glass-walls-everyone-would-be-vegetarian>.