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## Something Stinks: The Need for Stronger Agricultural Waste Regulations

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# Something Stinks: The Need for Stronger Agricultural Waste Regulations

Audrey Curelop\*

## *Abstract*

*In the twentieth century, the American agricultural industry underwent significant changes—while most food animals were once raised on small family farms, now, over fifty percent are produced entirely inside concentrated animal feeding operations. These large-scale farming operations house hundreds to thousands of cows, swine, or chickens, which collectively produce hundreds of millions of tons of waste per year. The primary method of waste disposal is land application, a process in which waste is sprayed or spread onto land with no required pretreatment. After land application, waste byproducts make their way into the surrounding air and waterways, posing significant threats to human health and the environment.*

*This Note challenges this industry-accepted method of waste disposal. It argues that federal environmental and regulatory law and state nuisance law coincide to effectively protect large-scale agricultural facilities from liability at a detriment to American health. This Note examines liability carve-outs for industrial farming in three federal statutory schemes: the Clean Water Act, the Resource Conservation and Recovery Act, and the*

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*Comprehensive Environmental Response, Compensation and Liability Act. When federal environmental protections fail, affected parties often turn to common law tort redress. But state Right-to-Farm laws have effectively barred these claims as well.*

*Although the products of industrial agriculture are enjoyed by the many, the environmental and health impacts of the farms' waste disposal systems fall on the few. This Note additionally seeks to highlight the communities most affected—primarily, low-income communities and communities of color that neighbor the farming operations.*

*The most comprehensive solution to this health crisis involves an ideological shift in the way the American public conceptualizes the farm-to-table pipeline. This Note ultimately argues that this shift requires a catalyst—a robust federal initiative that disincentivizes hazardous agricultural waste practices and incentives sustainable farming.*

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*Anyone with a pet knows firsthand that raising animals means dealing with animal waste. But many of us may not realize that as the waste breaks down, it emits serious pollutants—most notably ammonia and hydrogen sulfide. While those emissions are miniscule for pet owners, they can be quite substantial for farms that have hundreds or thousands of animals.*

Judge Stephen Fain Williams<sup>1</sup>

#### INTRODUCTION

Industrial farming creates waste that is dangerous to human health and the environment, but regulatory laws that adequately remedy this issue are nonexistent. Because federal and state regulation of agricultural waste is minimal, industrial farms are allowed to manage waste in a way that negatively impacts the environment and health of rural communities, particularly low-income and minority communities. Where environmental regulations fail to provide adequate remedies, communities often rely on common law tort claims as a means for limited redress. In the case of agricultural waste, however, Right-to-Farm laws and other state legal protections for farmers remove the fail-safe of tort liability. As a result, agricultural waste goes largely unchecked and those affected by it are left without a remedy. Due to the particularly politicized nature of state farming legislation, this problem can only be fixed with a strong federal initiative. This initiative must commence with a

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1. *Waterkeeper All. v. EPA*, 853 F.3d 527, 529 (D.C. Cir. 2017).

robust federal statutory and regulatory scheme that disincentivizes hazardous agricultural waste practices and incentivizes sustainable farming. But the issue of environmentally dangerous agricultural waste disposal requires more than a legal solution—the ultimate remedy will only come with a collective shift in the way the American people conceptualize the farm-to-table pipeline.

This Note begins with an introduction to the history of American agriculture and a discussion of current waste disposal methods and their impacts on human health and the environment.<sup>2</sup> Next, this Note presents the regulatory landscape surrounding agricultural waste with a particular focus on the Resource Conservation and Recovery Act (RCRA),<sup>3</sup> the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),<sup>4</sup> and the Clean Water Act (CWA).<sup>5</sup> This Part also discusses the ways in which state regulations fail to fill federal regulatory gaps.<sup>6</sup> This Note then discusses nuisance as a common law means of environmental activism, how Right-to-Farm laws preclude this remedy, and *McKiver v. Murphy-Brown*<sup>7</sup>—the nuisance case that recently spurred a regeneration of state agricultural protections.<sup>8</sup> The Note concludes with three concrete solutions: (i) amend the CWA to more broadly cover “concentrated animal feeding operation[s]” as point sources; (ii) amend RCRA to specifically classify “agricultural waste” as “hazardous;” and (iii) impose CERCLA liability on agricultural facilities based on the new CWA and RCRA definitions.<sup>9</sup>

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2. See *infra* Part I.

3. 42 U.S.C. §§ 6901–6992.

4. 42 U.S.C. §§ 9601–9675.

5. 33 U.S.C. §§ 7401–7675; see *infra* Part II.A.

6. See *infra* Part II.B.

7. 980 F.3d 937 (4th Cir. 2020).

8. See *infra* Part III.

9. See *infra* Part IV.

## I. ENVIRONMENTAL & SOCIAL IMPACT OF AGRICULTURAL WASTE

Rosemary Partridge “love[s] hogs.”<sup>10</sup> She grew up on a small farm in Iowa where she and her family raised pigs, cattle, and sheep, and grew crops.<sup>11</sup> In fact, Rosemary still lives in Iowa, where she and her husband continue to farm.<sup>12</sup> But in the “nearly 40 years” they have lived there, the neighborhood has changed—the small farming community has become commercial.<sup>13</sup> Rosemary’s “land is now surrounded by hog factories,” and the animal waste pollution “is almost unbearable.”<sup>14</sup> Unfortunately, Rosemary’s story is not exceptional. While agriculture has always played a prominent role in the American experience, the move from small to industrial farming has drastically changed the effect of farming on the American people, with one of the largest environmental and health impacts resulting from agricultural waste management.

This Part will first discuss the history of American agriculture. Next, it will discuss the current best practices in agricultural waste disposal and the negative health impacts caused by improper management of agricultural waste. Lastly, this Part will discuss the impact that waste disposal practices have on surrounding communities.

### A. *A Brief History of American Agriculture*

Each state has a rich agricultural history, from egg and poultry production in Alabama to rows of soybeans in Delaware and hills of sweet potatoes in Louisiana.<sup>15</sup> Across the United States, however, farming has changed drastically in the last

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10. Rosemary Partridge, *My Nightmare Neighbors: 30,000 Hogs and Their (Secretly Toxic) Manure*, MEDIUM (Dec. 15, 2016), <https://perma.cc/FM7L-9PM8>.

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. See Seth Berkman, *How Farming Has Changed in Every State the Last 100 Years*, STACKER (Sept. 3, 2020), <https://perma.cc/86N9-CRD2> (comparing data from the 1920 Agriculture Census to the 2019 Census State Agriculture summaries).

century.<sup>16</sup> The agricultural operations of our past consisted primarily of smaller and geographically widespread family farms, but now “[m]ost dairy cows, chickens, pigs and turkeys in the US are housed in high-density, confined spaces.”<sup>17</sup> Additionally, while American farming has expanded and increased in value since 1920, the number of farms has dramatically decreased.<sup>18</sup> For example, in the 1920s, Kentucky was best known for horse and cattle ranching: the state housed over 382,442 horses and over one million cattle across 270,626 farms.<sup>19</sup> Over the past century, the number of farms in Kentucky dropped to 75,100 (a 72.2% decrease from 1920), while cattle inventory rose to 2.1 million and chicken production rose to over 303 million.<sup>20</sup> Notably, the total farm acres in Kentucky in 2019 was 12.9 million, a 40.3% decrease from 1920.<sup>21</sup> Scholars have attributed this shift to the increased market demand for poultry in the 1930s, which spurred a change from a seasonal agricultural cycle to continuous production.<sup>22</sup> At the time, “the US army was the largest consumer of broiler chickens and, following [World War II], the integrated model was increasingly adopted by the industry.”<sup>23</sup> Starting in the 1970s, other livestock

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16. Jay P. Graham & Keeve E. Nachman, *Managing Waste from Confined Animal Feeding Operations in the United States: The Need for Sanitary Reform*, 8 J. WATER & HEALTH 646, 647 (2010).

17. *Id.*

18. See Berkman, *supra* note 15 (“[T]here were almost three times as many farms 100 years ago than there are today—in 1920 there were 6.4 million farms, while 2020 estimates come in at two million.”).

19. *Id.*; see also USDA, 2017 CENSUS OF AGRICULTURE: UNITED STATES SUMMARY AND STATE DATA 7–8 [hereinafter 2017 CENSUS] (detailing historical highlight data of the United States’ agricultural censuses from 1987 to 2017). Notably, while the number of farms in the United States has decreased over the last ten years, the average size of farms and the average market value of agricultural products sold per farm have increased. *Id.*

20. Berkman, *supra* note 15; see also U.S. DEP’T OF COMMERCE, BUREAU OF THE CENSUS, FOURTEENTH CENSUS OF THE UNITED STATES TAKEN IN THE YEAR 1920, AGRICULTURE, ch. X, tbl. 3 (1920) (reporting approximately ten million chickens in Kentucky in 1920).

21. Berkman, *supra* note 15.

22. See Graham & Nachman, *supra* note 16, at 647 (attributing the “industrial system of raising and processing large numbers of animals in confinement” to the broiler poultry industry).

23. *Id.* The integrated model created a corporate relationship between “companies that perform most of the production activities,” the integrators, and farmers or growers contracted to “lease [livestock] from the integrator.”

production industries began to adopt similar practices.<sup>24</sup> Now, “nearly half of all food animals are produced” in concentrated animal feeding operations (CAFOs)—yet these operations “occupy less than 5% of the land base used for animal production.”<sup>25</sup>

### B. *Common Agricultural Waste Disposal Methods*

As agricultural operations evolved to house more animals in increasingly condensed spaces, the amount of concentrated animal waste produced soared.<sup>26</sup> Farming operations were then tasked with developing waste disposal systems to deal with the new model of livestock production.<sup>27</sup>

Swine and cattle operations predominately adopted “water-based slurry systems that essentially flush waste from the floors where the animals are housed, and channel the liquid slurry into large ponds for storage.”<sup>28</sup> These ponds, or “lagoons,” are not a permanent location for animal waste; instead, the waste is later utilized.<sup>29</sup> “Utilization includes reusing and/or

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*Id.* This model allows integrators to “maintain strict controls over much of the farmers’ activities” regarding raising, feeding, managing, and providing for veterinary treatments of the leased animals. *Id.* While not the topic of this Note, another significant drawback of this model is that it often takes bargaining power away from the farmers, most of whom earn proportionally low wages and must take on significant debt to buy into these investments. *See id.* (“[N]early three-quarters of poultry farmers earn below poverty-level wages and most farmers have significant debt from capital investments that reduce their bargaining power with integrators.”).

24. *See id.* at 648 (“Swine production demonstrated a 574% increase in the number raised in confinement in the US between 1982 and 1997.”).

25. *Id.* The Sierra Club defines “CAFO” as “an industrial-sized livestock operation” that confines “anywhere from hundreds to millions of animals . . . at least 45 days or more per year in an area without vegetation.” *Why Are CAFOs Bad?*, SIERRA CLUB MICH. CHAPTER, <https://perma.cc/RDK5-S8LV>; *see also infra* notes 161–165 and accompanying text.

26. *See* Graham & Nachman, *supra* note 16, at 649 (“According to the US Department of Agriculture, confined food animals produce roughly 335 million tons of waste . . . per year.”).

27. *See, e.g., id.*, at 650 (attributing the need for current waste disposal systems to “insufficient space available for each animal to freely excrete and for natural systems to absorb and decompose these wastes”).

28. *Id.*

29. *See, e.g.,* McKiver v. Murphy-Brown, LLC, 980 F.3d 937, 946 (4th Cir. 2020) (“Kinlaw Farms periodically drained waste from the lagoons and spread it across open ‘sprayfields’”).



recycling of waste products,” and methods of utilization vary depending on the type of animal waste.<sup>30</sup> Dairy and cattle waste is often “used as bedding for livestock, marketed as compost, and used as an energy source.”<sup>31</sup> But the most common utilization for both cattle and swine operations is “land application.”<sup>32</sup> The three common methods of land application include the use of (i) “spreading devices” for solid waste; (ii) “irrigation systems” for liquid or partially liquid waste; and (iii) soil injection, if “odors are a problem.”<sup>33</sup> Alternatively, swine and cattle farms can dispose of solid waste mixed with bedding by applying it directly to fields as fertilizer, but this is a less common method.<sup>34</sup>

In contrast, poultry waste is almost exclusively collected and disposed of as solid waste.<sup>35</sup> “Waste associated with poultry operations includes manure and dead poultry,” and “can also include litter, wash-flush water, and wasted feed.”<sup>36</sup> There are two types of standard poultry confinement facilities: those used to house broilers and turkeys produced for meat, and those to house layers.<sup>37</sup> Generally, broilers are housed in large barns for the time it takes to raise a flock, about five to seven weeks.<sup>38</sup> During that time, manure is “allowed to accumulate on the floor

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30. See USDA, AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK 5, 14, 17, 18 (2011) [hereinafter WASTE MANAGEMENT HANDBOOK].

31. *Id.* at 14.

32. *Id.* at 14, 18.

33. *Id.* at 18.

34. See *Animal Agriculture in the U.S.—Trends in Production and Manure Management*, LIVESTOCK & POULTRY ENV'T LEARNING CMTY. (Mar. 5, 2019), <https://perma.cc/2PSW-WXDA> (“In decades past, most farms handled manure as a solid material, often mixed with bedding, and hauled the manure and bedding out to a field regularly, referred to as ‘daily haul.’”).

35. See *Layer Hen Housing and Manure Management*, LPE LEARNING CTR. [hereinafter *Layer Management*], <https://perma.cc/8FR5-4CGJ> (“Manure from layer housing is predominantly handled as a solid or semi-solid that is moist when excreted and then dries out, to varying degrees, during the manure movement and storage process.”); *Broiler Chicken Farms and Manure Management*, LPE LEARNING CTR. [hereinafter *Broiler Management*], <https://perma.cc/M7MT-6W22> (“Broiler litter is a solid manure and can be collected and stored as such [and the] mixture of bedding and manure (litter) makes broilers different than other major animal agriculture sectors.”).

36. WASTE MANAGEMENT HANDBOOK, *supra* note 30, at 25.

37. *Id.*

38. See *Broiler Management*, *supra* note 35 (“A typical broiler house will have 20–30,000 birds and can raise 5–7 flocks per year.”).

where it is mixed with litter” and “forms a ‘cake’ that is removed between flocks.”<sup>39</sup> Layer hens are usually housed in cages, which are commonly organized in a “high-rise” system so that rows of cages are placed on top of one another with manure belt systems to remove waste between each row.<sup>40</sup> “The belt below each cage catches manure to prevent it from dropping on the birds below and then carries [it] away for storage outside of the hen house.”<sup>41</sup> In both systems, the removed waste is applied directly to the land.<sup>42</sup> The U.S. Department of Agriculture recommends that owners who “do not have enough land suitable for application . . . should arrange to apply the waste to their neighbors’ land.”<sup>43</sup>

As discussed in greater detail below, the current agricultural waste methods endanger the environment and public health because byproducts in animal waste commonly find their way into nearby water supplies or are sprayed into the air.<sup>44</sup>

### C. *Environmental & Public Health Impacts*

Regardless of the original method of waste disposal, almost all agricultural waste is ultimately utilized as fertilizer and “applied to land without any required pretreatment.”<sup>45</sup> In comparison, human biosolids are treated to the point where they “are assumed to be pathogen-free,” or by a “process [which] significantly reduce[s] pathogens.”<sup>46</sup> This is significant because

39. WASTE MANAGEMENT HANDBOOK, *supra* note 30, at 25.

40. *Id.*; see *Layer Management*, *supra* note 35 (“Manure belts can be used with conventional cages, each containing around 8 birds and stacked one on top of another.”).

41. *Layer Management*, *supra* note 35.

42. WASTE MANAGEMENT HANDBOOK, *supra* note 30, at 25.

43. *Id.* Because “[c]hicken manure is rich in nutrients like nitrogen, phosphorus, and potassium, . . . [t]he vast majority of layer manure today is sold to third parties.” *Layer Management*, *supra* note 35. *But see* Graham & Nachman, *supra* note 16, at 652 (“The problems are exacerbated when operations over-apply waste, a common practice among larger operations that lack sufficient land for waste application.”).

44. See *infra* Part I.C.

45. Graham & Nachman, *supra* note 16, at 650. “For example, for poultry litter, over 90% is applied to land.” *Id.*

46. *Id.* Biosolids that are assumed to be pathogen-free are classified as Class A and can be applied to any land once the treatment process concludes.

“pathogens in animal waste can be equal to or even higher than levels found in human wastewater and sludge.”<sup>47</sup> For example, swine waste “can contain 28 times the density of [fecal] streptococci found in human waste.”<sup>48</sup> If we as a society acknowledge that human waste needs to be treated before it is disposed to prevent dangers to the environment and human health, why not animal waste? After all, the EPA has acknowledged that “confined livestock and poultry operations generate three times as much raw waste as humans.”<sup>49</sup>

Scientific studies have confirmed that untreated animal wastes applied to land can lead to toxicity in neighboring water sources.<sup>50</sup> Once applied to the land, byproducts of animal waste make their way by means of runoff<sup>51</sup> to both waterways and groundwater.<sup>52</sup> Prior to land application, storage in waste lagoons can also pose risks to clean water due to leaks and ruptures caused by poor management or weather.<sup>53</sup> One study found that concentrations of fecal coliforms in streams neighboring swine CAFOs commonly “exceeded state and federal recreational water quality guidelines,” suggesting

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*Id.* Class B, biosolids that “have a [fecal] coliform count less than  $2 \times 10^6$  per gram or have been treated by a ‘process to significantly reduce pathogens,’” can be applied only to “agricultural, forest and mine reclamation sites.” *Id.* Any treated biosolids may not be applied to land unless approved by the EPA. *See id.* (“[I]f biosolids do not meet these limits, they can still be approved by the EPA for land amendment as long as they are accompanied by an information sheet specifying maximum annual application rate.”).

47. *Id.*

48. *Id.* at 651.

49. Terence J. Centner, *New Regulations to Minimize Water Impairment from Animals Rely on Management Practices*, 30 ENV'T INT'L 539, 539 (2004)

50. *See, e.g.*, Christopher D. Heaney et al, *Source Tracking Swine Fecal Waste in Surface Water Proximal to Swine Concentrated Animal Feeding Operations*, 511 SCI. TOTAL ENV'T 676, 677 (2015) (finding that fecal coliforms, *E. coli*, and *Enterococcus* [fecal indicator bacteria] sample concentrations “exceeded state and federal recreational water quality guidelines” by 40, 23, and 61%, respectively, both up- and downstream from North Carolina swine CAFO lagoons).

51. *See id.* at 681 (tracking “swine-specific fecal waste runoff . . . proximal to swine CAFO liquid waste land application sites”).

52. *See Agricultural Contaminants*, U.S. GEOLOGICAL SURV., U.S. DEP'T OF THE INTERIOR (Mar. 1, 2019), <https://perma.cc/KYB9-MZJV> (“Agricultural contaminants can impair the quality of surface water and groundwater.”).

53. *See, e.g.*, Graham & Nachman, *supra* note 16, at 650 (documenting spills in Iowa, Missouri, Nebraska, Ohio, Maryland, and New York).

“diffuse and overall poor sanitary quality of surface waters where swine CAFO density is high.”<sup>54</sup> In addition to fecal coliforms, pathogenic microorganisms, zoonotic protozoa, antibiotic-resistant bacteria, and pharmaceuticals often inhabit food animal waste.<sup>55</sup>

In terms of microbial pathogens, “*Salmonella spp.*, *Campylobacter spp.*, *Listeria monocytogenes*, *Cryptosporidium parvum*, *Giardia lamblia*, [and] *E. Coli* . . . are the most common causative agents of disease and outbreaks that most likely originate from animal-feeding operations.”<sup>56</sup> These are especially worrisome because they can survive for extended periods of time and are transported long distances in water.<sup>57</sup> These bacteria have been found to travel both upstream and downstream of CAFOs.<sup>58</sup> Healthy people exposed to microbial pathogens typically recover “after a bout of diarrhea, [but] more vulnerable groups like infants, pregnant women, the elderly, and those with weak immune systems are at risk of severe illness and death.”<sup>59</sup>

Similarly, protozoa are microparasites found in animal waste that “are of a particular concern . . . due to their high prevalence and environmental stability.”<sup>60</sup> “The ability of [protozoa] to withstand chlorination and other disinfectants increases the threat of disease.”<sup>61</sup> Additionally, they commonly and asymptotically present themselves in animals, particularly cattle, which excrete them with no sign of infection.<sup>62</sup> The most common protozoan found in cattle is *C. parvum*, which is transmitted through contaminated food and

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54. *Id.* at 676.

55. *See id.* at 652–54 (detailing the risks associated with byproducts of food animal waste).

56. *Id.* at 652.

57. *Id.*

58. *See* Heaney et al., *supra* note 50, at 684 (noting that upstream “locations did not represent pristine non-impacted sites” because fecal indicator bacteria were still detected).

59. D. LEE MILLER & GREGORY MUREN, NAT. RES. DEF. COUNCIL, CAFOS: WHAT WE DON’T KNOW IS HURTING US 8 (2019).

60. Graham & Nachman, *supra* note 16, at 652.

61. *Id.*

62. *See id.* (“Prevalence rates . . . range from 1.1 to 62.4% in apparently healthy cattle and up to 79% in symptomatic calves.”).

water, is currently untreatable in humans, and leads to diarrhea and malnutrition.<sup>63</sup>

Excess pharmaceuticals in farm animal waste also pose a risk to human health. Some of the more prevalent pharmaceuticals found in agricultural waste are antibiotics.<sup>64</sup> “Estimates of the amounts of antimicrobials used in US food-animal production currently range from 3.1 million pounds to approximately 25 million pounds annually . . . [and antimicrobials] have been found in surface and groundwater located near swine and poultry operations.”<sup>65</sup> Farmers began giving antibiotics to livestock “some 50 years ago” to “improv[e] growth, feed efficiency and disease prevention.”<sup>66</sup> One of the most prevalent antimicrobial feed additives used in both poultry and swine production is Roxarsone, which degrades to arsenite and arsenate—leachable forms of arsenic—when excreted in animal waste.<sup>67</sup> This compound is known to cause cancer and other dangerous health conditions.<sup>68</sup> Another risk associated with the overuse of antibiotics is the increased presence of antimicrobial-resistant bacteria in animal waste.<sup>69</sup> “[S]tudies have found antibiotic-resistant bacteria in soil, surface and ground water, air and wild animal populations near AFOs (Animal Feeding Operations).”<sup>70</sup> These bacteria can lead to antibiotic-resistant intestinal infections, “either through direct contact with animals and animal environments or through contaminated drinking or swimming water.”<sup>71</sup>

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63. See Hanan H. Abdelbaky et al., *A Review on Current Knowledge of Major Zoonotic Protozoan Diseases Affecting Farm and Pet Animals*, 2 GER. J. VETERINARY RSCH. 61, 64 (2021) (summarizing the “control measures for major zoonotic protozoan diseases”).

64. See Graham & Nachman, *supra* note 16, at 653 (noting that antibiotic use in farming operations ranges from “13 to 70% of all antimicrobial use in the US,” but also that estimates vary because there are not regulations in place that require “public reporting of actual use”).

65. *Id.*

66. *Id.*

67. *Id.*

68. *See id.*

69. *See id.* (“[T]he use of sub-therapeutic antimicrobials increases the likelihood that antimicrobial resistant bacteria are present in the waste.”).

70. *Id.* at 652.

71. *Antibiotic Resistance, Food, and Food Animals*, CDC, <https://perma.cc/A9AH-FE4H> (last updated Oct. 26, 2021).

Some may argue that the potential use of antibiotics in day-to-day farming practices poses less of a threat in recent years because of FDA guidance documents suggesting that farms should discontinue the practice.<sup>72</sup> While recognition from the FDA that “the use of medically important antimicrobial drugs for production purposes in food-producing animals does not represent a judicious use of these drugs”<sup>73</sup> represents a step in the right direction, the guidance documents are merely permissive.<sup>74</sup> Thus, they do not create legally enforceable responsibilities for agricultural facilities to discontinue the use of preventative or daily antibiotics.<sup>75</sup>

Discharge into neighboring water can also cause serious harm to ecological communities, including marine life and commercial fisheries.<sup>76</sup> For example, “discharge of hog waste . . . affects the aquatic ecosystems as it ends up polluting larger water bodies, killing fish and depleting food and economic resources of the communities.”<sup>77</sup> Most commonly, these effects are caused by a “dead zone,” “an area of depleted oxygen that

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72. See FDA, NEW ANIMAL DRUGS AND NEW ANIMAL DRUG COMBINATION PRODUCTS ADMINISTERED IN OR ON MEDICATED FEED OR DRINKING WATER OF FOOD-PRODUCING ANIMALS: RECOMMENDATIONS FOR DRUG SPONSORS FOR VOLUNTARILY ALIGNING PRODUCT USE CONDITIONS WITH GFI #213, at 4 (2013) [hereinafter GFI #213], <https://perma.cc/9UUW-DX52> (PDF) (recommending that antibiotic use in animals be limited to “medically important . . . uses . . . that are considered necessary for assuring animal health, and . . . uses in animals that include veterinary oversight or consultation”).

73. *Id.*

74. See *id.* at 3 (“This guidance represents the [FDA’s] current thinking on this topic. It does not create or confer any rights for or on any person and does not operate to bind FDA or the public.”).

75. See *id.* at 2–26 (stating “Contains Nonbinding Recommendations” at the top of every page). *But see Timeline of FDA Action on Antimicrobial Resistance*, FDA, <https://perma.cc/S6ST-AGXF> (last updated Apr. 30, 2021) (noting that the 2017 implementation of GFI #213 transitioned the use of medically important antimicrobial drugs to “*requir[e]* veterinary oversight and eliminate[] production use” (emphasis added)). The FDA’s proclivity to use compulsory language to describe this guidance document is interesting considering, again, the document is nonbinding.

76. See Bradley R. Finney, *Agricultural Law Stifles Innovation and Competition*, 72 ALA. L. REV. 785, 797 (2021).

77. Abel Radian, *Factory Farming and Environmental Racism*, FACTORY FARMING AWARENESS COAL. (Aug. 5, 2020), <https://perma.cc/4KKY-683U>.

kills and displaces fish and marine life and is caused primarily by nutrient . . . runoff from agriculture.”<sup>78</sup>

Beside the dangers to clean water, fumes from confined barns and the spray-field-land-application method<sup>79</sup> pose additional risks to clean air by releasing “ammonia, hydrogen sulfide, and other gases.”<sup>80</sup> “The components of the particulate matter found in concentrated animal production systems may include soil particles, bedding materials, fecal matter, litter, and feed, as well as bacteria, fungi, and viruses.”<sup>81</sup> Inhalation of the particulate matter can lead to chronic respiratory symptoms.<sup>82</sup> Specifically, exposures to “organic dusts from livestock barns and confinements . . . can lead to increased rates of COPD, asthma, hypersensitivity pneumonitis, interstitial lung disease, and possibly lung cancer.”<sup>83</sup> Recently, the National Academy of Sciences published a comprehensive assessment of deaths in the United States resulting from airborne agricultural pollutants in which it stated that “[p]oor air quality is the largest environmental health risk in the United States and worldwide.”<sup>84</sup> The assessment revealed that “[a]griculture is a major contributor to air pollution,” resulting in approximately 15,900 “annual air quality-related deaths . . . from food

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78. Finney, *supra* note 76, at 797.

79. See *supra* notes 32–33 and accompanying text.

80. MILLER, *supra* note 59, at 8; see Selçuk Arslan & Ali Aybek, *Particulate Matter Exposure in Agriculture*, in AIR POLLUTION: A COMPREHENSIVE PERSPECTIVE 73, 84 (Budi Haryanto ed., 2021) (“Class of animal, animal activity levels, type of bedding material, cleanliness of the buildings, temperature, relative humidity, ventilation rate, stocking density, and feeding method are among the factors affecting the dust concentrations in animal production.”); Tara M. Nordgren & Kristina L. Bailey, *Pulmonary Health Effects of Agriculture*, 22 CURRENT OP. PULMONARY MED. 144, 144.

81. Arslan & Aybek, *supra* note 80, at 84.

82. *Cf. id.* (“Compared to non farmers, pig, poultry or cattle farmers have greater prevalence of work related and chronic respiratory symptoms.”).

83. Nordgren & Bailey, *supra* note 80, at 144.

84. Nina G. G. Domingo et al., *Air Quality-Related Health Damages of Food*, PROCEEDINGS OF THE NAT’L ACAD. OF SCIS., Mar. 18, 2021, at 1.

production” in the United States.<sup>85</sup> Of these annual deaths, 80 percent are attributable to animal-based food production.<sup>86</sup>

Despite courts taking note of the serious environmental and public health risks associated with current agricultural waste disposal systems,<sup>87</sup> legislators seem to turn a blind eye and regulatory laws continue to fail the communities most affected.<sup>88</sup> And while the risk of encountering dangerous byproducts from agricultural waste is serious for anyone, it is a much more probable risk for the communities neighboring agricultural areas.<sup>89</sup> As discussed fully in the next Part, livestock operations are often located in minority and low-income communities, placing the most serious environmental and health impacts of CAFOs in the backyards of some of the most powerless political communities.<sup>90</sup>

#### D. *Environmental Justice: Protect the Neighbors*

While CAFOs produce over 50 percent of all food animals,<sup>91</sup> the environmental and health impacts of the production fall on the few: the nearby communities. These communities are

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85. *Id.* “In the United States alone, atmospheric fine particulate matter from anthropogenic sources is responsible for about 100,000 premature deaths each year, one-fifth of which are linked to agriculture.” *Id.*

86. *Id.* at 2. The researchers attribute this figure to deaths directly caused by livestock production (43%) and deaths indirectly linked to livestock production via impacts of animal feed production. *Id.*

87. *See, e.g.,* *Waterkeeper All. v. EPA*, 853 F.3d 527, 529 (D.C. Cir. 2017) (“[A]s waste breaks down, it emits serious pollutants—most notably ammonia and hydrogen sulfide.”); *Waterkeeper All. v. EPA*, 399 F.3d 486, 494 (2d Cir. 2005) (“Animal waste includes a number of potentially harmful pollutants. . . . These pollutants can infiltrate the surface waters in a variety of ways.”); *Cmty. Ass’n for Restoration of the Env’t v. Henry Bosma Dairy*, 65 F. Supp. 2d 1129, 1133 (E.D. Wash. 1999).

88. *See infra* Part II.A.

89. *See Radian, supra* note 77.

90. *See* David H. Harris, Jr., *The Industrialization of Agriculture and Environmental Racism: A Deadly Combination Affecting Neighborhoods and the Dinner Table*, 7 RACE, POVERTY & THE ENV’T 39, 39 (“The same economic neglect that makes people of color communities and low-income communities prime targets of the usual polluting industrial activities also makes them prime targets of the environmental harm cause by agribusiness’ efforts to monopolize our food supply through unsustainable production methods.”).

91. *See supra* note 25 and accompanying text.



predominantly low-income and communities of color.<sup>92</sup> This is not an accident—it is an intentional tactic on the part of the agriculture industry.<sup>93</sup> Environmental activists call this environmental racism, defined as the phenomenon by which “Black, Brown, and Indigenous communities and low-income communities . . . are burden[ed] with a disproportionate number of facilities that fill the air, soil, and water with contaminants.”<sup>94</sup> It is “no mistake that these companies targeted the communities they did. They did it because they perceived the communities to have the least amount of political and economic power to fight them.”<sup>95</sup> Industrial farms also move into these areas because land is cheaper.<sup>96</sup> Additionally, these facilities create jobs.<sup>97</sup> Because rural residents in low-income communities value the promise of economic stability, they are more likely to “accept [] negative health consequences and adverse effects on the environment in order to have a job.”<sup>98</sup>

One of the most documented instances of environmental racism by food-animal production is in the North Carolina pork

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92. See, e.g., Sacoby M. Wilson et al., *Environmental Injustice and the Mississippi Hog Industry*, 110 ENV'T HEALTH PERSP. 195, 199 (“[T]he majority of the Mississippi’s industrial hog operations are located in areas with high percentages of African Americans and persons in poverty.”); Christine Ball-Blakely, *CAFOs: Plaguing North Carolina Communities of Color*, 18 SUSTAINABLE DEV. L. & POL’Y 4 (discussing the impact of the pork industry on communities of color and low-income communities in North Carolina).

93. See *CAFOs Distribution of Confinements*, N.C. ENV’T JUST. NETWORK, <https://perma.cc/ANF8-ZRJX> (“[C]orporations are lured by pro-business tax incentives, lax environmental regulations, minimal oversight, and encounter little push back from community residents.”).

94. *Environmental Racism*, FOOD EMPOWERMENT PROJECT, <https://perma.cc/PGA3-2KBC> (last updated Jan. 2022).

95. *How the Meat Industry Thrives on Environmental Racism*, MERCY FOR ANIMALS, <https://perma.cc/LJM5-TQPH>.

96. See *Environmental Racism*, *supra* note 94 (“[B]ecause of the distinct connections between race and class in the United States, poor rural areas tend to house Black, Brown, and Indigenous communities and the land in these areas is cheaper.”).

97. See *Ag and Food Sectors and the Economy*, USDA, <https://perma.cc/3WNC-BHZC> (“In 2020, 19.7 million full- and part-time jobs were related to the agricultural and food sectors.”) (last updated Feb. 24, 2022).

98. *Environmental Racism*, *supra* note 94.

industry.<sup>99</sup> “Industrial hog operations in North Carolina are disproportionately located in communities of low-income people and people of color, where inadequate housing, poor nutrition, lack of access to medical care, and simultaneous exposure to other environmental and occupational hazards may exacerbate their impact.”<sup>100</sup> In North Carolina, the human population only slightly outnumbers the hog population.<sup>101</sup> But the hogs are predominantly housed in farms located in the Southeastern part of the state, with the most densely populated operations located in Duplin and Sampson Counties.<sup>102</sup> In Duplin County, the hogs outnumber people approximately thirty to one.<sup>103</sup> In this region, the human population is made up primarily of communities living below the poverty line and non-white, mostly Black, communities.<sup>104</sup> This is especially poignant considering that the eastern plains region of North Carolina, a section of the “Black Belt,”<sup>105</sup> is “a region where the agricultural economy was first

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99. This is due largely to research headed by epidemiologist Steve Wing and his colleagues at the University of North Carolina. See *infra* notes 100–102 and accompanying text.

100. Steve Wing et al., *Integrating Epidemiology, Education, and Organizing the Environmental Justice: Community Health Effects of Industrial Hog Operations*, 98 AM. J. OF PUB. HEALTH 1390, 1390–91 [hereinafter Wing et al., *Community Health Effects*].

101. See *QuickFacts North Carolina*, U.S. CENSUS BUREAU (estimating a 10,551,162 population as of July 1, 2021); USDA, QUARTERLY HOGS AND PIGS 6 (2021), (estimating a total inventory of 8,500,000 hogs located in North Carolina in September 2021).

102. See Steve Wing et al., *Environmental Injustice in North Carolina’s Hog Industry*, 108 ENV’T HEALTH PERSPS. 225, 227 (2000) [hereinafter Wing et al., *Env’t Injustice*] (“The dense area of operations in the southeastern part of the state is centered on Duplin and Sampson Counties, the two largest hog-producing counties in the United States.”).

103. See Doug Bock Clark, *Why Is China Treating North Carolina Like the Developing World?*, ROLLING STONE (Mar. 19, 2018), <https://perma.cc/KHZ6-ZVVJ> (noting that this estimate equates to “about 2,450 pigs per square mile”).

104. See Wing et al., *Env’t Injustice*, *supra* note 102, at 227 (noting that the highest-poverty areas are in North Carolina’s eastern coastal plain, areas with higher proportions of non-white communities compared to the entire state). “An exception to the primarily African American makeup of the state’s [eastern] nonwhite population is Robeson County, . . . home to the Lumbee Indians and its population is approximately one-third Native American.” *Id.*

105. See Ball-Blakely, *supra* note 92, at 4 (“The Black Belt, a crescent-shaped band throughout the South where slaves worked on plantations, runs squarely through eastern North Carolina, . . . [and] has

built on the basis of slave labor.”<sup>106</sup> Although residents of these areas have complained about the concentrated farming and its impact on quality of life since the 1990s, they have received chilled responses from legislators.<sup>107</sup> Instead of taking the resident’s worries seriously, elected officials tended to point towards the legality of the operations, requesting “research that documented problems, [and] placing the burden of proof on the public and the communities themselves.”<sup>108</sup> Although colloquial accounts of the hog waste problem are vast,<sup>109</sup> “most community members d[o] not have experience conducting research,”<sup>110</sup> and they lack resources to examine the quantitative impacts that agricultural land use and waste management practices have on their quality of life.<sup>111</sup> As a result, the stinky status quo persists.

The situation in North Carolina is not an isolated occurrence—environmental racism and injustice resulting from industrial farming exists throughout the United States. In Mississippi, hog operations are similarly located in low-income and Black communities.<sup>112</sup> In Maryland, poultry CAFOs and meat processing facilities are disproportionately located in low-income and minority communities, respectively.<sup>113</sup> In California, there is evidence that dairy farms are

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historically been defined as those places with a black population majority at the time of the Civil War.” (quotations omitted)).

106. Wing et al., *Env’t Injustice*, *supra* note 102, at 225.

107. See Wing et al., *Community Health Effects*, *supra* note 100, at 1391.

108. *Id.*

109. See, e.g., Barry Yeoman, “It Smells Like a Decomposing Body”: North Carolina’s Polluting Pig Farms, *THE GUARDIAN* (Aug. 27, 2019), <https://perma.cc/6GWS-RS6F>; see also Wing et al., *Community Health Effects*, *supra* note 100, at 1391 (devising an epidemiological study based on interviews with hog farm neighbors in North Carolina to determine the effect on quality of life).

110. Wing et al., *Community Health Effects*, *supra* note 100, at 1391.

111. *Id.* at 1390.

112. See Wilson et al., *supra* note 92, at 195 (“At increasing levels of percentage African Americans and percentage of persons in poverty, there are 2.4–3.6 times more operations compared with the referent group.”).

113. See Jonathan Hall et al., *Environmental Injustice and Industrial Chicken Farming in Maryland*, 18 *INT’L J. OF ENV’T RSCH. & PUB. HEALTH* 1, 11 (2021) (using hot spot analysis to determine the associations between environmental justice variables and the location of Maryland CAFOs and meatpacking facilities).

disproportionately located in Latinx communities.<sup>114</sup> While the racial and economic makeup of communities surrounding industrial farms is not well-documented across all states, Geographic Information System (GIS) mapping<sup>115</sup> and the history of the United States exploiting raw materials from rural America<sup>116</sup> suggest that the trend of environmental racism surrounding agricultural operations is pervasive.

## II. REGULATORY LANDSCAPE

Although the problem is clear, and the negative human and environmental health effects are well established, federal and state laws fail to protect the affected communities. This Part will discuss the failings of the federal and state regulatory systems governing agricultural waste. First, it will discuss three federal regulatory schemes that implicate agricultural waste disposal.<sup>117</sup> Next, it will discuss state laws regulating (or, more accurately, protecting) agricultural operations.<sup>118</sup>

### A. Federal Regulatory Scheme (or Lack Thereof)

While federal regulations protect against multiple types of dangerous waste emissions,<sup>119</sup> there is no federal regulatory scheme that specifically targets agricultural waste. Instead, this Subpart will focus on three Acts that target general waste

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114. See FOOD EMPOWERMENT PROJECT, *supra* note 94 (noting that of the “[m]ore than 5.2 million cows” located in California, a majority are located in the San Joaquin Valley, where the “population is 49 percent Latinx”).

115. See *EnvironAtlas Interactive Map*, EPA, <https://perma.cc/Z6R2-QZUS> (tracking “hundreds of data layers relating to ecosystem services, biodiversity, people, and the built environment”). For example, combining the layers “[p]ercentage of households below the quality of life threshold income” and “[m]anure application” shows that overlap is most prevalent in locations known for livestock production, including areas around Fayetteville, Arkansas. *Id.*

116. See PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 41 (2008) (“Rural America has long been this country’s main supplier of raw materials.”).

117. See *infra* Part II.A.

118. See *infra* Part II.B.

119. See, e.g., Clean Air Act, 42 U.S.C. §§ 7401–7671q (establishing a comprehensive federal regulatory scheme to protect against air pollution); Clean Water Act, 33 U.S.C. §§ 1251–1388 (regulating quality standards for surface waters).

disposal and pollution: the Resource Conservation and Recovery Act (RCRA),<sup>120</sup> the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, also known as “Superfund”),<sup>121</sup> and the Clean Water Act (CWA).<sup>122</sup>

RCRA is the primary federal scheme regulating the generation, transportation, treatment, storage, and disposal of hazardous waste.<sup>123</sup> While RCRA works on the front end to track hazardous waste from “cradle-to-grave,”<sup>124</sup> CERCLA works on the back end to “respond directly to releases or threatened releases of hazardous substances” and issue clean-up plans.<sup>125</sup> Lastly, the CWA regulates the discharge of pollutants into the waters of the United States through a federal permitting system.<sup>126</sup> These federal programs are expansive, but each carves out an explicit exception or implicit loophole for agricultural waste.

#### 1. RCRA and CERCLA: An Explicit Regulatory Exemption

Under RCRA and CERCLA, Congress authorized the EPA to manage the “development of solid waste management plans” and “assur[e] that hazardous wastes management practices are conducted in a manner which protects human health and the environment.”<sup>127</sup> Because agricultural waste is not designated as “hazardous waste” under either RCRA or CERCLA, it is not

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120. 42 U.S.C. §§ 6901–6992.

121. 42 U.S.C. §§ 9601–9675.

122. 33 U.S.C. §§ 1251–1388.

123. *Resource Conservation and Recovery Act (RCRA) Overview*, EPA, <https://perma.cc/G8C4-GW94> (last updated July 14, 2021).

124. *Id.*

125. *Superfund: CERCLA Overview*, EPA, <https://perma.cc/3RAP-S4YW> (last updated Jan. 4, 2021).

126. *Summary of the Clean Water Act*, EPA, <https://perma.cc/VRQ6-6Q6Y> (last updated Oct. 22, 2021).

127. 42 U.S.C. §§ 6902(a)(1)–(6); *see id.* § 6903. All definitions of solid and hazardous wastes adopted by Congress in RCRA apply to CERCLA regulations. *See* 42 U.S.C. § 9601(14) (including within the term “hazardous substance” “any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act,” codified at 42 U.S.C. § 6921, which is part of RCRA).

subject to federal regulation under this comprehensive scheme.<sup>128</sup>

RCRA defines “hazardous waste” as “a solid waste . . . which because of its quantity, concentration, or physical, chemical, or infectious characteristics may” lead to an “increase in mortality” or “serious . . . illness” or “pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”<sup>129</sup> RCRA defines “solid waste” broadly, as “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.”<sup>130</sup> The EPA further defines “solid waste” as “any discarded material,” including material that is “[a]bandoned,” and in some circumstances “[r]ecycled.”<sup>131</sup> While the EPA has broad jurisdiction under RCRA to regulate solid hazardous waste, the EPA has designated certain materials “which are not solid wastes” and thus not subject to regulation.<sup>132</sup> Notably, the EPA excludes solid animal waste as “hazardous” if it is returned to the soil as fertilizer.<sup>133</sup> Since almost all agricultural waste is returned to the soil as fertilizer, it goes largely unchecked.<sup>134</sup> This approach is particularly illogical because scientific evidence clearly establishes that

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128. See 40 C.F.R. 261.4(b)(ii) (establishing an exception for “solid wastes generated by . . . [t]he raising of animals, including animal manures” that are “returned to the soil as fertilizer”).

129. 42 U.S.C. § 6903.

130. *Id.* § 6903(27).

131. 40 C.F.R. § 261.2(a). The scope of the EPA’s jurisdiction over recycled materials has been challenged. See, e.g., *Am. Mining Cong. v. EPA*, 824 F.2d 1177, 1183 (D.C. Cir. 1987) (holding that the EPA cannot regulate closed-loop recycled material (“materials destined for reuse in an industry’s *ongoing* production processes”) under RCRA because it is not “discarded material”).

132. 40 C.F.R. § 261.4.

133. See *id.* § 261.4(b)(2) (“Solid wastes . . . are not hazardous wastes . . . [if] generated by [[t]he raising of animals, including animal manures] which are returned to the soils as fertilizers.”).

134. See Graham & Nachman, *supra* note 16, at 649–50 (“[T]he USEPA estimates ‘nearly all’ of the waste produced, including manure, litter and process wastewater, is applied to land without any required pretreatment or classification.”).

agricultural waste is harmful to human health and the environment, especially when returned to the soil as fertilizer.<sup>135</sup>

CERCLA adopts the statutory definitions of “hazardous” from other environmental statutes and thus has broader jurisdiction than RCRA alone.<sup>136</sup> Additionally, CERCLA further defines “hazardous substance” as “any element, compound, mixture, solution, or substance” designated as “hazardous” by the EPA.<sup>137</sup> The EPA may promulgate regulations designating substances as “hazardous” that, “when released into the environment[,] may present substantial danger to the public health or welfare or the environment.”<sup>138</sup> Thus, the EPA has the authority under CERCLA to explicitly regulate the cleanup of agricultural waste which poses a “substantial danger,” but it has not.<sup>139</sup>

Instead, the EPA has promulgated regulations that provide specific reporting exemptions to agricultural facilities.<sup>140</sup> In 2008, for example, the EPA promulgated a rule that exempted all farms from reporting air releases from animal waste under CERCLA.<sup>141</sup> While this final rule was ultimately vacated,<sup>142</sup> the

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135. See *supra* Part I.C.

136. See 42 U.S.C. § 9601(14) (extending jurisdiction pursuant to CERCLA to any “hazardous substance,” including those defined by the CWA, RCRA, CAA, and the Toxic Substances Control Act). The only explicit exception of a “hazardous substance” under CERCLA applies to petroleum. *Id.* Additionally, CERCLA creates an exemption for “the normal application of fertilizer,” not because fertilizer isn’t hazardous, but because the application is not considered a “release.” *Id.* § 9601(22).

137. *Id.*

138. *Id.* § 9602(a).

139. *Id.*

140. See, e.g., CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste at Farms, 73 Fed. Reg. 76,948, 76,948 (2008) (exempting “releases of hazardous substances to the air that meet or exceed their reportable quantity where the source of those hazardous substances is animal waste at farms”). These exemptions are notable because the EPA has explicitly acknowledged that byproducts from animal wastes, including ammonia and hydrogen sulfide, are hazardous. See 40 C.F.R. § 302.4 (listing the reportable quantity of both ammonia and hydrogen sulfide as 100 pounds).

141. 73 Fed. Reg. at 76,948.

142. See *Waterkeeper All. v. EPA*, 853 F.3d 527, 537–38 (D.C. 2017) (finding that the EPA’s action could not be “justified either as a reasonable interpretation of any statutory ambiguity or implementation of a *de minimus* exception”).

EPA's reasoning for promulgating the rule—"that notifications of animal-waste-related releases serve no regulatory purpose because it would be 'impractical or unlikely' to respond to such a release"—shines a light on its enforcement policies regarding animal-waste disposal.<sup>143</sup> Specifically, the EPA asserted that "*in most cases*, a federal response is impractical and unlikely,"<sup>144</sup> and that it could "not foresee a situation where [it] would initiate a response action as a result of such notification."<sup>145</sup> In fact, the EPA noted in its proposed rule that "it has never taken response action based on notifications of air releases from animal waste."<sup>146</sup>

But the EPA's failure to respond to reports of hazardous animal waste releases is not due to a finding that there is no "substantial risk" of harm.<sup>147</sup> The D.C. Circuit actually noted that commenters in this rulemaking provided a "good deal of information not refuted by the EPA" detailing scenarios in which reporting animal-waste-air emissions "could be quite helpful in fulfilling the statutes' goals."<sup>148</sup> Specifically, the commenters focused on manure pits, which, when agitated for pumping, rapidly release hydrogen sulfide, methane, and ammonia, which even the EPA conceded "may cause emissions

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143. See *id.* at 537 (noting that "it's not at all clear why" an EPA response to these kinds of releases would be impractical if agricultural methods of waste disposal "lead to toxic levels of hazardous substances").

144. See *id.* at 536–37 (emphasis added) ("The qualification suggests that at least some circumstances would call for response.").

145. *Id.*

146. *Id.* at 531. In proposing the rule, the EPA relied explicitly on its history of not responding to air releases of hazardous substances from animal waste at farms. See CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste, 72 Fed. Reg. 73700, 73704 (proposed Dec. 28, 2007) ("[T]o date, EPA has not initiated a response to any NRC notifications of ammonia, hydrogen sulfide, or any other hazardous substances released to the air where animal waste at farms is the source of that release.").

147. The EPA previously classified ammonia and hydrogen sulfide, two of the most common byproducts of animal waste, as "hazardous substances." See 40 C.F.R. 302.4 (including ammonia and hydrogen sulfide, but also nitrous oxide, methane, and certain volatile organic compounds also found in animal waste).

148. *Waterkeeper All.*, 853 F.3d at 536.



to exceed reportable quantities.”<sup>149</sup> Despite recognizing the risks from agricultural waste, the EPA chose not to act, a choice permitted under the agency’s broad authority to enforce—or not enforce—regulatory cleanup actions.<sup>150</sup> Regardless, Congress settled the debate in 2018 when it passed the Fair Agricultural Reporting Method Act (the “FARM Act”),<sup>151</sup> which amended CERCLA to explicitly “exempt air emissions from animal waste at a farm from reporting.”<sup>152</sup>

CERCLA, like RCRA, also provides an exemption from reporting releases of “[n]ormal application of fertilizers” from any farm.<sup>153</sup> CERCLA itself does not define “[n]ormal application of fertilizer,” the EPA has not issued relevant guidance, and district courts faced with the issue have construed the exemption according to its “ordinary meaning” within its factual context.<sup>154</sup> Because the application of animal waste as

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149. *See id.* (noting that the EPA’s concession was “truly an understatement” as the “risk isn’t just theoretical; people have become seriously ill and even died as a result of pit agitation”).

150. CERCLA requires “parties to notify authorities when large quantities of hazardous materials . . . are released into the environment,” and “[o]n learning of such a release, the EPA has broad powers to take remedial actions.” *Id.* at 530; *see also* 40 C.F.R. § 300.130(c) (authorizing, but not requiring, response “when the Administrator or Secretary determines that any hazardous substance is released . . . which may present an imminent and substantial danger to the public health or welfare of the United States”).

151. Pub. L. 115-141, 132 Stat. 348 (2018).

152. *CERCLA and EPCRA Reporting Requirements for Air Releases of Hazardous Substances from Animal Waste at Farms*, EPA, <https://perma.cc/BNZ9-8Y4K> (last updated May 20, 2021). While never passed, bills have been introduced to Congress attempting to exempt *all* applications of manure from CERCLA reporting. *See* S. 1729, 112th Cong. (2011) (proposing to “exempt from notification requirements applicable to releases from facilities of hazardous substances any release associated with manure as defined under CERCLA”); Superfund Common Sense Act, H.R. 2997, 112th Cong. (2011) (proposing an exception to CERCLA for manure).

153. *See* 42 U.S.C. § 9601(22) (“The term ‘release’ means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, . . . but excludes . . . the normal application of fertilizer.”); *see also Laws and Regulations that Apply to Your Agricultural Operation by Statute*, EPA, <https://perma.cc/WKV4-6EZT> (last updated Feb. 26, 2021).

154. *See City of Tulsa v. Tyson Foods, Inc.*, 258 F. Supp. 2d 1263, 1287 (N.D. Okla. 2003), *vacated*, No. 01 CV 0900EA(C), 2003 U.S. Dist. LEXIS 23416 (N.D. Okla. July 16, 2003); *Sheridan v. D&D Grading, Inc.*, No. 16-CV-5085(JS)(ARL), 2019 U.S. Dist. LEXIS 54340, at \*12 (E.D.N.Y. Mar. 29, 2019) (construing “normal” in accordance with its ordinary meaning and

fertilizer is a common practice and method of waste disposal,<sup>155</sup> this exemption almost completely protects farms from CERCLA liability. Additionally, regulatory exemptions disincentivize farmers from exploring more environmentally friendly options for waste disposal<sup>156</sup>—there is no incentive for change if the norm is exempt from liability. These reporting exemptions act as a shield from CERCLA liability for agricultural operations, regardless of whether these releases exceed reportable quantities of hazardous substances.<sup>157</sup>

## 2. CWA: No Permit Necessary

The Clean Water Act regulates water pollution and makes it “unlawful to discharge any pollutant from a point source into navigable waters, unless a permit [is] obtained.”<sup>158</sup> While the Act is widely considered a sweeping success,<sup>159</sup> it fails to adequately regulate discharges of animal waste pollution.

The Act defines “point source” as “any discernable, confined and discrete conveyance . . . from which pollutants are or may be discharged,”<sup>160</sup> including CAFOs.<sup>161</sup> The EPA defines a CAFO as an animal feeding operation “where more than 1,000 ‘animal units’ . . . are confined,” or where “more than 300 animal units are confined” and “pollutants are discharged into navigable

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finding that “applying topsoil that contains numerous CERCLA hazardous substances is not ‘the normal application of fertilizer’”).

155. See Graham & Nachman, *supra* note 16, at 649–50 (estimating that “nearly all” agricultural waste from “food animals” is applied to the land as fertilizer).

156. See, e.g., Yun Xie, *The Ambiguity of Sustainable Farming*, AM. ASS’N FOR THE ADVANCEMENT OF SCI. (Nov. 4, 2010), <https://perma.cc/Q6TR-HF99> (arguing that Walmart has no incentive to practice “environmentally sound farming practices” “[w]ithout regulations for sustainable farming”).

157. See *supra* notes 147–152 and accompanying text.

158. *Summary of the Clean Water Act*, *supra* note 126.

159. See William L. Andreen, *Success and Backlash: The Remarkable (Continuing) Story of the Clean Water Act*, 4 J. ENERGY & ENV’T L. 25, 26 (2013) (“Both municipal and industrial discharges have declined sharply, the loss of wetlands has been cut decisively, and water quality has broadly improved across the country . . . without causing any significant harm to the economy in terms of employment, growth, or investment. It is, in short, a real success story.”).

160. 33 U.S.C. § 1362(14).

161. *Id.*

waters” either directly or through a manmade ditch, or other similar manmade device.<sup>162</sup> While this may appear expansive, it is deceptively so. An “animal unit” is not a measurement of how many animals are on a farm but instead is equivalent to “1,000 pounds of live weight,” meaning that the number of confined animals necessary for any farm to qualify as a CAFO changes depending on the type of livestock.<sup>163</sup> Specifically, for a farm to be a point source and therefore subject to CWA permitting requirements, it must house at least “1000 head of beef cattle, 700 dairy cows, 2500 swine weighing more than 55 [pounds], 125 thousand broiler chickens, or 82 thousand laying hens.”<sup>164</sup> This significantly narrows the number of farms regulated as point sources under the CWA.<sup>165</sup>

The Act classifies all discharges not regulated as point sources, by default, as nonpoint sources, which are largely exempt from federal regulation.<sup>166</sup> Nonpoint source pollution, as the name may suggest, “comes from many diffuse sources” and “generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification.”<sup>167</sup> Environmentalists and scholars view the nonpoint source

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162. USDA & EPA, UNIFIED NATIONAL STRATEGY FOR ANIMAL FEEDING OPERATIONS § 4.2 (1999).

163. *Animal Feeding Operations (AFO) and Concentrated Animal Feeding Operations (CAFO)*, USDA, <https://perma.cc/3LG7-69X4>.

164. *Id.*

165. For example, according to the 2017 Census of Agriculture, a total of 66,439 hog farms were operating in the United States, with only 8,324 farms housing 2,000 to 5,000 or more hogs and pigs. *See* 2017 CENSUS, *supra* note 19, at 24 tbl. 21. Considering only farms that house “2500 swine” are subject to CWA permitting, and assuming the hogs and pigs included in the census weighed more than 55 pounds and were confined, at least 58,115 hog and pig farms were untouched by the CWA’s permitting system in 2017. *Id.* To put this into perspective, the 2017 Census reported that U.S. farms housed a total of 72,381,007 hogs and pigs. *Id.* Of this total, 20,163,804 hogs and pigs, at most, were housed in farms that may qualify as point sources under the CWA. *Id.* This leaves over 52,217,203 hogs and pigs—approximately 72 percent of the swine population—whose waste was completely unregulated under the CWA. *Id.*

166. *See Basic Information About Nonpoint Source (NPS) Pollution*, EPA, <https://perma.cc/MAT7-DV5P> (last updated July 8, 2021) [hereinafter *Basic Information About NPS Pollution*].

167. *Id.*

program as “[t]he most significant problem” of the CWA.<sup>168</sup> The Act leaves regulation of nonpoint sources primarily to state and local governments, and the current approach calls on states to identify waters that are “impaired due to nonpoint source pollution and then develop management plans to rectify the problem.”<sup>169</sup> Unfortunately, the Act only creates a voluntary system for management plans, and, as a result, “nonpoint source pollution has evolved into the largest single source of water quality impairment in the country.”<sup>170</sup>

Negative environmental impacts resulting from agricultural waste often fall into this greater problem of nonpoint source regulation.<sup>171</sup> The EPA has long recognized that “animal manure and wastewater . . . is commonly applied to land.”<sup>172</sup> Because the Act exempts “agricultural stormwater discharges,”<sup>173</sup> the EPA stated in 1999 that it “has in the past, and will in the future, assume that discharges from the vast majority of agricultural operations are exempted from the NPDES [point source] program.”<sup>174</sup> Today, the EPA still categorizes “[e]xcess fertilizers . . . from agricultural lands” and “[b]acteria and nutrients from livestock, [and] pet wastes” as nonpoint sources,<sup>175</sup> despite its acknowledgement that runoff from farms is a leading source of pollution affecting U.S. waterways.<sup>176</sup> Thus, the structure of the CWA allows many industrial farms to escape most, if not all, regulatory impact.

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168. See Andreen, *supra* note 159, at 27 (arguing that nonpoint pollution “was treated as something of an afterthought left primarily in the hands of state and local government”).

169. *Id.*

170. *Id.*

171. See USDA & EPA, *supra* note 162, § 4.4 (acknowledging that a large portion of agricultural discharges are considered nonpoint sources and that “[p]roper land application of these resources has agricultural benefits, but improper land application can cause water quality and potential public health impacts”).

172. *Id.*

173. 33 U.S.C. § 1362(14).

174. USDA & EPA, *supra* note 162, § 4.4.

175. See *Basic Information About NPS Pollution*, *supra* note 166.

176. See *id.*

States report that nonpoint source pollution is the leading remaining cause of water quality problems. The effects of nonpoint source pollutants on specific waters vary and may not always be

### B. State Waste Regulation

State regulations of agricultural waste have similarly failed to “ke[ep] pace with the growth and increased concentration of food-animal production.”<sup>177</sup> While federal environmental acts commonly authorize regulation based on risk assessment,<sup>178</sup> common methods of regulating agricultural waste at the state level center around industry norms<sup>179</sup> and land use.<sup>180</sup> As discussed, creating waste regulations pursuant to industry standards is not environmentally safe because common agricultural practices follow the money with little regard to environmental impact.<sup>181</sup> Land-use regulation is typically in the form of zoning laws, which simply designate agricultural

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fully assessed. However, we know that these pollutants have harmful effects on drinking water supplies, recreation, fisheries and wildlife.

see also EPA, PROTECTING WATER QUALITY FROM AGRICULTURAL RUNOFF 1 (2005) (“Did you know that runoff from farms is the leading source of impairments to the surveyed rivers and lakes?”).

177. See Graham & Nachman, *supra* note 16, at 655; see also Finney, *supra* note 76, at 787 (“Agriculture operates in a complex mosaic of federal and state environmental laws, from which it is largely exempt—to its own benefit.”).

178. See COMM. ON IMPROVING RISK ANALYSIS APPROACHES USED BY THE U.S. EPA, NAT’L RSCH. COUNCIL, SCIENCE AND DECISIONS: ADVANCING RISK ASSESSMENT 3 (2009).

179. See, e.g., *Agriculture Waste & Disposal*, ILL. ENV’T PROT. AGENCY, <https://perma.cc/EJ2R-XTYR> (“Livestock waste generated and applied on the same farm may be composted under *normal agricultural practices* without a permit from the Illinois EPA.” (emphasis added)).

180. “[L]and-use planning is among the powers retained by the states . . . [and] local governments have a large degree of autonomy to control land use within their jurisdictions.” ORG. FOR ECON. COOP. & DEV., THE GOVERNANCE OF LAND USE: COUNTRY FACT SHEET UNITED STATES 1–2 (2017). Notably, many state Right-to-Farm laws have zoning restrictions. See, e.g., VA. CODE ANN. § 3.2-301 (“No locality shall enact zoning ordinances that would unreasonably restrict or regulate farm structures or farming . . . practices in an agricultural district unless such restrictions bear a relationship to the health, safety, and general welfare of its citizens.”) (2022); S.C. CODE ANN. § 46-45-60(B) (“[T]his section shall not preclude any right a county may have to determine whether an agricultural use is a permitted use under the county’s land use and zoning authority.”) (2022). As discussed below, these zoning restrictions are primarily for agricultural protectionism, with little regard to environmental impact. See *infra* Part III.B.

181. See *supra* Parts I.B–C.

activities to specific agricultural areas.<sup>182</sup> While this may help prevent conflicts and reduce nuisance in urban areas, it concentrates the agricultural waste—and its dangerous byproducts. This method also does little to protect communities from the environmental impacts of agricultural waste if they happen to live in an area zoned for agriculture.<sup>183</sup>

Alternatively, a minority of states have enacted nutrient management regulations which govern manure application rates.<sup>184</sup> This is a move in the right direction but, unfortunately, many of these laws only regulate a small number of animal waste byproducts,<sup>185</sup> still leaving communities vulnerable to negative environmental and public health impacts.

Interestingly, a handful of states have turned to odor regulation as a means of controlling animal waste management.<sup>186</sup> As previously discussed, federal environmental statutes exist to regulate hazardous substances, air quality, and water quality.<sup>187</sup> But there is no federal statute that specifically regulates odors.<sup>188</sup> This is significant because environmental odors, including those from CAFOs, are known to be toxic at

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182. *Cf. Can You Build a House on Agricultural Land?*, MILLMAN NAT. LAND SERVS. (Feb. 28, 2021), <https://perma.cc/HX5K-UA6F>. (“Agricultural zoning is intended to protect farming activities . . . from non-farm uses.”).

183. *See infra* Part III.B. *But see* 53 P.S. § 10603(h) (“Zoning ordinances may not restrict agricultural operations or changes to or expansions of agricultural operations in geographic areas where agriculture has traditionally been present unless the agricultural operation will have a direct adverse effect on the public health and safety.”).

184. *See* R. MCDUGALL, JURISDICTIONAL SCAN OF AGRICULTURAL WASTE MANAGEMENT REGULATIONS AND GUIDELINES 8–11 (2010) (describing nutrient management plans in Pennsylvania, Washington State, Texas, and California).

185. *See, e.g., id.* at 8–9 (requiring only that “[m]anure application rates . . . be nitrogen-limited” under Pennsylvania’s Nutrient Management Regulations).

186. CDC, MENU OF STATE LAWS REGARDING ODORS PRODUCED BY CONCENTRATED ANIMAL FEEDING OPERATIONS 1 (2016) [hereinafter STATE ODOR LAWS].

187. *See supra* Part II.A.

188. STATE ODOR LAWS, *supra* note 186, at 1–2. *But see Environmental Odors: Frequently Asked Questions (FAQ)*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, <https://perma.cc/XZQ2-QXYB> (noting that, while no federal statute regulates odors specifically, the National Ambient Air Quality Standards regulate pollutants in outdoor air, including sulfur dioxide, the “only regulated air pollutant with a strong, pungent odor”).

high levels and cause harmful health effects.<sup>189</sup> At lower levels, or for people with lower odor sensitivity, environmental odors may still “become a nuisance[,] causing temporary symptoms such as headache and nausea.”<sup>190</sup> Some states have enacted laws to specifically regulate odors produced by CAFOs.<sup>191</sup> Yet communities living near CAFOs still complain about intense odors,<sup>192</sup> and, in nuisance cases involving factory farms, odor is one of the most common complaints.<sup>193</sup>

Some may argue that state initiatives help resolve the problem of animal waste management, at least incrementally, but the negative impacts of agricultural waste disposal are no longer local problems that can be fixed with a state-by-state band-aid approach.<sup>194</sup> Additionally, state laws that protect agricultural operations, particularly state Right-to-Farm laws as discussed in the following Part,<sup>195</sup> stand as an additional barrier to achieving environmentally friendly agricultural waste management programs on a state-by-state level.

### III. COMMON LAW BATTLEFRONT

While the federal regulatory options are, pardon the pun, stinky, state regulations are similarly ineffective. What options

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189. *Environmental Odors: Frequently Asked Questions (FAQ)*, *supra* note 188 (observing that potentially toxic environmental odors may come from many sources, including CAFOs, sewage, fires, oil refineries, and diesel exhaust).

190. *Id.*

191. *See* STATE ODOR LAWS, *supra* note 186, at 2 (“Seven states require CAFOs to submit an odor management, abatement, or control plan.”).

192. For example, Missouri laws related to odor controls only regulate “CAFOs housing more than 7,000 animal units.” *Id.* Missouri residents that live near smaller farms are still negatively affected by agricultural odors. *See, e.g.,* Eli Chen, *North St. Louis Residents Want Foul-Smelling Farm Out of Neighborhood*, ST. LOUIS PUB. RADIO (June 21, 2020), <https://perma.cc/RF77-LX2Y>.

193. *See, e.g.,* McKiver v. Murphy-Brown, LLC, 980 F.3d 937, 954 (4th Cir. 2020) (noting that plaintiffs in a nuisance case against a large hog facility complained of odors, stating that “the odor was ‘always annoying’ and ‘literally unending’”); Concerned Area Residents for the Env’t v. Southview Farm, 834 F. Supp 1410, 1414 (W.D.N.Y. 1993) (alleging that “intense, obnoxious odors have made the atmosphere at plaintiffs’ properties unbearable or undesirable to breathe”).

194. *See supra* Part I.A.

195. *See infra* Parts III.B–D.

are communities left with to remedy the negative physical and environmental impacts of agricultural waste regulations? Under normal circumstances, landowners may turn to common law causes of action, particularly nuisance.<sup>196</sup> Unfortunately, state Right-to-Farm laws have effectively barred this option as well.<sup>197</sup>

This Part first introduces how landowners have used nuisance suits as a vehicle for environmental activism.<sup>198</sup> Next, it discusses the barrier created by state Right-to-Farm laws, pro-agriculture laws that explicitly grant farmers an affirmative defense against nuisance actions.<sup>199</sup> It then analyzes *McKiver v. Murphy-Brown*, a Fourth Circuit case upholding a substantial jury verdict for plaintiffs who filed a nuisance suit against a large hog farm in eastern North Carolina, and the reason why the defendants' Right-to-Farm defense failed.<sup>200</sup> It concludes with a discussion of legislative responses to *McKiver*, which have been overwhelmingly agriculturally-protectionist.<sup>201</sup>

#### A. *Nuisance as Environmental Activism and its Drawbacks*

Common law nuisance claims, designed to protect against invasions of the use and enjoyment of land,<sup>202</sup> have long been used to seek redress against industrial facilities for damage to the environment and neighboring properties.<sup>203</sup> Now these claims are primarily used only when regulations fail to

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196. See *infra* Part III.A.

197. See *infra* Part III.B.

198. See *infra* Part III.A.

199. See *infra* Part III.B.

200. See *infra* Part III.C.

201. See *infra* Part III.D.

202. CHRISTINE H. KELLETT, UNDERSTANDING “RIGHT TO FARM” LAWS 1 (1999) (“A nuisance is defined at common law as a use of land by one party which ‘unreasonably interferes with the comfortable enjoyment of life or property of another.’”).

203. See ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 63 (7th ed. 2013) (“The common law articulates foundational principles that have shaped the development of regulatory programs.”); *id.* at 63–81 (detailing the history of private and public nuisance suits to remedy interferences to the use and enjoyment of land, which provided redress for actions that “endangered the health or property of large numbers of people”).



adequately protect a private or public interest.<sup>204</sup> This is usually because nuisance law is not as fit to remedy environmental issues as is regulatory law. Regulatory law can prevent environmental damages through permits, licensing, bans, and incentive programs,<sup>205</sup> but the most common remedy for nuisance suits is damages.<sup>206</sup> Generally, courts calculate compensation proportionally to the defendant's unreasonable interference with the plaintiff's property interest.<sup>207</sup> While this is obviously helpful for an individual plaintiff, it is an inherently retroactive solution that does little to stop environmental harm before it occurs.<sup>208</sup> Additionally, damage awards from these nuisance claims are unlikely to create a deterrent effect—large industrial farms are prosperous enough that even a large payout will not deter them from continuing tortious conduct.<sup>209</sup> While injunctions are available as an equitable remedy, in practice, courts have, over time, become more and more hesitant to grant them.<sup>210</sup>

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204. *Id.* at 63 (“[The common law] retains considerable vitality as a safety net when unregulated activities cause environmental harm.”).

205. *See id.* at 154–57 (listing regulatory approaches including technology specifications, emission limits, ambient or harm-based standards, and reporting requirements).

206. *See Nuisance*, CORNELL L. SCH. LEGAL INFO. INST., <https://perma.cc/Q8X4-GPYX>.

207. *Cf. PERCIVAL ET AL.*, *supra* note 203, at 64–65 (“Liability is imposed only in those cases where the harm or risk to one is greater than he ought to be required to bear under the circumstances at least without compensation.”).

208. *But see* Serena M. Williams, *The Anticipatory Nuisance Doctrine: One Common Theory for Use in Environmental Justice Cases*, 19 WM. & MARY ENV'T L. & POL'Y REV. 223, 224 (1995) (suggesting the option of “anticipatory nuisance . . . to prevent the siting of waste facilities in [a community] before the accompanying harm can occur”).

209. *See* Andrew L. Frey, *Corporate Finances: Punitive Damages? 800-Pound Gorilla*, MAYER BROWN (Oct. 14, 2014), <https://perma.cc/P23D-R8RX> (“A big company will not be deterred . . . by a punishment that is proportionate only to the harm it has caused and the gravity of its misconduct but not to its net worth, income, or revenues.”).

210. *See PERCIVAL ET AL.*, *supra* note 203, at 67 (“U.S. courts [did not] issue injunctions to shut down nuisances caused by economically important activities, particularly if they could afford to compensate their victims.”). An injunction “is a court order requiring a person to do or cease doing a specific action.” *Injunction*, CORNELL L. SCH. LEGAL INFO. INST., <https://perma.cc/HQ2D-RQCV>.

Traditionally, common law nuisance “held actors strictly liable when their actions interfered with property rights.”<sup>211</sup> When the Industrial Revolution began, the strict liability approach lost favor as courts cited “fears that nuisance actions could bring industry to a halt.”<sup>212</sup> Instead, courts traded the strict liability approach for a balancing approach, through which they would consider “the value of activities that generated pollution against the rights of victims”<sup>213</sup> and against the cost of environmental damage.<sup>214</sup> While courts continued to award damages, many only issued injunctions “in cases where environmental damage was quite severe.”<sup>215</sup> For example, in *Madison v. Ducktown Sulphur, Copper & Iron Co.*,<sup>216</sup> a group of small farm owners filed a nuisance claim against two iron smelting companies for large volumes of smoke emanating from their plants that destroyed the plaintiffs’ trees and crops.<sup>217</sup> The Tennessee Supreme Court refused to issue an injunction based largely on an economic and social utility balancing approach, finding that the smelting companies were worth nearly two thousand times more than the plaintiffs’ property and that the enterprise was “engaged in work of very great importance, not only to [its] owners, but to the State and the whole country as well.”<sup>218</sup> This balancing approach has remained the predominant test courts use to determine whether to grant an

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211. PERCIVAL ET AL., *supra* note 203, at 64.

212. *Id.* at 65. *Hole v. Barlow*, (1858) 4 C.B.N.S. 334 (CP), is one of the first cases to take this stance, holding that a brickmaking operation in industrial England would not be held liable “despite the pollution it produced.” See PERCIVAL ET AL., *supra* note 203, at 65 (“[N]o action lies for the use, the reasonable use, of a lawful trade in a convenient and proper place even though some one may suffer annoyance from its being carried on.” (citing *Hole v. Barlow*, (1858) 4 C.B.N.S. 334 (CP))).

213. PERCIVAL ET AL., *supra* note 203, at 64.

214. See *supra* Part I.C.

215. PERCIVAL ET AL., *supra* note 203, at 70.

216. 83 S.W. 658 (Tenn. 1904).

217. *Id.* at 659.

218. *Id.* at 666–67. The Court clearly valued industry interests over the plaintiffs’ property or environmental interests, relying heavily on the companies’ value to society. See *id.* at 666 (“[S]hall we . . . grant their request to blot out two great mining and manufacturing enterprises, destroy half of the taxable values of a county, and drive more than 10,000 people from their homes?”).

injunction, and economic harm to the defendant continues to be a prevalent factor.<sup>219</sup>

Because of inadequate and largely retroactive remedies, common law nuisance claims are insufficient tools to prevent environmental damages. In the context of agricultural waste, an even greater barrier exists: Right-to-Farm laws. These state protections create an affirmative defense for farmers faced with a nuisance claim. Combined with ineffective regulatory options, the Right-to-Farm affirmative defense effectively strips individuals impacted by agricultural waste of *any* viable remedy.

### B. *State Right-to-Farm Laws*

While nuisance actions remain available in theory to remedy environmental issues caused by agricultural operations, state Right-to-Farm laws make these suits practically difficult to bring. State Right-to-Farm laws exist to protect farmers from nuisance lawsuits related to production practices.<sup>220</sup> Each state has a Right-to-Farm law, and while many involve similar policy goals,<sup>221</sup> each law differs to fit the needs of the local agricultural industry.<sup>222</sup> Many of them rely in part on the assumption that

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219. See Michael C. Blumm, *A Dozen Landmark Nuisance Cases and Their Environmental Significance*, 62 ARIZ. L. REV. 403, 445 (2020) (“Large, well-financed defendants may be able to successfully defeat nuisance claims by invoking the balancing of economic equities . . . [b]y emphasizing the social utility of their operations as well as their spillover economic effects.”). For an example of this balancing approach in use, see *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870, 872 (N.Y. App. Ct. 1970) (“The ground for the denial of injunction . . . is the large disparity in economic consequences of the nuisance and of the injunction.”). The *Boomer* Court ultimately granted the injunction, but only conditionally—the factory could continue polluting upon payment of damages. *Id.* at 875.

220. *States’ Right-To-Farm Statutes*, NAT’L AGRIC. L. CTR., <https://perma.cc/D4SJ-FA9B> (last updated April 15, 2022).

221. See, e.g., ARK. CODE ANN. § 2-4-101 (West 2021) (establishing a policy to “conserve, protect, and encourage the development and improvement of [Arkansas’s] agricultural [lands] . . . for the production of food, fiber, and other agricultural . . . products”); COLO. REV. STAT. § 35-3.5-101 (2021) (establishing a policy to “conserve, protect, and encourage the development and improvement of [Colorado’s] agricultural land for the production of food and other agricultural products”).

222. See *Right-to-Farm: Typical Provisions*, NAT’L AGRIC. L. CTR., <https://perma.cc/2SJR-LQB4> (organizing the “different content in the specific details of [each state’s] laws” into provisions, including a “Triggering Event,”

accepted agricultural practices should not, as a matter of policy, be considered public or private nuisances.<sup>223</sup> While agriculturalists champion these laws as protections for farmers from “individuals who move into a rural area where normal farming operations exist, and who later use nuisance actions to attempt to stop these ongoing operations,”<sup>224</sup> in some states, these laws make it almost impossible to file nuisance suits against farmers.<sup>225</sup>

While statutes differ, there are generally two buckets that Right-to-Farm laws can be placed into.<sup>226</sup> The first bucket contains Right-to-Farm laws that grant nuisance immunity to farming operations “which have been in existence for a given period of time.”<sup>227</sup> For example, Alabama’s Right-to-Farm Act protects all “agricultural [or] farming operation facilit[ies that] ha[ve] been in operation for more than one year.”<sup>228</sup> These restrictions act as a sort of statute of limitations and are enacted to “prevent new neighbors from moving into an agricultural area and then suing because the neighboring farming operation cause[s] an annoyance.”<sup>229</sup> The second bucket of Right-to-Farm laws has no temporal limitation and thus creates “absolute

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“Change in the Operation,” and “Limitations on Protections”) (last updated Jan. 2020).

223. See, e.g., CAL. CIV. CODE § 3482.5 (2021) (protecting agricultural activities operated “in a manner consistent with proper and accepted customs and standards”); CONN. GEN. STAT. § 19a-341 (2021) (making nuisance suits non-actionable against agricultural facilities that conform to “acceptable management practices”).

224. *States’ Right-To-Farm Statutes*, *supra* note 220.

225. See, e.g., N.C. GEN. STAT. §§ 106-700–702 (2021) (prohibiting plaintiffs from filing a suit unless they own “real property” within a “half-mile of the source of activity or structure” and setting a statute of limitations “within one year of the establishment of the agricultural . . . operation or within one year of the operation undergoing a fundamental change”). The 2013 amendments to North Carolina’s Right-to-Farm law substantially narrowed what constitutes as a “fundamental change.” Cordon M. Smart, *The “Right to Commit Nuisance” in North Carolina: A Historical Analysis of the Right-to-Farm Act*, 94 N.C. L. REV. 2097, 2130–32 (2016) (“Considering these modifications to the statute, it remains unclear what, if anything, would constitute a fundamental change to preclude the applicability of the nuisance defense.”).

226. See KELLETT, *supra* note 202, at 2.

227. *Id.*

228. ALA. CODE § 6-5-127 (2021).

229. KELLETT, *supra* note 202, at 2.

immunity for the farming operation[s].”<sup>230</sup> For example, Iowa’s Right-to-Farm statute states that “[a] farm or farm operation located in an agricultural area shall not be found to be a nuisance regardless of the established date of operation.”<sup>231</sup> While bucket one gives neighbors faced with a nuisance a short amount of time to file suit, bucket two makes it almost impossible to file suit at any time.<sup>232</sup>

In addition to temporal restrictions, Right-to-Farm laws often restrict plaintiffs from filing suit if the farming operation is in compliance with either zoning laws, environmental laws, or some other standard of conduct.<sup>233</sup> One common standard of compliance is with accepted agricultural customs.<sup>234</sup> For example, in Hawaii, “[n]o court . . . shall declare any farming operation a nuisance for any reason if the farming operation has been conducted in a manner consistent with generally accepted agricultural practices.”<sup>235</sup> In Florida, “[n]o farm operation . . . shall be a public or private nuisance if the farm operation conforms to generally accepted agricultural and management practices.”<sup>236</sup> While some statutes create exemptions for especially egregious waste disposal issues that occur even when farms employ “generally accepted . . . practices,”<sup>237</sup> others do not.<sup>238</sup> For many, the purpose of the statute is to actually promote the use of generally accepted practices.<sup>239</sup> While that may seem reasonable, as

230. *Id.* at 3.

231. IOWA CODE § 352.11(1)(a) (2021).

232. *See* KELLETT, *supra* note 202, at 3.

233. *See id.*

234. *See infra* notes 238–239 and accompanying text.

235. HAW. REV. STAT. § 165-4 (2022).

236. FLA. STAT. § 823.14(4)(a) (2022). However, Florida’s Right-to-Farm law contains several exceptions which *would* constitute a nuisance, including “[t]he presence of untreated or improperly treated . . . dead animals, dangerous waste materials, or gases which are harmful to human or animal life.” *Id.*

237. *See supra* note 236 and accompanying text.

238. *See supra* note 235 and accompanying text; *see also* CONN. GEN. STAT. § 19A-341 (stating that an agricultural or farming operation is not a nuisance “provided . . . such operation follows generally accepted agricultural practices”).

239. *See, e.g.,* IOWA CODE § 657.11A(1)(C) (2021) (“The general assembly . . . declares its intent to preserve and enhance responsible animal

discussed previously, many generally accepted agricultural practices pose significant risks to human health and the environment.<sup>240</sup>

For example, pursuant to Michigan's Right to Farm Act,<sup>241</sup> the Michigan Commission of Agriculture and Rural Development was tasked with adopting Generally Accepted Agricultural and Management Practices ("GAAMPs").<sup>242</sup> Michigan has adopted GAAMPs in multiple practices relevant to farm-animal waste disposal, including Care of Farm Animals, Irrigation Water Use, and Manure Management and Utilization.<sup>243</sup> Any farm that adheres to GAAMPs guidelines is fully protected from nuisance liability, provided that the farm is also abiding by state and federal environmental and agricultural laws.<sup>244</sup> The GAAMPs guidelines for Manure Management and Utilization are almost identical to common practices discussed earlier.<sup>245</sup> For example, the guidelines suggest that "[r]unoff control can be achieved by providing facilities the option to collect and store the runoff for later application to cropland."<sup>246</sup> After storage, the GAAMPs suggest land application "when the soil is dry enough to accept the water," and recommends "[s]prinkler irrigation methods . . . [to] provide uniform application of liquid with minimum labor requirements."<sup>247</sup> The Michigan Commission of Agricultural and Rural Development proffers that the standards are "based on

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agricultural production, specifically animal agricultural producers in this state who use existing prudent and generally utilized management practices reasonable for their animal feeding operations.").

240. See *supra* Part I.C.

241. Right to Farm Act, Mich. Comp. Laws §§ 286.471–286.474 (2022).

242. See *Generally Accepted Agricultural and Management Practices (GAAMPs)*, MICH. DEP'T OF AGRIC. & RURAL DEV., <https://perma.cc/HT4D-NZZF>.

243. See *id.*

244. *Id.*; see also MICH. COMM. OF AGRIC. & RURAL DEV., GENERALLY ACCEPTED AGRICULTURAL AND MANAGEMENT PRACTICES FOR MANURE MANAGEMENT AND UTILIZATION 1 (2022) [hereinafter GAAMPs MANURE MANAGEMENT], <https://perma.cc/29XT-7NCX> (PDF).

245. See *supra* Part I.B.

246. GAAMPs MANURE MANAGEMENT, *supra* note 244, at 2–3; see also *supra* notes 28–29 and accompanying text.

247. GAAMPs MANURE MANAGEMENT, *supra* note 244, at 3; see also *supra* notes 30–32 and accompanying text.

sound science” and designed to “be[] protective of the environment.”<sup>248</sup> But considering that sound science has established that these very practices are in fact harmful to the environment and public health, Michigan’s environmental justification is merely pretext.<sup>249</sup> Instead, the accepted practices are geared directly toward Michigan’s other stated purpose: to allow “[a]nimal agriculture in Michigan [to] have the flexibility and opportunity to change agricultural enterprises and adopt new technology to remain economically viable and competitive in the market place.”<sup>250</sup>

Other Right-to-Farm statutes allow a plaintiff to bring suit only if there has been a substantial change in operation. For example, the Alaska Right-to-Farm law states that “[a]n agricultural facility . . . is not and does not become a private nuisance as a result of a changed condition that exists in the area of the agricultural facility if the agricultural facility was not a nuisance at the time [it] began agricultural operations.”<sup>251</sup> In comparison, the North Carolina statute requires a “fundamental change” in operation as a condition for an agricultural operation to qualify as a nuisance.<sup>252</sup> But, under this statute, a “fundamental change” does not include “[a] change in ownership or size,” “[a]n interruption of farming for a period of no more than three years,” “[p]articipation in a government-sponsored agricultural program,” “[e]mployment of new technology,” or “[a] change in the type of agricultural . . . product produced.”<sup>253</sup> The exclusion is so

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248. GAAMPS MANURE MANAGEMENT, *supra* note 244, at iii, 8.

249. *See supra* Part I.C. In fact, Michigan’s Right to Farm Act specifically acknowledges that “[g]enerally accepted agricultural and management practices . . . may generate usual and ordinary noise, dust, odors, and other associated conditions, and these practices are protected by the Michigan right to farm act.” MICH. COMP. LAWS § 286.473c (2022).

250. GAAMPS MANURE MANAGEMENT, *supra* note 244, at 1.

251. ALASKA STAT. § 09.45.235(a) (2021).

252. *See* N.C. GEN. STAT. § 106-701(a)(3) (2022) (only allowing suit if “[t]he action is filed within one year of the establishment of the agricultural . . . operation or within one year of the operation undergoing a fundamental change”). The statute also requires that the plaintiff be a “legal possessor of the real property” affected by the alleged nuisance and the real property must be “located within one half-mile of the source of the activity or structure alleged to be a nuisance.” *Id.* §§ 106-701(a)(1)–(2).

253. *Id.* § 106-701(a)(1).

expansive, it is hard to image what would qualify as a “fundamental change.”

While not much is clear about these statutes, the state legislatures clearly intend to protect farming operations at all costs. For example, North Carolina’s “Legislative determination and declaration of policy” states,

It is the declared policy of the State to conserve and protect and encourage the development and improvement of its agricultural land . . . for the production of food, fiber, and other products. When other land uses extend into agricultural . . . areas, agricultural . . . operations often become the subject of nuisance suits. As a result, agricultural . . . operations are sometimes forced to cease. Many others are discouraged from making investments in farm . . . improvements. It is the purpose of this Article to reduce the loss to the State of its agricultural . . . resources by limiting the circumstances under which an agricultural . . . operation may be deemed to be a nuisance.<sup>254</sup>

There is nothing inherently wrong with valuing agriculture as an economic commodity and protecting its economic value as paramount. In fact, it is tantamount to American culture—we view agriculture, and the right to farm, as a means to achieve the “American dream.”<sup>255</sup> Protecting agricultural activities has obvious positive societal benefits, like boosting local and national economy and promoting food security.<sup>256</sup> Thus, the problem is not that these acts exist,<sup>257</sup> but rather that these acts,

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254. *Id.* § 106-700.

255. See, e.g., Stephanie Metzinger, *Agriculture Provides Gateway to Achieve American Dream*, W. GROWERS (Nov. 2, 2019), <https://perma.cc/N9YS-V3W6> (“The American Dream, the idea that anyone, regardless of social class or location of birth, can attain prosperity through perseverance and hard work, . . . is achievable largely through the opportunities offered by America’s employers, in particular, the agriculture industry.”).

256. See *Global Food Security*, NAT’L INST. OF FOOD & AGRIC., <https://perma.cc/VE47-RJE2> (“Secure access to food can produce wide ranging positive impacts, including: Economic growth and job creation[, p]overty reduction[, and i]mproved health and healthcare.”).

257. Some argue that Right-to-Farm laws *are* the primary cause of negative environmental impacts caused by farming practices because the acts minimize transaction costs for large CAFOs, which generate far more manure than small farms could generate alone. See Shi-Ling Hsu, *Scale Economies, Scale Externalities: Hog Farming and the Changing American Agricultural*



in conjunction with loose federal environmental regulations, make it practically impossible to protect against negative health and environmental impacts arising from activities that are considered normal farming practices.

C. *Success Despite all Odds: McKiver v. Murphy-Brown*

While Right-to-Farm laws restrict the number of nuisance suits that can be filed against agricultural facilities, they have not completely barred these suits. *McKiver v. Murphy-Brown*<sup>258</sup> is one of the largest of these cases, in terms of number of plaintiffs and size of payout, to stand in the face of Right-to-Farm laws.<sup>259</sup> In 2013, a group of over five hundred plaintiffs, comprising twenty-six cases, sought monetary damages for nuisance and negligence against a large swine farm operation in eastern North Carolina.<sup>260</sup> The cases alleged that Murphy-Brown, an industrial farming operator, operated Kinlaw Farms, a large hog farm in eastern North Carolina, and engaged in farming practices that constituted an ongoing nuisance.<sup>261</sup> Kinlaw Farms maintained about 15,000 hogs, which produced “approximately 153,000 pounds of feces and urine daily.”<sup>262</sup> To dispose of the hog waste, the Farms used a “lagoon-and-sprayfield method.”<sup>263</sup> Kinlaw Farms had three lagoons that “contained millions of gallons of hog waste.”<sup>264</sup> As lagoons were filled, the Farms “periodically drained [the]

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*Industry*, 94 OR. L. REV. 23, 40 (2015) (“RTF laws do not actually protect farms, . . . [but instead] are an implicit subsidy for large CAFOs and, as such, are an assault on small farms.”). This Note does not promote the idea that Right-to-Farm acts are broadly without fault. It only suggests that the most effective solution is to fix federal regulatory and statutory gaps that allow the agricultural pollution issues caused by large CAFOs to occur in the first place.

258. 980 F.3d 937 (4th Cir. 2020).

259. *See id.* at 946 (affirming the district court’s finding of liability against a hog production facility but remanding to reduce the amount of punitive damages originally awarded [more than \$50 million]).

260. *In re NC Swine Farm Nuisance Litig.*, No. 5:15-CV-00013-BR, 2017 U.S. Dist. LEXIS 185089, at \*13 (E.D.N.C. Nov. 8, 2017).

261. *McKiver*, 980 F.3d at 946.

262. *Id.* at 947.

263. *Id.*; *see also supra* Part I.B.

264. *McKiver*, 980 F.3d at 947.

waste . . . and spread it across open ‘sprayfields.’”<sup>265</sup> “Approximately eight million gallons of hog feces were sprayed in the air annually.”<sup>266</sup> Additionally, the Farms used fans and vents to move fumes from the hog shed to the outside of the building and stored hog carcasses in “dumpsters placed in open fields,” which attracted “dozens of buzzards and flies.”<sup>267</sup> On top of more general nuisances, including “odor, flies, noise, trucks, [and] interference with [plaintiffs’] quality of life,” plaintiffs feared health effects, including “upper respiratory and gastrointestinal ailments.”<sup>268</sup>

At the trial court, Murphy-Brown raised an affirmative defense pursuant to North Carolina’s Right-to-Farm law.<sup>269</sup> At the time, the law protected “existing farming operations . . . when other land uses extend into agricultural . . . areas . . . by limiting the circumstances under which an agricultural . . . operation may be deemed to be a nuisance.”<sup>270</sup> The relevant section of the statute stated:

No agricultural or forestry operation . . . shall be or become a nuisance . . . by any changed conditions *in or about the locality outside of the operation* after the operation has been in operation for more than one year, when such operation was not a nuisance at the time the operation began.<sup>271</sup>

Murphy-Brown argued that conditions around the area had “changed since the farms began operating.”<sup>272</sup> Specifically, it referred to an increase in the number of people living nearby, and argued that the affirmative defense was applicable.<sup>273</sup> The court disagreed based on evidence presented by the plaintiffs: “that they or their relatives ha[d] lived on the affected properties prior to the subject swine farms beginning operations.”<sup>274</sup> The

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265. *Id.*

266. *Id.*

267. *Id.*

268. *Id.*

269. *In re NC Swine Farm Nuisance Litig.*, 2017 U.S. Dist. LEXIS 185089, at \*24.

270. *Id.* at \*25.

271. *Id.* (emphasis added).

272. *Id.*

273. *Id.* (emphasis added).

274. *Id.* at \*25–26. The court relied on *Mayes v. Tabor*, 334 S.E.2d 489, 491 (N.C. Ct. App. 1985), where the court found that the Right-to-Farm affirmative

court definitively stated that “for the right-to-farm to apply, it must be on account of changed conditions in the locality *outside* the agricultural operation.”<sup>275</sup> Because the plaintiffs’ land use “had been in existence well before the operations of the subject farms began” and their “[specific] nuisance claims ha[d] nothing to do with changed conditions in the area,” the court held that the defendant’s affirmative Right-to-Farm defense was barred as a matter of law.<sup>276</sup> Accordingly, and upon hearing evidence of the plaintiff’s harms, the jury returned a verdict in favor of the plaintiffs and awarded “\$75,000 in compensatory damages per plaintiff, along with a total of \$5 million in punitive damages.”<sup>277</sup>

In response to this ruling, the North Carolina legislature swiftly amended its Right-to-Farm law, prompting Murphy-Brown’s motion to alter or amend summary judgment and eventual appeal to the Fourth Circuit.<sup>278</sup> The legislature specifically stated that “recently a federal trial court incorrectly and narrowly interpreted the North Carolina Right to Farm Act in a way that contradicts the intent of the General Assembly and effectively renders the Act toothless in offering meaningful protection to long-established North Carolina farms.”<sup>279</sup> At the Fourth Circuit, the court affirmed that these amendments were

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defense did not apply to the defendant because the plaintiffs had owned their land longer than defendants and conditions outside of the agricultural operations had not changed. *Id.* at 490–91.

275. *In re NC Swine Farm Nuisance Litig.*, No. 5:15-CV-00013-BR, 2017 U.S. Dist. LEXIS 185089, at \*26 (E.D.N.C. Nov. 8, 2017).

276. *Id.* at \*27.

277. *See McKiver v. Murphy-Brown, LLC*, 980 F.3d 937, 946 (4th Cir. 2020) (reducing punitive damages “to \$2.5 million due to North Carolina’s punitive damages cap”).

278. *See McKiver v. Murphy-Brown, LLC*, 2018 U.S. Dist. LEXIS 211807, at \*3–4 (E.D.N.C. Dec. 17, 2018) (“Defendant argues that based on post-trial amendments to North Carolina’s Right to Farm Act, the Act bars plaintiffs’ recovery of punitive damages.”).

279. 2018 N.C. Sess. Laws 113. The Act went into effect so that, now, [n]o nuisance action may be filed against an agricultural . . . operation . . . unless . . . the plaintiff is a legal possessor of the real property affected, . . . [t]he real property . . . is located within one half-mile of . . . the activity, . . . [and t]he action is filed within one year of the establishment of the agricultural . . . operation or within one year of the *operation* undergoing a fundamental change.

N.C. GEN. STAT. § 106-701(a) (emphasis added).

only prospective and did not apply to the current litigation.<sup>280</sup> But, if the case had been brought after the 2018 amendment, it would almost certainly have been barred.<sup>281</sup>

Although many championed this outcome as a “historic victory,”<sup>282</sup> agriculturalists saw the award as an attack on agriculture generally.<sup>283</sup> Many legislatures sided with the agriculturalists.

#### D. *The Battle in State Legislatures*

While *McKiver* may be a glimmer of hope for communities neighboring farming operations,<sup>284</sup> state legislatures have taken the opportunity to “fight back” and protect their farmers.<sup>285</sup> In the wake of this litigation, states other than North Carolina

280. See *McKiver*, 980 F.3d at 955 (noting that “the 2017 RTFA amendment expressly states it will apply to causes of action *going forward*” (emphasis added)).

281. See, e.g., *Lewis v. Murphy-Brown, LLC*, 2020 U.S. Dist. LEXIS 44997, at \*4 (E.D.N.C. Mar. 16, 2020) (ordering summary judgment for Murphy-Brown because “defendant’s removal of its swine from the Kinlaw Farm operation” did not qualify as a fundamental change contemplated by the statute and the Kinlaw Farm operation was established in 1995, “which is well over one year after the establishment of the subject operation”). Notably, this was the exact farming operation implicated in *McKiver* and Lewis was alleging similar injuries as the *McKiver* plaintiffs had alleged—the only difference between *McKiver* and *Lewis* was the statutory language applied. See also Kill Tovar, *North Carolina’s New Right to Farm Law Bars Nuisance Claim*, IOWA ST. UNIV. CTR. FOR AGRIC. & TAX’N (Mar. 17, 2020), <https://perma.cc/M2D9-Q2HY> (discussing *Lewis*).

282. See *McKiver v. Murphy-Brown*, PUB. JUST. FOOD PROJECT, <https://perma.cc/HW9G-DWV8> (“Hundreds of mostly Black and brown community members in Eastern North Carolina won a series of mass action lawsuits against Smithfield.”).

283. See, e.g., Lisa Sorg, *Jury Awards Plaintiffs More than 50 Million in Historic Hog Nuisance Lawsuit*, NC POLY WATCH (April 26, 2018), <https://perma.cc/49VU-MSMD> (describing the suit as an “outrageous attack on animal agriculture” and “a serious threat to a major industry, [the] economy and the jobs and livelihoods of tens of thousands of North Carolinians”).

284. See, e.g., Christina Cooke, *Iowa Residents to Sue the State Over Air Emissions from Industrial Hog Farms*, CIV. EATS (May 16, 2018), <https://perma.cc/L7X5-SQNA> (“The Iowa lawsuit comes on the heels of a landmark verdict in the first twenty-six nuisance cases filed by 500 Eastern North Carolina residents against Murphy-Brown LLC.”).

285. See, e.g., Smart, *supra* note 225, at 2129 (“A comparison of the legislative history and the timeline of the litigation strongly suggests that the proposed amendments were modified to apply to the developing litigation.”).

have also amended their Right-to-Farm laws,<sup>286</sup> Farm Acts,<sup>287</sup> and constitutions<sup>288</sup> to provide broader protection to farmers.

North Carolina first amended its Right-to-Farm statute in 2013, mere weeks after the initiation of the flurry of nuisance cases against Murphy-Brown.<sup>289</sup> As discussed above, it continued to amend its law in response to *McKiver*.<sup>290</sup> Arizona followed suit in 2021 and amended its Right-to-Farm law to provide cost-shifting provisions, penalties for bad-faith filing, and a bar against awarding punitive damages to plaintiffs unless “the alleged nuisance emanated from an agricultural operation that has been subject to a criminal conviction or a civil enforcement action.”<sup>291</sup>

The Georgia legislature similarly fought to amend its Right-to-Farm law in the wake of *McKiver*, but the bill failed to pass.<sup>292</sup> Led and lobbied by the Georgia Farm Bureau, the bill was controversial from the start.<sup>293</sup> In form and policy, it “mimicked [the] 2018 North Carolina law.”<sup>294</sup> Environmentalists strongly opposed the bill, arguing that it

286. See Chelsea McGuire, *More Than a Nuisance: Why Strengthening Right-to-Farm Laws Became a Key Legislative Priority*, ARIZ. FARM BUREAU (Apr. 16, 2021), <https://perma.cc/4R7R-4WGR> (“Since the 2018 verdicts in North Carolina, Arizona ag policy leaders have been looking for opportunities to strengthen our Right to Farm statute, in anticipation that these kinds of lawsuits are not going away.”).

287. For example, North Carolina amended its Farm Act in 2019 providing further protection to farmers from nuisance suits. See *Hog Waste and the Farm Act of 2019*, N.C. LEAGUE OF CONSERVATION VOTERS, <https://perma.cc/DLX5-36A5> (arguing that the 2019 Farm Bill, which added a section making formerly public documents confidential and another section allowing for permits to modify waste operations, was enacted to “prop up Smithfield foods”).

288. See, e.g., N.D. CONST. art. XI, § 29 (“The right of farmers and ranchers to engage in modern farming and ranching practices shall be forever guaranteed in this state.”).

289. Smart, *supra* note 225, at 2101.

290. See *supra* Part III.C.

291. ARIZ. REV. STAT. ANN. § 3-112(C) (2021); see also 2021 Ariz. Sess. Laws 1448.

292. See Jessica Szilagyi, *Ga Legislature Fails to Give Final Passage to Ag Nuisance/‘Right to Farm’ Bill*, ALLONGEORGIA (July 1, 2020), <https://perma.cc/Q3AT-EXRJ>.

293. See *id.* (noting that the Bureau released a “strong digital ad campaign,” rousing small property owners and environmentalists in opposition).

294. *Id.*

“flip[ped] the current law on its head . . . [by] prevent[ing] existing land owners from protecting their property values from new and expanding agricultural operations that mov[ed] into their neighborhoods.”<sup>295</sup> They argued that this would be in direct conflict with the law’s current policy to protect farmers “[w]hen nonagricultural land uses extend into agricultural or agricultural-supporting industrial or commercial areas.”<sup>296</sup> The environmentalists and landowners ultimately prevailed, but the contentious political fight suggests that legislators backed by the Georgia agriculture industry may continue to fight for an amendment.<sup>297</sup>

A few legislatures have gone a step farther and amended their constitutions to include the right to farm. In 2012, for example, North Dakota added a Right-to-Farm provision to its state constitution, forever guaranteeing “[t]he right of farmers and ranchers to engage in modern farming and ranching practices . . . in this state.”<sup>298</sup> Missouri passed a similar amendment to its constitution in 2014,<sup>299</sup> and Oklahoma tried, but ultimately failed, to add the right to farm to its constitution in 2016.<sup>300</sup>

For better or worse, state Right-to-Farm protections appear anchored into the American legal system. Regardless, repealing Right-to-Farm laws or leaving the regulatory work up to the states has not successfully protected vulnerable communities from the negative impacts of agricultural waste.<sup>301</sup> Instead, the federal government must combat the dangerous environmental impacts of agricultural waste on a sweeping scale. A renewed federal initiative is necessary.

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295. *Id.*

296. GA. CODE ANN. § 41-1-7 (2021).

297. See Szilagyi, *supra* note 292 (suggesting that the bill failed to pass primarily because “lawmakers could not negotiate the measure to a point of consensus” by the end of the 2019–2020 legislative session).

298. N.D. CONST. art. XI, § 29.

299. MO. CONST. art. I, § 35 (“[T]he right of farmers and ranchers to engage in farming and ranching practices shall be forever guaranteed in this state.”).

300. See *Oklahoma Right to Farm Amendment, State Question 777 (2016)*, BALLOTPEdia, <https://perma.cc/6XZ4-AHPE>.

301. See *supra* Part I.D.

#### IV. THE SOLUTION: STRONGER FEDERAL ENVIRONMENTAL ACTION

Agricultural waste is a comprehensive problem that can only be remedied with a comprehensive solution. Below are two primary solutions: (i) amend the CWA to more aptly cover farms that house less than 1,000 animal units in concentrated facilities as “point sources;”<sup>302</sup> and (ii) amend RCRA to designate big-issue wastes, starting with agricultural wastes, as hazardous.<sup>303</sup> If the CWA or RCRA regulated agricultural waste, the EPA could also regulate it under CERCLA.<sup>304</sup> This would further impose liability upon agricultural facilities that improperly dispose of waste.<sup>305</sup>

Because of the highly politicized nature of state farming legislation, the issue of agricultural waste disposal can only be fixed with stronger federal legislation, as opposed to state regulation or some restriction on state Right-to-Farm laws. Amending these statutes to address the problem more adequately would be the best solution because the policy behind each statute provides a compelling foundation for the proposed amendments.<sup>306</sup> It would appear less drastic than an entirely new federal statute, making it more palatable to the public and the federal legislature. While some of the same political concerns would arise in the federal legislature, an amendment could be worded to mitigate economic concern by setting jurisdictional limits within the bounds of federalism and by targeting only the facilities that cause more than a de minimis environmental impact. Finally, the political agendas of different states could create a majority in Congress that is more willing to expand environmental protections than legislators may be on a state-by-state basis.

On both a state and federal level, powerful lobbyists back Right-to-Farm laws and other agricultural legislation, and the fight for or against stronger agricultural legislation often splits

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302. See *supra* notes 162–165 and accompanying text.

303. See *supra* notes 137–139 and accompanying text.

304. See *supra* note 136 and accompanying text.

305. See *supra* Part II.A.1.

306. See *supra* note 127 and accompanying text (explaining RCRA policy); *infra* notes 323–324 and accompanying text (explaining CWA policy).

along party lines.<sup>307</sup> Lobbyist backing for agricultural initiatives predominates across both parties, but Republicans historically attract almost two times the amount of funding from agribusiness political action committees (PACs) than their Democratic counterparts.<sup>308</sup> In terms of agricultural political contributors, Democratic contributors generally back stronger regulatory action, while Republicans are more partial to de-regulatory action.<sup>309</sup> Once environmental legislation is in place, agency regulation follows a similar trajectory and sways from regulatory to de-regulatory action depending on the political affiliation of the current administration.<sup>310</sup> While it may be “impossible to stop the swing of regulation and deregulation,” Congress has the ability to step in and make larger policy decisions by either passing more specific legislation or amending current legislation to take a final stance on vacillating regulation.<sup>311</sup>

While this political tension is also prevalent in federal agricultural legislation, leaving this large of an issue to oscillating regulatory action or to state regulation has led to inadequate protection of human health and the environment.<sup>312</sup> To fix the gaps in our current federal environmental laws, Congress must act.

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307. See, e.g., Szilagyi, *supra* note 292 (discussing Georgia’s failed Right-to-Farm bill).

308. In 2021, agribusiness PACs contributed \$2,253,938 to Democrats and \$4,036,974 to Republicans. See *Agribusiness PACs Contributions to Candidates, 2021–2022*, OPEN SECRETS: FOLLOWING THE MONEY IN POL., <https://perma.cc/L9DH-ECKK>.

309. See, e.g., *Policy: Issues Important to America’s Cattlemen and Women*, NAT’L CATTLEMEN’S BEEF ASS’N, <https://perma.cc/ZD5U-3D4M> (arguing that the Endangered Species Act should be amended to support “flexibility . . . to make responsible management decisions for their land”).

310. See Rachel Augustine Potter, *Democratic Presidents Regulate. Republican Presidents Deregulate. Congress Could Stop the Pendulum Swing.*, WASH. POST (Oct. 14, 2021, 5:00 AM), <https://perma.cc/9EZU-4T59> (describing the “pendulum” of regulatory action through the lens of Clean Water Act jurisdictional arguments). This article argues that “[t]his back-and-forth” wastes government resources, demoralizes agency officials, and makes it more difficult for agencies to make long-term plans. *Id.* Political lobbyists also back these regulatory actions. See *Policy: Issues Important to America’s Cattlemen and Women*, *supra* note 309 (supporting an EPA rule that exempts “cattle producers from EPCRA reporting”).

311. Potter, *supra* note 310.

312. See *supra* Part II.B.



### A. *The Straightforward CWA Solution*

As discussed above, agricultural waste negatively impacts clean water because the CWA fails to classify most large industrial farms as “point sources.”<sup>313</sup> Strictly speaking, however, the statutory language of the CWA *does* classify a “concentrated animal feeding operation” as a point source.<sup>314</sup> This signifies that Congress intended to regulate large-scale agricultural waste, but that at some point the problem got out of hand. Specifically, this issue grew as EPA regulations intending to further clarify the language “concentrated animal feeding operation” allowed many large farms to escape regulation altogether.<sup>315</sup> Generally, when Congress leaves gaps in legislation, courts presume that it intended the gaps to be filled by the agency granted congressional authority to execute the statute<sup>316</sup>—in this case, the EPA.<sup>317</sup> There are methods in place for the people and courts to monitor agency action,<sup>318</sup> but generally agencies have significant power to define ambiguous statutory language and determine how it should be carried out.<sup>319</sup> Once agencies fill statutory gaps, so long as the agency’s interpretation is “reasonable,” it will stand.<sup>320</sup> Alternatively, the definition may change as administrations change and political incentives drive agency officials to regulate or deregulate.<sup>321</sup> But the agency does not have the last word—Congress does.<sup>322</sup> If Congress believes that an agency has made a policy decision that is unwise in the context of the greater statutory scheme, it can amend the statute. That is exactly what Congress should do.

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313. See *infra* Part II.A.2.

314. See 33 U.S.C. § 1362(14).

315. See notes 160–166 and accompanying text.

316. See *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837, 843–44 (1984).

317. 33 U.S.C. § 1251(d).

318. See JARED P. COLE, CONG. RSCH. SERV., R44699, AN INTRODUCTION TO JUDICIAL REVIEW OF FEDERAL AGENCY ACTION 1–2 (discussing judicial review of agency actions under the Administrative Procedure Act).

319. *Id.* at 1.

320. *Id.* at 13.

321. See Potter, *supra* note 310 (“It is probably impossible to stop the swing of regulation and deregulation.”).

322. See *id.* (“[I]f Congress wanted to, it could slow down the pendulum by making more of the big policy calls itself.”).

By narrowly defining “concentrated animal feeding operation,” the EPA has subverted the purpose of the Clean Water Act. In 1972, when Congress enacted the CWA, it declared a policy to restore and maintain the “chemical, physical, and biological integrity of [the] Nation’s waters.”<sup>323</sup> At that time, Congress set lofty goals, including “that the discharge of pollutants into the navigable waters be eliminated by 1985,” “that the discharge of toxic pollutants in toxic amounts be prohibited,” and “that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State.”<sup>324</sup> Although water quality has improved,<sup>325</sup> polluting activities classified as nonpoint sources still stand in the way of hitting these statutory goals.<sup>326</sup> One way that Congress can ensure a move in the right direction is to statutorily clarify what qualifies as a “concentrated animal feeding operation.”<sup>327</sup>

While the EPA currently defines a CAFO by the number of animal units that are confined on any one farm, there are other definitions that would be more comprehensive and sustainable. Congress should adopt a definition that considers the ratio of animals to land forages. This is a method used in sustainable farming to determine how much livestock a farmer should obtain depending on the type and size of the land they own.<sup>328</sup> For example, the Natural Resources Conservation Service (NRCS) suggests that, as a rule of thumb, “it takes 1.5 to 2 acres

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323. 33 U.S.C. § 1251(a); *see also* Reynolds Metal Co. v. EPA, 760 F.2d 549, 557 (4th Cir. 1985) (“The Act expresses a congressional insistence to eliminate water pollution within a short time-span.”).

324. 33 U.S.C. § 1251(a).

325. *See* Andreen, *supra* note 159, at 26 (“Both municipal and industrial discharges have declined sharply, the loss of wetlands has been cut decisively, and water quality has broadly improved across the country.”).

326. *See id.* at 27 (suggesting that the CWA is in need of some “fine-tuning . . . to finish the task that began in 1972,” with a specific focus on pollution from nonpoint sources).

327. *See* 33 U.S.C. § 1362(14) (listing “concentrated animal feeding operation” as a “point source” but leaving a gap open for the EPA to further define it); *see also* notes 162–166 and accompanying text.

328. *See* NAT. RES. CONSERVATION SERV., BALANCING YOUR ANIMALS WITH YOUR FORAGE: SMALL SCALE SOLUTIONS FOR YOUR FARM 1 (2009), <https://perma.cc/27UX-VJNZ> (PDF).

to feed a cow calf pair for 12 months.”<sup>329</sup> This means that a farm with about twenty acres of pasture would sustainably be able to house and feed about ten to thirteen cows.<sup>330</sup> Any farmer who wants to own more livestock than could sustainably forage her land would be subject to the CWA permitting scheme. Because almost all industrial feeding operations house livestock in “high-density, confined spaces,” they would be subject to CWA permitting.<sup>331</sup> This would incentivize industrial farmers to invest in sustainable practices or be subjected to regulation. It would also shield smaller farms and farms already using sustainable farming practices from unnecessary regulation.

Some may argue that expanding the CWA in this way would upset the balance of cooperative federalism implicit in the Act<sup>332</sup>—but this is not the case. Cooperative federalism is defined as a mode of government “in which the state governments, local governments, and the federal government share responsibility” in creating and implementing a particular area of law or policy.<sup>333</sup> While Congress left statutory gaps for the EPA to fill, it also left gaps for states to fill based on jurisdictional limits.<sup>334</sup> The federal government regulates “point sources,” and the states regulate “nonpoint sources.”<sup>335</sup>

This division of responsibility reflects a legislative understanding that “nationwide uniformity in controlling non-point source pollution [is] virtually impossible,” as well as that “the control of non-point source pollution often depends on land use controls, which are traditionally state or local in nature.” Put another way, the Act’s election not to regulate all sources of pollution—or for that matter all waters of the nation—is rooted in the traditional

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329. *Id.*

330. *Id.* The NRCS’s calculations account for more than the size of land and the amount of cattle. Other factors include the length of the grazing season, the average weight of one of the animals, the average yield of the pasture per acre, and the daily utilization rate for livestock. *Id.*

331. *See supra* note 16 and accompanying text.

332. *See, e.g.,* Damien Schiff, *Keeping the Clean Water Act Cooperatively Federal—Or, Why the Clean Water Act Does Not Directly Regulate Groundwater Pollution*, 42 WM. & MARY ENV’T L. & POL’Y REV. 447, 448 (2018).

333. *Cooperative Federalism Law and Legal Definition*, USLEGAL, <https://perma.cc/D6QX-D8N8>.

334. *See Schiff, supra* note 332, at 449.

335. *See supra* notes 166–170 and accompanying text.

congressional “reluctance . . . to allow extensive federal intrusion into areas of regulation that might implicate land and water uses in individual states.”<sup>336</sup>

Thus, the purpose behind cooperative federalism in the CWA was to let states address local water- and land-use problems through a local lens. But the business of agriculture is no longer localized.<sup>337</sup> In the context of industrial farming, an overwhelming number of farms are managed in the same ways, including their waste disposal mechanisms.<sup>338</sup> To better meet the clean water needs of the country, these farms should be widely federally regulated under the CWA.

### B. *Getting Around RCRA’s Legislative History*

While protecting the waters of the United States from agricultural waste under the CWA would require a relatively straightforward amendment to the Act’s substantive text, regulating agricultural waste under RCRA poses a larger obstacle. The only feasible option to effectively cover agricultural waste under RCRA is for Congress to amend the statute to specifically designate “agricultural waste” as “hazardous.” This would allow the EPA to track agricultural waste before it reaches a waterway or is discharged into the air in a way that negatively effects the natural environment and public health.<sup>339</sup> Notably, this amendment would clearly fall in line with RCRA’s goal to “assur[e] that hazardous waste management practices are conducted in a manner which protects human health and the environment.”<sup>340</sup>

Currently, the leading obstacles to this solution are that (i) the statute does not specifically define *any* “hazardous waste[s],”<sup>341</sup> and (ii) its legislative history suggests that the enacting legislators did not intend for RCRA to apply to agricultural facilities.<sup>342</sup> Instead, the EPA designates solid

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336. Schiff, *supra* note 332, at 449.

337. See *supra* Part I.A.

338. See *supra* Part I.B.

339. See *supra* note 127 and accompanying text.

340. 42 U.S.C. §§ 6902(a)(4).

341. *Id.* § 6903; see also *supra* notes 129–130 and accompanying text.

342. See *infra* note 352 and accompanying text.

wastes as “hazardous” and thus determines which wastes RCRA regulates.<sup>343</sup> Pursuant to this authority, the EPA promulgated a rule that exempts “solid wastes generated by . . . raising of animals, including manures . . . [if they] are returned to the soils as fertilizers.”<sup>344</sup> As discussed previously, this exempts substantially all agricultural waste from RCRA regulation.<sup>345</sup> But this exemption was policy-based, not toxicity-based—as noted by the EPA when promulgating the rule, “the legislative history of RCRA . . . specifically calls for such an exclusion.”<sup>346</sup>

Under RCRA, the EPA has developed two primary routes for determining what constitutes hazardous waste. Solid waste is designated as hazardous if (i) it is “listed as a hazardous waste in EPA’s regulations,” or (ii) it “exhibit[s] one of four hazardous characteristics.”<sup>347</sup> One method of listing hazardous wastes, under route one, is if the waste comes “from specific sources.”<sup>348</sup> Thus, the EPA could list wastes “from” industrial livestock production or agricultural production as hazardous wastes under this framework. Alternatively, the four hazardous characteristics are (i) ignitability, (ii) corrosivity, (iii) reactivity, and (iv) toxicity.<sup>349</sup> “Toxicity” is defined as a solid waste that leaches a listed contaminant at levels equal to or greater than those defined as “toxic” by the EPA.<sup>350</sup> Notably, listed contaminants include arsenic, which is known to be a common byproduct of food-animal waste, suggesting that the EPA could

343. See PERCIVAL ET AL., *supra* note 203, at 384 (“Although Congress required EPA to regulate hazardous waste, . . . it did not specify how the agency was to determine what wastes were hazardous.”).

344. 40 C.F.R. 261.4(b)(2) (2022); *see also supra* Part II.A.2.

345. *See supra* Part II.A.1.

346. Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33084, 33099 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261); *see generally* H.R. REP. No. 94-1491 (1976).

347. PERCIVAL ET AL., *supra* note 203, at 384.

348. 40 C.F.R. § 261.32 (2022). Some examples of this designation include wastes from “[i]norganic pigments,” “[o]rganic chemicals,” or “[i]norganic chemicals.” *Id.*

349. PERCIVAL ET AL., *supra* note 203, at 385; *see also* 40 C.F.R. § 261.21 (2022) (defining ignitability); *id.* § 261.22 (defining corrosivity); *id.* § 261.23 (defining reactivity); *id.* § 261.24 (defining toxicity).

350. *See id.* § 261.24(a) (“A solid waste . . . exhibits the characteristic of toxicity if . . . the extract from a representative sample of the waste contains any of the contaminants [listed in the statute] at the concentration equal to or greater than the respective value given.”).

regulate agricultural waste under this method as well.<sup>351</sup> But the legislative history of the Act, which the EPA relied on when promulgating the broad exemption for agricultural waste, states that “agriculture wastes which are returned to the soil as fertilizer or soil conditions are not considered discarded material in the sense of this legislation.”<sup>352</sup>

There are a few ways to get around this problem without resorting to legislative action. First, a few cases have interpreted this exemption narrowly, suggesting that it only applies if the agricultural waste is *properly* applied to the land as fertilizer, not “appl[ied] in such large quantities that its usefulness as organic fertilizer is eliminated.”<sup>353</sup> The EPA could adopt this logic via a policy or guidance document and then enforce it against agricultural operations that overapply manure as fertilizer.<sup>354</sup> Alternatively, the EPA could repeal its exemption, but this would likely be challenged widely by agriculturalists. Because of the *Chevron* standard<sup>355</sup> and RCRA’s legislative history, the EPA may have a difficult time defending the reasonableness of this action.<sup>356</sup> As a final option, Congress could amend the statute to explicitly give the EPA authority to regulate agricultural waste as a solid, hazardous waste under the statute. While there is currently no section under RCRA that defines specific wastes that *must* be regulated under the statute, it is well within Congress’s power to grant this authority by amending the statute. Additionally, because of

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351. *See id.*; *see also supra* note 67 and accompanying text.

352. *Water Keeper All., Inc. v. Smithfield Foods, Inc.*, 2001 U.S. Dist. LEXIS 21314, at \*12 (E.D.N.C. Sept. 20, 2001) (“Legislative history of the RCRA clarified that ‘agriculture wastes which are returned to the soil as fertilizer or soil conditions are not considered discarded material in the sense of this legislation.’” (quoting H.R. REP. No. 94-1491 (1976), *reprinted in* 1976 U.S.C.C.A.N. 6238, 6240)); *see also supra* note 346 and accompanying text.

353. *Water Keeper All., Inc.*, 2001 U.S. Dist. LEXIS 21314, at \*13; *see also* Cmty. Ass’n for Restoration of the Env’t v. Cow Palace, LLC, 80 F. Supp. 3d. 1180, 1220 (E.D. Wash. 2015) (refusing to accept the defendants’ “blanket interpretation that manure, used as a fertilizer, can *never* be considered a ‘solid waste’ under RCRA” (emphasis in original)).

354. *See COLE*, *supra* note 318, at 1.

355. *See Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837, 842–43 (1984).

356. *See id.* at 843–44. Although not specifically in the statute, legislative history suggests congressional intent to exclude agriculture from RCRA regulation, which would make it difficult for the EPA to argue that agricultural waste regulation is reasonable under RCRA.

the drastic growth of industrialized agriculture since the enactment of RCRA in 1976<sup>357</sup> and the scientific evidence now available to clarify the toxicity of animal-waste byproducts,<sup>358</sup> Congress should explicitly regulate industrial, agricultural waste under this statute.

C. *Backend Cleanup: Imposing CERCLA Liability*

CERCLA regulates cleanup of hazardous waste and its jurisdiction extends to substances regulated under both the CWA and RCRA.<sup>359</sup> Thus, if Congress were to amend the CWA to impose permitting requirements on a wider range of CAFOs, the EPA could impose cleanup liability on farming operations that impermissibly discharge agricultural pollutants into the waters of the United States. Similarly, if Congress were to amend RCRA to explicitly cover agricultural wastes, CERCLA liability could be broadly imposed on agricultural operations that overapply manure as fertilizer even if dangerous byproducts are not directly discharged into national waters.<sup>360</sup> Additionally, CERCLA can be applied retroactively,<sup>361</sup> which could help communities surrounding agricultural facilities reclaim the environmental purity of their land from pollution that occurred prior to enactment. Again, the problem of agricultural waste disposal is comprehensive and deserves a comprehensive solution. While these legal solutions are only the tip of the iceberg, amending these statutes and imposing cleanup liability through CERCLA would be a big step toward a necessary, comprehensive solution.

CONCLUSION

Agricultural waste is currently one of the most significant threats to clean water and air in the United States. As the

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357. See *EPA History: Resource Conservation and Recovery Act*, EPA, <https://perma.cc/8E5Q-4Z6C>.

358. See *supra* Part I.C.

359. See *supra* note 136 and accompanying text.

360. While CERCLA provides an exemption from reporting “[n]ormal application of fertilizers,” the overapplication of fertilizers covered by this Note’s proposed RCRA amendment is not “normal.” See *supra* notes 153–154 and accompanying text.

361. See *Superfund Liability*, EPA, <https://perma.cc/72CC-N3D8>.

industrial agricultural complex continues to grow, the negative health and environmental impacts of agricultural waste will only worsen. If nothing is done to change this trajectory, industrial agriculture will continue to exploit the land and lives of communities neighboring these concentrated facilities, primarily communities of color and low-income communities. Excessive animal consumption, the American need for meat, and the considerable economic incentives driving food-animal production have swept public health and environmental safety under the regulatory rug. Now is the time to reconsider these priorities. We must initiate a shift in the way we think about the farm-to-plate pipeline by reinforcing a legal landscape that incentivizes sustainable farming and disincentivizes concentrated animal production.

This Note has demonstrated that federal laws purporting to safely govern waste disposal practices fail to effectively regulate agricultural waste and that state laws and regulations place agricultural interests before environmental and public safety. As a result, the major environmental statutes governing waste disposal must be amended to address this public health crisis and give the communities most intimately affected by it the protection they deserve.