

# Successful Agriculture and Clean Water?: A Workable Path Forward for Regulating Drainage Districts as Point Sources Under the Clean Water Act

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*ABSTRACT: This Note addresses drainage district regulation under the Clean Water Act in the midst of a continued agricultural and environmental battle over water quality. One recent lawsuit, Des Moines Water Works v. Sac, Calhoun, and Buena Vista Counties, exemplifies the complexities of current perspectives on drainage district regulation and implementation. In the lawsuit, an Iowa water utility company sued three upstream counties' drainage districts for allegedly discharging excess nitrates into the river that the utility relied on for supplying water to its customers. This Note places the Water Works lawsuit within a larger context to contend that drainage districts with drainage tile should fall under the point source definition of the Clean Water Act and thus be subjected to more stringent observation and control. This Note next recommends how Iowa's Department of Natural Resources should undertake the permitting process to avoid the pitfalls that have hindered other states' water discharge permit implementation plans. This Note concludes by expressing how two seemingly incompatible ideas, successful agriculture and clean water, can result from this necessary regulation.*

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## I. INTRODUCTION

In its complaint against Sac, Calhoun, and Buena Vista Counties, Des Moines Water Works, the largest water utility in the State of Iowa, claimed that “drainage districts can be, should be, and are required by law to be regulated as ‘point sources’ under the Clean Water Act.”<sup>1</sup> This legal claim was one of many from the latest clash between public utilities and agricultural interests in a battle over water quality.<sup>2</sup> Those caught up in this contentious issue picked sides<sup>3</sup> as the case progressed slowly through the federal court system, but the court eventually punted on the issue.<sup>4</sup> Because the federal district

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1. Complaint at 9, *Bd. of Water Works Trs. of Des Moines v. Sac Cty. Bd. of Supervisors*, 890 N.W.2d 50 (N.D. Iowa 2017) (No. 5:15-cv-04020), 2017 WL 1191173.

2. See Bourree Lam, *Finding the Right Price for Water*, ATLANTIC (Mar. 24, 2015), <http://www.theatlantic.com/business/archive/2015/03/finding-the-right-price-for-water/388246> (demonstrating how water’s increased demand and scarcity continue to pit agricultural and water utility interests against each other).

3. Even Raygun, a popular Midwestern apparel brand, weighed in on the issue. On Raygun’s website, a person could buy either a fictional novel about a reporter covering a case about poisonous water in Iowa or an *America Needs Clean Water* sticker. *Water*, RAYGUN (May 12, 2016), <https://www.raygunsite.com/blogs/news/94221702-water>; *Clean Water Die-Cut Sticker*, RAYGUN, <https://www.raygunsite.com/products/clean-water-stickers-round> (last visited Dec. 9, 2017). On the other side, the Iowa Partnership for Clean Water developed political-style television commercials aimed at persuading the public to oppose the Des Moines lawsuit. Marcus McIntosh, *New TV Ad Takes Aim at Water Works Drinking Water Lawsuit*, KCCI, <http://www.kcci.com/news/new-tv-ad-takes-aim-at-water-works-drinking-water-lawsuit/33007014> (last updated May 13, 2015, 6:01 PM).

4. See Memorandum Opinion and Order on Defendant’s Motions for Summary Judgment at \*5, *Bd. of Water Works Trs. of Des Moines v. Sac Cty. Bd. of Supervisors*, 890 N.W.2d 50 (N.D. Iowa 2017) (No. C15-4020-LTS), 2017 WL 1042072. Common law claims on public nuisance and trespass, in addition to the Clean Water Act claim, were under review. See *id.* at \*1.

court avoided significant downstream effects by its narrowed decision, a new ruling on the Clean Water Act's ("CWA" or "Act") authority to regulate drainage districts could still dramatically alter the current landscape.<sup>5</sup>

To understand the Des Moines Water Works CWA claim, one must first understand what a drainage district is, who manages drainage districts, and Des Moines Water Works' motivation for its past suit against these three particular drainage districts. The term "drainage district" refers to the system of pipes and ditches that carry excess water from croplands to larger water systems.<sup>6</sup> Iowa's agricultural communities rely on these drainage districts to keep their fields suitable for farming, even during periods of significant moisture.<sup>7</sup> In specific areas with high water tables, such as in northwest Iowa, farmers would be unable to use their land without some type of drainage infrastructure.<sup>8</sup> In other areas, like the three counties implicated in the Des Moines Water Works case, farmers use drainage tile—a type of plastic tubing run below the crops' root level—to collect moisture when soil saturation is too great for crop production. Drainage tile directs the excess water into drainage districts.<sup>9</sup>

Frequently, the term "drainage district" is not used to define the specific type of land, but to refer to those in charge of overseeing the land. In the Des Moines Water Works case, the media, courts, and public generally used the term "drainage district" to refer to the Board of Supervisors who oversee the drainage sites.<sup>10</sup> The Board of Supervisors—made up of county politicians and farmers—create and control these drainage districts with a thorough understanding of the water runoff patterns, the strength of the water's flow, and the potential for pollution.<sup>11</sup> In the Des Moines Water Works lawsuit, the reason the water utility sued three *counties* is because counties oversee the Board of Supervisors, and the Board of Supervisors oversee drainage districts.<sup>12</sup>

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5. Mark Ryan, *The Clean Water Act's Agricultural Exemptions*, *ADVOCATE*, June–July 2016, at 48, 49–50.

6. EVERYTHING YOU WANTED TO KNOW ABOUT DRAINAGE DISTRICTS IN IOWA, <http://www.boonecounty.iowa.gov/home/showdocument?id=186> (last visited Dec. 9, 2017).

7. *Id.*

8. *Id.*

9. *Id.* See generally Jerry Wright & Gary Sands, *Planning an Agricultural Subsurface Drainage System*, U. MINN. EXTENSION, <http://www.extension.umn.edu/agriculture/water/planning-a-subsurface-drainage-system> (last visited Dec. 9, 2017) (providing farmers with a detailed roadmap for installing their own drainage infrastructure).

10. EVERYTHING YOU WANTED TO KNOW ABOUT DRAINAGE DISTRICTS IN IOWA, *supra* note 6.

11. *Id.*

12. See IOWA CODE § 468.230 (2012). The Board of Supervisors can tax, construct, improve, and maintain drainage projects. Repairs occur infrequently and are generally done by the county or a private contract. Farmers have to pay for any work done in the drainage district even though the work may not be done on the farmer's specific property.

Des Moines Water Works sued the three counties/drainage districts because the utility believed the districts' drainage tile systems were responsible for a drastic increase in water pollution. The utility believed nitrates from excess crop runoff were flowing through the drainage districts and into the Raccoon River. The high concentration of nitrates was then flowing downstream and damaging the water quality of the Des Moines watershed.<sup>13</sup> In support, Des Moines Water Works cited independent water measurements that suggested the nitrate levels in Des Moines' water were at record highs.<sup>14</sup> Furthermore, the utility argued it had no choice but to filter out these pollutants because the high level of water pollutants would continue, and federal law would continue to require the utility to have nitrates below a specific level before supplying water to a community.<sup>15</sup> As a result, Des Moines Water Works filed a legal claim on CWA grounds, which ultimately was avoided, in an effort to hold the drainage districts accountable for the water's high nitrate levels.<sup>16</sup>

The Des Moines Water Works CWA claim was thought to have hinged on the notion that drainage districts with drainage tile discharge are "point sources"<sup>17</sup> within the meaning of the CWA. Farmers and environmentalists alike believed the claim would force the court to interpret complex regulatory language within the Act while also confronting significant public policy concerns about the consequences of such an interpretation.<sup>18</sup> Even the critics of the lawsuit who saw the interpretive merit of a "point source" classification awaited the decision, because they hoped the court would determine that the prospective costs on farmers, the difficulty of implementation and enforcement, and the lack of support from the general public was sufficient to support a finding that the interpretation should fail on public policy

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13. Complaint, *supra* note 1, at 2–4.

14. Donnelle Eller, *High Nitrate Levels Plague 60 Iowa Cities, Data Show*, DES MOINES REG., <http://www.desmoinesregister.com/story/money/agriculture/2015/07/04/high-nitrates-iowa-cities/29720695> (last updated July 7, 2015, 8:09 AM).

15. "[T]he Environmental Protection Agency's (EPA) maximum contaminant level (MCL) [is] 10 milligrams per liter (mg/L) for nitrate in drinking water." FACT SHEET, DES MOINES WATER WORKS (2015), <http://www.dmw.com/upl/documents/water-quality/lab-reports/fact-sheets/nitrate-removal-facility.pdf>.

16. See Complaint, *supra* note 4; *Iowa Supreme Court Mulls Water Works Farm Drainage Lawsuit*, KCCI, <http://www.kcci.com/article/iowa-supreme-court-mulls-water-works-farm-drainage-lawsuit/6923247> (last updated Sept. 14, 2016, 1:41 PM).

17. Being labeled a "point source" means the water pollution source is subject to stricter regulation. For a thorough explanation of what constitutes a point source, see *infra* notes 61–84 and accompanying text.

18. Grant Rodgers, *Supreme Court Case is Key to Recouping Damages from Nitrate Pollution*, DES MOINES REG., <http://www.desmoinesregister.com/story/news/crime-and-courts/2016/09/13/supreme-court-case-key-recouping-damages-nitrate-pollution/90260770> (last updated Sept. 15, 2016, 9:19 AM).

grounds.<sup>19</sup> Instead, the Court determined that drainage districts were unable to provide any remedy to a CWA claim, promptly avoiding this significant issue altogether.<sup>20</sup> The Act's language, while a jumble of categorical restrictions and inscrutable exemptions, now continues to be assumed to exclude drainage districts from this form of regulation.<sup>21</sup> Des Moines Water Works never even got a decision on point source discharge.

This Note uses the recent Des Moines Water Works decision as a framework to attack the dominant statutory interpretation and public policy perspectives concerning point source regulation of drainage districts. First, this Note seeks to show how a court, should it choose to address the CWA issue, could reasonably interpret the CWA to find that drainage districts with drainage tile discharge should be regulated as point sources. This would require drainage districts to better manage the amount of nitrates and other pollutants being discharged into a state's waterways.<sup>22</sup> Second, this Note provides guidance for how such a permitting process for regulating drainage districts as point sources could be implemented successfully. The feasibility of this permit process demonstrates how public policy concerns are overstated and avoidable.

Part II.A of this Note provides a brief history of water quality regulation leading up to the CWA.<sup>23</sup> Part II.B covers the CWA's enactment.<sup>24</sup> Part II.C describes the current state-federal enforcement balance in water regulation.<sup>25</sup> Then, Part III details the result of the Des Moines Water Works case and the challenges remaining in regulating water quality.<sup>26</sup> Part IV provides a recommendation for how to control the amount of pollutants being discharged by drainage districts by arguing that drainage districts with drainage tile discharge should be considered point sources under CWA and that they can be successfully regulated through a general permitting process.<sup>27</sup> Part IV also addresses the risks of identifying drainage districts as point sources. The Part concludes by highlighting how a strong base of community support concerning such a regulation is necessary to ensure a healthy farming

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19. See Todd Neeley, *Water Fight*, PROGRESSIVE FARMER, Oct. 2015, [http://dtnpf-digital.com/article/Water\\_Fight/2271671/273037/article.html](http://dtnpf-digital.com/article/Water_Fight/2271671/273037/article.html).

20. Memorandum Opinion, *supra* note 4, at \*6.

21. Only two federal district courts have heard cases on drainage districts, and both ruled that drainage districts are nonpoint sources under the CWA. *Fishermen Against the Destruction of the Env't, Inc. v. Closter Farms, Inc.*, 300 F.3d 1294, 1297-98 (11th Cir. 2002); *Pac. Coast Fed'n of Fishermen's Ass'ns v. Glaser*, No. CIV S-2:11-2980-KJM-CKD, 2013 WL 5230266, at \*14-15 (E.D. Cal. Sept. 16, 2013).

22. See *infra* Part IV.A.

23. See *infra* Part II.A.

24. See *infra* Part II.B.

25. See *infra* Part II.C.

26. See *infra* Part III.

27. See *infra* Part IV.A.

and environmental future.<sup>28</sup> Ultimately, this Note seeks to demonstrate that regulating drainage districts as point sources is possible, plausible, and necessary for agricultural states.

## II. WATER QUALITY REGULATION HISTORY, DEVELOPMENTS, AND IMPLEMENTATION STRATEGIES

The history of the CWA provides insight into Congress's continued efforts<sup>29</sup> to regulate U.S. water quality and also elucidates how modern water quality responsibilities within the current statutory structure have developed.<sup>30</sup> This Part first details legislative efforts to regulate water quality<sup>31</sup> including the rise of the CWA and the current status of specific CWA provisions.<sup>32</sup> Next, this Part highlights courts' continued efforts to interpret key portions of the Act by considering results in specific cases and remaining unresolved questions.<sup>33</sup> This Part concludes by looking at the State of Iowa's regulatory actions and current responsibilities under the CWA in order to exemplify how states operate within the CWA's complex regulatory system. The review of Iowa's responsibilities sets up a framework for the current debate taking place in Iowa regarding drainage districts' regulatory requirements.<sup>34</sup>

### A. PRE-CLEAN WATER ACT REGULATIONS

In 1948, Congress established the Federal Water Pollution Control Act ("FWPCA") in an effort to improve the nation's water quality.<sup>35</sup> The FWPCA failed to substantially reduce pollution, however, and the Act proved difficult

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28. See *infra* Part IV.B.3.

29. CLAUDIA COPELAND, CONG. RESEARCH SERV., WATER QUALITY ISSUES IN THE 114TH CONGRESS: AN OVERVIEW 8–14 (2016), <https://www.fas.org/sgp/crs/misc/R43867.pdf>; see, e.g., Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. § 403 (2012) (requiring Congressional approval for construction of bridges, dams, dikes, and other infrastructure over United States waters).

30. See Jeremy Symons, *The Importance of the Clean Water Act*, HUFFPOST (July 2, 2011, 1:28 PM), [http://www.huffingtonpost.com/jeremy-symons/clean-water-act\\_b\\_856378.html](http://www.huffingtonpost.com/jeremy-symons/clean-water-act_b_856378.html) ("Now, nearly 40 years later, a toxic combination of factors is contributing to a decline in U.S. water quality and crippling the Clean Water Act. Two divisive Supreme Court cases (SWANCC v. Army Corps of Engineers, 2001 and Rapanos v. United States, 2006) and subsequent Environmental Protection Agency guidance are causing confusion over the Clean Water Act's intent to broadly protect all important surface waters. These developments have removed or jeopardized Clean Water Act protections for more than 20 million wetland acres and an estimated 59 percent of the stream miles that sustain our communities.").

31. See *infra* Part II.A.

32. See *infra* Part II.B.

33. See *infra* Part II.B.

34. See *infra* Part II.C.

35. *History of the Clean Water Act*, EPA, <https://www.epa.gov/laws-regulations/history-clean-water-act> (last visited Dec. 9, 2017).

to enforce.<sup>36</sup> The FWPCA also failed to calm the public's increasing concerns regarding water pollution.<sup>37</sup> By the time the EPA was established in 1972,<sup>38</sup> Congress had overhauled the FWPCA.<sup>39</sup>

While not specifically focused on water quality, Congress passed the National Environmental Policy Act ("NEPA") in 1970 to require all federal government agencies to consider the environmental effects of any proposed action.<sup>40</sup> NEPA requires agencies to produce an Environmental Assessment along with any proposal for a project in order to show whether a substantial environmental impact will result from implementing the proposed plan.<sup>41</sup> If no substantial impact is found, the governmental agency submits a "[f]inding of no significant impact."<sup>42</sup> If the proposed action "significantly affect[s] the quality of the human environment,"<sup>43</sup> the governmental agency must submit an environmental impact statement ("EIS").<sup>44</sup> An EIS lists the proposed action along with available alternatives to "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public."<sup>45</sup> Water quality impacts must be addressed in the EIS.<sup>46</sup> NEPA promotes transparency in environmental decision-making, but it does not require the agency to act in any specific way.<sup>47</sup> Therefore, NEPA's success as a tool of environmental regulation is limited.

36. See S. REP. NO. 92-414, at 7 (1972), as reprinted in 1972 U.S.C.C.A.N. 3668, 3674 ("[T]he Federal water pollution control program . . . has been inadequate in every vital aspect . . ."); David Drelich, *Restoring the Cornerstone of the Clean Water Act*, 34 COLUM. J. ENVTL. L. 267, 269 (2009) (identifying the Clean Water Act as a more effective act than the FWPCA); Jeffrey M. Gaba, *Generally Illegal: NPDES General Permits Under the Clean Water Act*, 31 HARV. ENVTL. L. REV. 409, 413-14 (2007).

37. Drelich, *supra* note 36, at 270.

38. President Richard Nixon introduced the idea of the Environmental Protection Agency in 1970 and signed an executive order to create it. Both the House and Senate later ratified the order. Together the Executive and Legislative branches set up one agency to control a variety of federal research, set environmental standards, and monitor and enforce activities related to environmental protection. *EPA History*, EPA, <https://www.epa.gov/aboutepa/epa-history> (last visited Dec. 9, 2017).

39. See 33 U.S.C. § 1251 (2012).

40. National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-70 (2012).

41. 40 C.F.R. § 1501.3 (2016).

42. *Id.* § 1508.13.

43. *Markle Interests, L.L.C. v. U.S. Fish & Wildlife Serv.*, 827 F.3d 452, 479 (5th Cir. 2016); see National Environmental Policy Act of 1969, 42 U.S.C. § 4332(2)(C).

44. *Markle Interests*, 827 F.3d at 479.

45. 40 C.F.R. § 1502.14 (2016).

46. *Id.* § 1502.25 (requiring an EIS to comply with specific statutes which further require the EIS to include impacts to threatened or endangered species, impacts to historical and cultural sites, and significant adverse effects on the human environment).

47. *Id.* § 1502.1.

### B. CLEAN WATER ACT'S ENACTMENT

In 1972, Congress introduced Amendments to the Federal Water Pollution Act.<sup>48</sup> These Amendments are known today as the CWA,<sup>49</sup> and essentially replaced the entirety of the FWPCA.<sup>50</sup> Congress passed the CWA to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>51</sup> The Act requires that individuals, corporations, and governments comply with more specific and heightened water pollution standards.<sup>52</sup>

The Amendments provided a structure to regulate and control pollutant discharge<sup>53</sup> into United States waters and granted the newly formed Environmental Protection Agency (“EPA”) authority to create programs and standards for managing water pollution.<sup>54</sup> The new structure shifted its focus to source pollution by identifying specific conveyances of pollution and requiring permits for specific pollutant discharge.<sup>55</sup> The Act granted the EPA oversight authority over the National Pollution Discharge Elimination System (“NPDES”) permit process.<sup>56</sup>

The NPDES permit process brought about a significant change to water pollution regulation. Under the CWA, polluters no longer look to state-established water quality standards to ensure compliance.<sup>57</sup> Instead, any party responsible for water pollution discharge falling within the scope of the NPDES must seek a permit establishing the level of compliance needed or risk civil and criminal penalties.<sup>58</sup> In *EPA v. California*, the Supreme Court stated that the NPDES’s purpose is to “to transform generally applicable effluent limitations . . . based on water quality . . . into the obligations (including a timetable for compliance) of the individual discharger.”<sup>59</sup> The Court went on to explain that “the permit defines, and facilitates compliance with, and enforcement of, a preponderance of a discharger’s obligations.”<sup>60</sup>

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48. 33 U.S.C. § 1251 (2012).

49. *History of the Clean Water Act*, *supra* note 35.

50. Drelich, *supra* note 36, at 269.

51. 33 U.S.C. § 1251.

52. *See id.* § 1362.

53. *History of the Clean Water Act*, *supra* note 35.

54. 33 U.S.C. § 1342(a)–(c).

55. Oliver A. Houck, *TMDLs: The Resurrection of Water Quality Standards-Based Regulation Under the Clean Water Act*, 27 ENVTL. L. REP. 10,329, 10,337 (1997).

56. Dianne K. Conway, *TMDL Litigation: So Now What?*, 17 VA. ENVTL. L.J. 83, 86 (1997).

57. Gaba, *supra* note 36, at 414.

58. 33 U.S.C. § 1319(b)–(c).

59. *EPA v. California ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 (1976). “[E]ffluent limitation[s]” refer to “any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources . . . including schedules of compliance.” 33 U.S.C. § 1362(11).

60. *State Water Res. Control Bd.*, 426 U.S. at 205.



The CWA requires permits for point source discharge but does not require permits for nonpoint source discharge.<sup>61</sup> The CWA defines point source as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.”<sup>62</sup> A nonpoint source is any other source of water pollution outside of the point source pollution definition. The CWA does not regulate nonpoint source pollution.<sup>63</sup> Given the harsh penalties for a failure to obtain a permit or for discharging pollutants in violation of the permit, and the near nonexistent recourse for nonpoint source pollution, the distinction between point and nonpoint discharge remains a contentious issue.<sup>64</sup>

The point source definition explicitly excludes “agricultural stormwater discharges and return flows from irrigated agriculture.”<sup>65</sup> Any other “discharges composed entirely of return flows from irrigated agriculture” are also identified as exclusions and do not need a permit.<sup>66</sup> Stormwater runoff from gas, oil, and mining operation and silvicultural activities also do not require permits.<sup>67</sup>

While thoroughly detailed statutorily, the Supreme Court was nonetheless tasked with interpreting the point source intricacies of the CWA in 2004. In the 2004 case, *South Florida Water Management District v. Miccosukee Tribe of Indians*, the Miccosukee Tribe brought a citizen suit challenging the management district’s operation of a pumping facility that pumped water containing agricultural, urban, and residential runoff from a channel into a

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61. *History of the Clean Water Act*, *supra* note 35. The CWA also limits the amount a pollutant can occur within a particular time span. Typically, severely polluted waters unable to meet water quality standards lead to the CWA requiring Total Maximum Daily Loads (“TMDL”) to reduce pollution. *Program Overview: Impaired Waters and TMDLs*, EPA, <https://www.epa.gov/tmdl/program-overview-impaired-waters-and-tmdls> (last visited Dec. 9, 2017).

62. 33 U.S.C. § 1362(14).

63. *NPDES Permit Basics*, EPA, <https://www.epa.gov/npdes/npdes-permit-basics> (last visited Dec. 9, 2017). A local municipality may have its own permit requirements, but it is not federally monitored. *See id.* Debate remains over whether the CWA has displaced federal common law remedies surrounding nonpoint source pollution. While the CWA has displaced nuisance claims against point sources, such a claim may still be available for nonpoint source pollution. *See generally* Endre Szalay, Comment, *Breathing Life Into the Dead Zone: Can the Federal Common Law of Nuisance Be Used to Control Nonpoint Source Water Pollution?*, 85 TUL. L. REV. 215 (2010).

64. *See, e.g.*, *Rapanos v. United States*, 547 U.S. 715, 742–46 (2006); Nat’l Res. Def. Council, Inc. v. Costle, 568 F.2d 1369, 1374 (D.C. Cir. 1977); 2 WILLIAM H. RODGERS, JR. & ELIZABETH BURLESON, ENVIRONMENTAL LAW § 4:10 (2017); William Madsen, Casenote, *Community Ass’n Restoration v. Bosma Dairy: The Expanding Definition of a Point Source Under the Clean Water Act*, 8 GREAT PLAINS NAT. RESOURCE J. 56, 61–63 (2003).

65. 33 U.S.C. § 1362(14).

66. 33 U.S.C.A. § 1342(l)(1) (West 2014).

67. *Id.* § 1342(l). Silvicultural activities include any discharge resulting from “nursery operations, site preparation, reforestation . . . prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance.” *Id.* § 1342(l)(3)(A).

reservoir.<sup>68</sup> The Miccosukee Tribe contended that the operation of the pump constituted the “discharge of a pollutant” and, therefore, was a point source for the purposes of the CWA and needed a permit in order to operate.<sup>69</sup> The management district argued the channel was not a point source because the pollutant did not originate in the channel.<sup>70</sup> The management district also claimed the channel and reservoir were two parts of a single body of water; therefore, the pump did not add water to the reservoir.<sup>71</sup>

The Court found the management district’s first argument unpersuasive and held that the phrase “discharge of a pollutant” applies to point sources that do not generate pollutants.<sup>72</sup> However, the Court did find that the record supported the District’s second argument, because if the pump were to be shut down, the channel portion may flood and render the channel and reservoir water indistinguishable.<sup>73</sup> Because the Court had resolved the point source issue on which it had granted certiorari, it remanded the case for a determination on whether the waters were distinct.<sup>74</sup>

In 2013, the Court again reviewed a CWA permit interpretation of point sources.<sup>75</sup> In *Decker v. Northwest Environmental Defense Center*, the court considered stormwater runoff along two logging roads and the ditches and channels that carried the water and other sediment into the nearby waterways.<sup>76</sup> The Northwest Environmental Defense Center claimed the logging operations and state and local governments were violating the CWA for failing to obtain NPDES permits.<sup>77</sup> The defendants claimed the regulation did not “cover temporary, outdoor logging installations.”<sup>78</sup>

The Court determined the stormwater runoff from these logging roads did not require NPDES permits before being discharged into navigable waters because the discharges were not “associated with industrial activity.”<sup>79</sup> The Court found that logging did not fall within the category of “industry” as

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68. S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians, 541 U.S. 95 (2004).

69. *Id.* at 99.

70. *Id.* at 104.

71. *Id.* at 105–06.

72. *Id.* at 105.

73. *Id.* at 111.

74. *Id.* at 111–12.

75. *Decker v. Nw. Env'tl. Def. Ctr.*, 133 S. Ct. 1326 (2013).

76. *Id.* at 1333.

77. *Id.*

78. *Id.* at 1337.

79. *Id.* The earlier version of the Industrial Stormwater Rule defines industrial activity as discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. . . . [T]he term includes, but is not limited to, storm water discharges from . . . immediate access roads . . . used or traveled by carriers of raw materials. . . .

40 C.F.R. § 122.26(b)(14) (2016).

defined by the CWA because the regulation was not meant to “cover temporary, outdoor logging installations.”<sup>80</sup>

These Supreme Court cases have had expansive implications for states because the majority of states provide their own permits under federal CWA guidelines.<sup>81</sup> Either the EPA or the State, with EPA approval, may issue permits within the State’s jurisdiction.<sup>82</sup> The EPA may waive review of certain permit applications to a State.<sup>83</sup> Otherwise, the State must forward the permit application to the EPA to ensure compliance with the CWA before approval.<sup>84</sup> The State may establish standards above and beyond federal requirements, but such regulation happens infrequently due to the lack of support from local industries.

### C. STATE-FEDERAL ENFORCEMENT BALANCE

If a state has authority to issue permits, it may either grant an individual permit, which is “issued directly to an individual discharger,” or a general permit, which is “issued to no one in particular with multiple dischargers obtaining coverage under that general permit after it is issued.”<sup>85</sup> General permits, which cover a specific type of discharge that shares similar conditions and characteristics, are easier for the state or federal agency to distribute and enact but are more difficult to enforce.<sup>86</sup> As a result, polluters worry less about compliance with the general permits because of less strict oversight.<sup>87</sup>

80. *Decker*, 133 S. Ct. at 1337 (2013). In *Decker*, the Court ignored an earlier version of the regulation that included “logging” within its Standard Industrial Classification because it concluded a reasonable interpretation of the CWA was that it only regulated “traditional industrial sources.” *Id.* at 1336–37 (emphasis omitted). The Court’s majority found the EPA’s interpretation reasonable and in his concurrence, Chief Justice Roberts invoked *Seminole Rock* deference. *Id.* at 1337–39 (Roberts, C.J., concurring). Interestingly, Justice Scalia dissented and said, “The fairest reading of the statute and regulations is that these discharges were from point sources, and were associated with industrial activity.” *Id.* at 1342 (Scalia, J., dissenting).

81. *Who Issues NPDES Permits in New England*, EPA, <https://www3.epa.gov/region1/npdes/issuers.html> (last visited Dec. 9, 2017) (“Forty-six states are authorized to issue NPDES permits themselves in lieu of the federal government. . . . The programs of the remaining four states . . . are administered by the EPA Regional offices.”).

82. 33 U.S.C. § 1342 (2012).

83. *Id.* § 1342(e).

84. *Id.* § 1342(d).

85. *NPDES Permit Basics*, *supra* note 63.

86. *See, e.g.*, Elaine Thompson, *Stormwater Legal Challenge Brewing in Central Mass.*, TELEGRAM.COM, <http://www.telegram.com/news/20160821/stormwater-legal-challenge-brewing-in-central-mass> (last updated Aug. 21, 2016, 6:52 PM) (explaining that the state is attempting to implement a “Massachusetts Small Municipal Separate Storm Sewer Systems General Permit . . . [which is a] 60-page permit—accompanied by 229 pages of appendages and nearly 600 pages of municipal comments . . . . affect[ing] more than 200 cities and towns in the state”).

87. *See* Phillip M. Bender, Comment, *Slowing the Net Loss of Wetlands: Citizen Suit Enforcement of Clean Water Act § 404 Permit Violations*, 27 ENVTL. L. 245, 260–63 (1997).

In many cases, general permits may be in violation of the requirements of the Clean Water Act. . . . The broad scope of most general permits . . . preclude the site-specific

Generally, state and federal agencies prefer general permits because they reduce the number of permits that need to be distributed. In contrast, environmental groups prefer individual permits because the stricter standard leads to more effective water regulation.

Outside the NPDES permit requirement, individual states are also responsible for Water Quality Standards under the CWA.<sup>88</sup> The CWA established Water Quality Standards to promote state improvement of water quality, to increase the CWA's effectiveness, and to encourage public involvement in the water regulation process.<sup>89</sup> The Water Quality Standards Regulation provides the basic requirements a state must follow while allowing freedom for each individual state to determine how best to implement the requirements.<sup>90</sup> The state must follow appropriately designated uses of water, protect existing water quality, and adopt general policies as deemed fit to apply and implement standards.<sup>91</sup>

Water Quality Standards serve as an umbrella regulation for NPDES permits and also require states to regulate already severely impaired waters.<sup>92</sup> The CWA requires states to regulate highly-polluted water through a Total Maximum Daily Load standard to reduce the amount of pollutants in the water to a safe level.<sup>93</sup> Water Quality Standards also require the state to disclose to its citizens the water quality in the state, thereby promoting transparency and public discourse surrounding water issues.<sup>94</sup>

Iowa is one of many states that regulates its own water quality under the Clean Water Act. The EPA approved the Iowa Department of Natural Resources's ("IDNR") petition in 1978, and since that time Iowa has

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assessment that underlies compliance with the various elements of water quality standards, including limitations on discharges into impaired waters, special limitations on discharges from new sources, and the anti-degradation provisions applicable to "high quality" waters.

Gaba, *supra* note 36, at 433 (footnote omitted).

88. *State-Specific Water Quality Standards Effective Under the Clean Water Act (CWA)*, EPA, <https://www.epa.gov/wqs-tech/state-specific-water-quality-standards-effective-under-clean-water-act-cwa> (last visited Dec. 9, 2017).

89. 40 C.F.R. § 131.2 (2016).

90. *State-Specific Water Quality Standards Effective Under the Clean Water Act (CWA)*, *supra* note 88.

91. *See, e.g., Water Quality Standards*, IOWA DEP'T NAT. RESOURCES, [www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Quality-Standards](http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Quality-Standards) (last visited Dec. 9, 2017).

92. *See, e.g., NPDES/Wastewater Permitting*, IOWA DEP'T NAT. RESOURCES, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting> (last visited Dec. 9, 2017).

93. *Clean Water Act Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDLs)*, EPA, <https://www.epa.gov/tmdl> (last visited Dec. 9, 2017).

94. *Impaired Waters and TMDLs: Identifying and Listing Impaired Waters*, EPA, <https://www.epa.gov/tmdl/impaired-waters-and-tmdls-identifying-and-listing-impaired-waters> (last visited Dec. 9, 2017).

continued to shape its own water regulations.<sup>95</sup> Under Iowa's current Water Quality Standards, Iowa follows CWA standards and maintains Tier 1 through Tier 3 protection for its waterways.<sup>96</sup> IDNR promotes volunteer monitoring to encourage citizens to actively support water quality goals.<sup>97</sup> IDNR also provides a Nutrient Reduction Strategy guide to citizens interested in reducing nutrients in surface water that would otherwise eventually end up in the Gulf of Mexico.<sup>98</sup>

Additionally, IDNR issues its own NPDES permits in compliance with the CWA.<sup>99</sup> "Typical point source discharges [requiring a permit] include. . . publicly owned treatment works (POTWs), discharges from industrial facilities, and. . . urban runoff."<sup>100</sup> Nonpoint sources, which do not require a permit, include most agricultural facilities, though the rule does not categorically exclude agricultural facilities.<sup>101</sup> Farm runoff and Animal Feeding Operations ("AFOs") have generally been exempt from the NPDES permitting process.<sup>102</sup> Drainage districts are an example of agricultural runoff

95. See generally IOWA CODE ch. 455B (2017) (including within the jurisdiction of the Department of Natural Resources the administration of water permits and the enforcement of water quality standards).

96. IOWA ADMIN. CODE r. 61.2(2) (2017). Tier 1 protection protects water quality for existing uses, maintaining and protecting the water's current level. *Id.* r. 61.2(2)(a). Tier 2 protection addresses water that exceeds the minimum required pollutant level and protects the water fully unless a plan to reduce water quality to accommodate economic development is approved. *Id.* r. 61.2(2)(b). Tier 2 ½ protection protects high quality waters that are of ecological or recreational significance. *Id.* r. 61.2(2)(c). Tier 3 protection protects an outstanding natural resource and will not allow any expansion of pollutants. *Id.* r. 61.2(2)(d).

97. *Iowa Watershed Improvement Program: Locally-Led Volunteer Water Monitoring*, IOWA DEP'T NAT. RESOURCES, <http://www.iowadnr.gov/Portals/idnr/uploads/water/watershed/volmon/2017%20Volunteer%20Water%20Monitoring%20ofact%20sheet%20FINAL.pdf> (last visited Dec. 9, 2017) (encouraging Iowa citizens to act as locally-led volunteers to help "educate, inform and engage Iowans on our state's water quality challenges through Iowa's volunteer monitoring program" because it is "more meaningful to the residents and their communities" if water quality is monitored at the most local levels).

98. IOWA DEP'T OF AGRIC. AND LAND STEWARDSHIP, IOWA NUTRIENT REDUCTION STRATEGY: A SCIENCE AND TECHNOLOGY-BASED FRAMEWORK TO ASSESS AND REDUCE NUTRIENTS OF IOWA WATERS AND THE GULF OF MEXICO 21 (2013), <http://www.nutrientstrategy.iastate.edu/sites/default/files/documents/NRSfull-130529.pdf>.

99. See IOWA CODE § 455B.183 (2017) (explaining what activities require a permit issued by Iowa or an Iowa county); see also 33 U.S.C. § 1342(a) (2012) (explaining what activities require a federally issued permit). Currently, one general permit is in the development process for hydrostatic testing and water lines while another general permit is in the development process for dewatering activities and residential geothermal discharge. *NPDES General Permits*, IOWA DEP'T NAT. RESOURCES, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-General-Permits> (last visited Dec. 9, 2017).

100. *NPDES/Wastewater Permitting*, *supra* note 92.

101. *Id.*

102. See *id.* Agricultural interests have maintained close, influential relationships with legislators to ensure that their AFOs, which contribute significantly to poor water quality, remain protected under water quality laws. Douglas R. Williams, *When Voluntary, Incentive-Based Controls*

currently considered nonpoint sources and are not required to have a permit.<sup>103</sup>

### III. REGULATING DRAINAGE DISTRICTS UNDER THE CLEAN WATER ACT

Drainage tile collects excess water and pollutants from cropland and transports the water and pollutants to drainage districts; the drainage districts transport the water and pollutants into the waterways.<sup>104</sup> Public utilities pull from these waterways, treat the water to remove pollutants, and distribute the water to local communities.<sup>105</sup> When the waterways have high levels of pollutants, water utility companies have the burden of increasing treatment to provide clean water.<sup>106</sup> The treatment costs the utility and consumers more money while leaving the sources of the pollutant unaccountable. With a lack of accountability, the pollutant sources have little incentive to change. As a result, unaccountable water polluters continue to pollute at higher levels, hurting aquatic life and communities' finances.

The Des Moines Water Works case was a water utility's attempt to hold what it perceived as a pollutant source accountable for high nitrate levels.<sup>107</sup> By holding the drainage districts with drainage tile accountable, Des Moines Water Works hoped to put pressure on drainage districts to change their ways and support cleaner waterways.<sup>108</sup> While Des Moines Water Works claimed drainage districts' actions constituted a nuisance, trespass, negligence, or an unconstitutional taking, its CWA claim uniquely addressed the larger problem facing agricultural communities: keeping waterways clean while avoiding unduly burdensome regulations on farmers. The Court, while adequately addressing the nuisance, trespass, negligence, and takings claim, failed to properly address the CWA claim.

This Part first addresses the types of pollutants found in drainage districts with drainage tile and these pollutants' effects on aquatic life and the general public upon entering the primary waterways.<sup>109</sup> Next, assuming for the purposes of this Note that the drainage districts in the Des Moines Water Works case are a primary cause of the high nitrate levels in the Des Moines

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*Fail: Structuring a Regulatory Response to Agricultural Nonpoint Source Water Pollution*, 9 WASH. U. J.L. & POL'Y 21, 25 (2002).

103. See IOWA CODE §§ 468.126, 468.2, 468.4 (2017) (detailing the requirements for drainage district installation, maintenance, and improvements); see also CHRISTOPHER B. BURKE, INDIANA DRAINAGE HANDBOOK §§ 5.2-1 to 5.204-3 (1999), <http://www.in.gov/dnr/water/files/allhbook.pdf> (describing the methodology for using drainage tile to secure proper water retention on farmers' land).

104. EVERYTHING YOU WANTED TO KNOW ABOUT DRAINAGE DISTRICTS IN IOWA, *supra* note 6.

105. See, e.g., *Water Treatment Process*, DES MOINES WATER WORKS, [dmww.com/water-quality/treatment-process](http://dmww.com/water-quality/treatment-process) (last visited Dec. 9, 2017).

106. See *id.*

107. See Complaint, *supra* note 1, at 1-2.

108. See *id.*

109. See *infra* Part III.A.

watershed area, this Part focuses on the difficulties of implementing any improvements to water quality through CWA regulation.<sup>110</sup> This Part concludes by discussing a parallel line of cases concerning water regulation and animal feeding operations to illustrate additional risks when attempting to address the root of this type of environmental problem.

#### A. AGRICULTURAL WATER POLLUTANTS

A variety of pollutants in waterways stem from agricultural water. Pesticides, fertilizers, and agrochemicals often wash off fields and end up in drainage districts and, consequently, the public water supply.<sup>111</sup> Pesticides often kill not only targeted bugs, but upon entering waterways kill other beneficial insects, harm freshwater creatures, and even adversely affect humans.<sup>112</sup> Although fertilizers are not directly toxic, they can significantly alter freshwater and marine areas.<sup>113</sup> When fertilizers alter nutrient systems in a waterway, it can lead to significant shifts in the water's ecosystem.<sup>114</sup>

"Nitrate is one of the most common" pollutants in drainage districts,<sup>115</sup> yet people are commonly confused about what nitrates actually are and what they can cause when in excess.<sup>116</sup> Nitrate is a compound of nitrogen and oxygen, meaning it is a mineral form of nitrogen, which otherwise exists as a gas.<sup>117</sup> Plants require nitrogen to grow but are unable to directly use nitrogen unless it is in a mineral form, so the plants instead rely on micro-organisms to oxidize, or add oxygen to, ammonium.<sup>118</sup> Ammonium, in turn, is oxidized to nitrite, and the nitrite is oxidized to nitrates.<sup>119</sup> Plants absorb the nitrogen from the ammonium, nitrites, or nitrates depending on the plant and soil conditions.<sup>120</sup> Farmers apply these oxidized nitrogen compounds to their fields through fertilizers to ensure the necessary nutrients are in the soil to support healthy crop growth.<sup>121</sup> When applied to the field, oxidized nitrogen

110. See *infra* Part III.B.

111. See *The Sources and Solutions: Agriculture*, EPA, <https://www.epa.gov/nutrientpollution/sources-and-solutions-agriculture> (last visited Dec. 9, 2017).

112. See ERIC S. LORENZ, POTENTIAL HEALTH EFFECTS OF PESTICIDES 3–8 (2009).

113. V.H. Smith et al., *Eutrophication: Impacts of Excess Nutrient Inputs on Freshwater, Marine, and Terrestrial Ecosystems*, 100 ENVTL. POLLUTION 179, 179–81 (1999).

114. *Id.* at 181.

115. Margaret McCasland et al., *Nitrate: Health Effects in Drinking Water*, PESTICIDE SAFETY EDUC. PROGRAM, <http://psep.cce.cornell.edu/facts-slides-self/facts/nit-heef-grw85.aspx> (last visited Dec. 9, 2017).

116. See *id.*

117. *Id.*

118. E.V.S. Prakasa Rao & K. Puttanna, *Nitrates, Agriculture and Environment*, 79 CURRENT SCI. 1163, 1163 (2000).

119. *Id.*

120. *Id.*

121. *Id.* at 1163–64.

not absorbed by plants may leach into ground water.<sup>122</sup> Some of the oxidized nitrogen, as ammonium, resides in clay minerals making it rather immobile, while oxidized nitrogen in its nitrate form is highly mobile.<sup>123</sup> As a result, nitrates are the most commonly known pollutant stemming from nitrogen fertilizer because of its propensity for ending up in the water supply.<sup>124</sup>

Nitrates can cause significant harm to humans, especially babies, and animal and aquatic life. Excess nitrate levels in water can cause “blue baby” disease, where the oxygen-carrying abilities of the red blood cells cease and the baby dies.<sup>125</sup> While still disputed in the scientific community, nitrate toxicity has also been linked to specific cancers, Alzheimer’s disease, multiple sclerosis, and cardiac disease.<sup>126</sup> The EPA limits the amount of nitrates in drinking water at ten Parts Per Million (“PPM”).<sup>127</sup> Nitrates cannot be removed by simply boiling the water or by adding chlorine.<sup>128</sup> Instead, water utilities must use reverse osmosis and do regular chemical testing to reduce the amount of nitrates to the required standard. As a result, treating water for excess nitrates is more costly and difficult than removing other common water pollutants.<sup>129</sup>

Like humans, animals suffer serious consequences from excess nitrate consumption.<sup>130</sup> Researchers have found negative effects to include intestinal disorders, pregnancy-related disorders, and muscle tremors.<sup>131</sup> Aquatic life also suffers from excess nitrate levels because the concentration of nitrates in water promotes rapid plant and algae growth.<sup>132</sup> This leads to high oxygen production during the day, but at night the dissolved oxygen dramatically decreases because oxygen-breathing bacteria use the oxygen in the water when breaking down the dead algae and plants.<sup>133</sup> Other aquatic creatures, such as fish or insects, then struggle to get enough oxygen to survive.<sup>134</sup>

Even though agricultural water pollutants such as nitrates continue to cause health and environmental problems, specific types of agricultural water that run into waterways are exempt from regulation. The CWA specifically

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122. *Id.*

123. *Id.* at 1163.

124. *Id.* at 1164.

125. *Id.* at 1165.

126. *Id.*

127. *National Primary Drinking Water Regulations*, EPA (May 2009), [https://www.epa.gov/sites/production/files/2016-06/documents/npwdr\\_complete\\_table.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf).

128. McCasland et al., *supra* note 115.

129. *Id.*

130. NAT’L RESEARCH COUNCIL, *MINERAL TOLERANCE OF ANIMALS*, 456–59 (2005).

131. *Id.*

132. Smith et al., *supra* note 113, at 181.

133. *Id.* at 181–82.

134. *Id.*



exempts agricultural stormwater, or water runoff, from regulation.<sup>135</sup> Agricultural states generally do not fill in this gap, allowing farmers to voluntarily choose whether to adopt practices that combat water pollution.<sup>136</sup> Farmers may decide to reduce production to preserve soil quality, plant other crops to offset nutrient depletion, or set up natural growth to filter out some of the water pollutants.<sup>137</sup> But all of these strategies are voluntary.<sup>138</sup> With substantial incentives to increase production and maximize short-term gains, farmers are reluctant to act to their own economic detriment for the sake of reducing invisible pollutants that do not directly affect them.<sup>139</sup>

Even though the CWA exempts agricultural stormwater, it is unclear whether drainage districts that channel water from drainage tile fall under the agricultural stormwater category. Drainage tile is unique from other agricultural water because it is not collected surface water nor is it groundwater.<sup>140</sup> Instead, drainage tile lies immediately under the root line to collect any excess water and directs that water to the drainage district.<sup>141</sup> Drainage tile benefits farmers because it prevents cropland from becoming too saturated. If too saturated, the soil's excess water will keep air from getting to the crops' roots and interfere with the crops' growth and development.<sup>142</sup> Because it decreases soil saturation, drainage tile improves the farmland's productivity and supports higher returns on crops.<sup>143</sup> It even helps prevent surface level agrochemicals and fertilizers from being washed away.<sup>144</sup> However, drainage tile's location below the root line also uniquely situates it to collect and displace nitrates, streamlining the pollutant directly into nearby drainage districts.<sup>145</sup>

135. See *Exemptions to Permit Requirements*, EPA, <https://www.epa.gov/cwa-404/exemptions-permit-requirements> (last visited Dec. 9, 2017).

136. See, e.g., *Iowa Nutrient Reduction Strategy*, IOWA ST. U., <http://www.nutrientstrategy.iastate.edu> (last visited Dec. 9, 2017).

137. See generally LAURIE NOWATZKE & J. ARBUCKLE, JR., *IOWA FARMERS AND THE IOWA NUTRIENT REDUCTION STRATEGY: 2015 SURVEY RESULTS* (2016), [http://www.nutrientstrategy.iastate.edu/sites/default/files/documents/INRS\\_2015\\_NRSFarmerSurvey\\_20161004.pdf](http://www.nutrientstrategy.iastate.edu/sites/default/files/documents/INRS_2015_NRSFarmerSurvey_20161004.pdf) (identifying the most common nutrient reduction strategies used by Iowa farmers).

138. *Id.* at 1.

139. Donnelle Eller, *How Do We Fix Iowa's Nitrate Pollution?*, DES MOINES REG., <http://www.desmoinesregister.com/story/money/agriculture/2015/09/13/tiling-pollution-nitrates/72103422> (last updated Sept. 13, 2015, 9:58 AM).

140. See BURKE, *supra* note 103, § 5.2-1.

141. See *id.* § 5.201-2.

142. *Id.* § 5.202-1.

143. Don Hofstrand, *Economics of Tile Drainage*, IOWA ST. U. EXTENSION & OUTREACH (July 2010), <https://www.extension.iastate.edu/agdm/articles/hof/HofJuly10.html>.

144. Keith E. Shilling & Calvin F. Wolter, *Contribution of Base Flow to Nonpoint Source Pollution Loads in an Agricultural Watershed*, 39 GROUNDWATER 49, 49 (2001).

145. G.W. Randall et al., *Nitrate Losses Through Subsurface Tile Drainage in Conservation Reserve Program, Alfalfa, and Row Crop Systems*, 26 J. OF ENVTL. QUALITY 1240, 1240-41 (1997).

Des Moines Water Works began its case against three Iowa counties for failing to regulate drainage districts because the utility company believes the drainage tile displaced significant levels of nitrates from the fields.<sup>146</sup> While the court determined the counties were not liable for the high level of nitrates and Des Moines Water Works' increased water treatment expenses, this Note does not focus on the Court's ruling of drainage district immunity.<sup>147</sup> Instead, this Note assumes the Court would have found sufficient causation to address the larger and still outstanding regulatory question—whether the CWA point source requirement, by its own language, should apply and how the regulation can be implemented effectively. The next Subpart addresses the implementation concerns should the court recognize the drainage districts as point sources.

### B. PROBLEMS WITH IMPLEMENTATION

Advocates against regulation of drainage districts claim that the additional administrative burden from drainage district regulation as point sources would be unreasonable, and a review of the implementation requirements does indicate real challenges.<sup>148</sup> With over nine million acres of farmland in Iowa being drained into 3,700 drainage districts, point source regulation would require a significant burden for drainage district boards.<sup>149</sup> Any verdict that the drainage districts violated the CWA would task the drainage district boards with responsibilities requiring significant time and money.<sup>150</sup>

Furthermore, the IDNR would be inundated with new permit requests.<sup>151</sup> The EPA delegated IDNR with permitting responsibilities in 1978, and since that time IDNR has not required drainage districts to require permits.<sup>152</sup> IDNR established rules in 2009 specifically addressing drainage tile as a non-

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146. See Complaint, *supra* note 1, at 1 (suing Sac, Calhoun, and Buena Vista Counties).

147. *Id.* at 40; Amended Answer at 4, 27, Bd. of Water Works Trs. of Des Moines, Iowa v. Sac Cty. Bd. of Supervisors, 890 N.W. 2d 50 (N.D. Iowa 2017) (No. 5:15-cv-04020), 2015 WL 3792818.

148. *Iowa Soybean Farmers Support Counties Sued by Des Moines Water Works*, IOWA SOYBEAN ASSOC. (July 13, 2016), <http://www.iasoybeans.com/news/news-releases/iowa-soybean-farmers-support-counties-sued-by-des-moines-water-works> (“By helping the counties, [Iowa Soybean Association CEO] Leeds [says supporting the counties] will bring a quicker end to the lawsuit. Then rural and urban neighbors will be able to work together to find solutions for a difficult and complex problem. . . . ‘At the end of the day, it’s who we are—an organization of family farmers who rally around neighbors in need as Iowans often do.’”).

149. *Facts About Drainage and Drainage Districts*, IOWA DRAINAGE DISTRICT ASS’N, <http://www.iowadrainage.org/Facts.html> (last visited Dec. 9, 2017).

150. The drainage districts would be required to follow point source regulation requirements. See *NPDES General Permits*, *supra* note 99.

151. See *Water Allocation & Use*, IOWA DEP’T NAT. RESOURCES, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Supply-Engineering/Water-Allocation-Use> (last visited Dec. 9, 2017) (providing “[a] permitting program to ensure consistency in decisions on the use of water”).

152. See *NPDES General Permits*, *supra* note 99.

regulated, nonpoint source,<sup>153</sup> so the current IDNR staff has not had this additional responsibility. From 1978 until September 1, 2017, IDNR has issued a total of 1,654 NPDES permits.<sup>154</sup> Needless to say, the addition of up to 3,700 entities into the regulatory scheme would require significant adjustments of IDNR's resources. In the event the CWA does include drainage districts within its point source definition, IDNR would be required by law to adopt one of two types of permitting processes.<sup>155</sup>

IDNR could either provide individual permits or general permits.<sup>156</sup> Issuing individual permits would require the permit writer to review the application, potentially contact the applicant, develop a permit by deriving technology-based and water quality-based effluent limits, set monitoring and reporting conditions, set facility-specific conditions, create a draft of the permit, allow for comments regarding the permit, draft a final permit taking comments into consideration, and issue the final permit.<sup>157</sup> Alternatively, IDNR could issue general permits, which would require IDNR first to collect data indicating the dischargers have enough similarities to be covered under a general permit. Then IDNR would follow the same steps required for the individual permitting process.<sup>158</sup> Other facilities that would later wish to be covered under the permit would submit a Notice of Intent to IDNR. IDNR would then determine whether each specific facility is covered by the general permit.<sup>159</sup> Both the individual and general permit process would be time and labor intensive.

In addition to the increased demands for IDNR permitting, the timeliness of issuing permits and the necessity of policing the permitted areas must also be considered.<sup>160</sup> It frequently takes a year or more before obtaining an individual NPDES permit, and the influx of new permits would only increase the backlog.<sup>161</sup> IDNR has the ability to streamline the process with general permits, but even these permits will require more time to process and review.<sup>162</sup> Once the permits are issued, IDNR must inspect the permitted areas

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153. See JACK RIESSEN, IOWA DEP'T OF NAT. RESOURCES, WATER PLANNING LAW AND GOVERNMENT 55 (2008).

154. *Current NPDES Permits*, IOWA DEP'T NAT. RESOURCES, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/Current-NPDES-Permits> (last visited Dec. 9, 2017) (follow "Permit Listing Spreadsheet" hyperlink).

155. See IOWA ADMIN. CODE r. 567-60.1 (2016).

156. *NPDES/Wastewater Permitting*, *supra* note 92.

157. *Id.*

158. *Id.*

159. *Id.*

160. Mark F. Cecchini-Beaver, Note, "Tough Law" Getting Tougher: A Proposal for Permitting Idaho's Logging Road Stormwater Point Sources After Northwest Environmental Defense Center v. Brown, 48 IDAHO L. REV. 467, 505 (2012).

161. *Id.*; *NPDES Permit Basics*, *supra* note 63.

162. *NPDES/Wastewater Permitting*, *supra* note 92.

to ensure compliance.<sup>163</sup> Iowa uses discharge monitoring reports and inspections to ensure facilities are in compliance.<sup>164</sup> When a facility is not in compliance, IDNR field staff, with consultation from counsel, issues an Administrative Order and a referral of the non-compliant source to the Iowa Attorney General's Office and the EPA.<sup>165</sup> Again, with over 3,700 drainage districts in the state, compliance monitoring and enforcement would increase significantly.

The other potential problem with a court establishing drainage districts as point sources is the possibility of agricultural interests successfully pressuring legislative alterations to the CWA to protect themselves from regulation. Concentrated Animal Feeding Operations ("CAFOs") went through a similar permitting process in the early 2000s as environmental groups and CAFOs litigated CWA regulation levels.<sup>166</sup> CAFOs are confinements for large groups of animals, such as cows or pigs, for periods of more than forty-five days in an area without vegetation.<sup>167</sup> The facilities generate significant amounts of animal waste that can cause human and environmental health risks if improperly managed.<sup>168</sup> After a series of EPA rules, court determinations, and legislative acts, CAFOs have continued to avoid some of the more stringent requirements of the CWA while still being defined as a point source.<sup>169</sup> The line of cases and rule-making efforts leading to the current CAFO regulations demonstrates the difficulty applying regulations once a facility is recognized as a point source.

Unlike drainage tile, Congress specifically included CAFOs in the CWA's definition of point source.<sup>170</sup> But in 1995, the EPA created a Guide Manual on NPDES Regulations for CAFOs and perhaps unintentionally demonstrated the uncertainty of when permits were required.<sup>171</sup> In 1998, the USDA and the EPA worked together to hold a national dialogue on CAFOs.<sup>172</sup> President Clinton focused on establishing a new Clean Water Action Plan, and, as part

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163. *Id.*

164. *Id.*

165. IOWA CODE §§ 445B.172(1), (5)(a)–(b) (2017).

166. *See generally* Nat'l Pork Producers Council v. EPA, 635 F.3d 738, 750 (5th Cir. 2011) (challenging the EPA's regulation requiring CAFOs to apply for an NPDES permit if they propose to discharge pollutants).

167. *National Enforcement Initiative: Preventing Animal Waste from Contaminating Surface and Ground Water*, EPA, <https://www.epa.gov/enforcement/national-enforcement-initiative-preventing-animal-waste-contaminating-surface-and-ground> (last visited Dec. 9, 2017).

168. *Id.*

169. *Id.*; *see Nat'l Pork Producers Council*, 635 F.3d at 750.

170. 33 U.S.C. § 1362(14) (2012); *see also* ENVTL. PROT. AGENCY, NPDES PERMIT WRITERS' MANUAL 7 (1996) [hereinafter *CAFOs Manual*] (noting where the primary EPA regulations for the NPDES permit program are located in the Code of Federal Regulations).

171. *CAFOs Manual*, *supra* note 170, at 1–2.

172. *Unified National Strategy for Animal Feeding Operations Public Listening Sessions*, EPA, <https://www3.epa.gov/npdes/pubs/afomeet.htm> (last visited Dec. 9, 2017).

of the Plan, the USDA and the EPA wrote the Unified National Strategy for Animal Feeding Operations.<sup>173</sup> The two agencies hosted eleven sessions where those interested could provide feedback on the document and ask additional questions.<sup>174</sup> Even when identified as a point source and subject to stringent regulatory standards, the public still had significant concerns about the water quality around the CAFOs.

After the EPA made alterations to its regulations in 2003, several of the provisions were quickly challenged in courts.<sup>175</sup> A 2003 rule required all CAFOs to apply for NPDES permits regardless of whether or not pollutant discharge was taking place, and it also added requirements for how CAFOs applied manure to the land.<sup>176</sup> CAFO operators believed the alterations and additions were overreaching and sued.<sup>177</sup> The Second Circuit Court of Appeals determined the EPA “exceeded its statutory jurisdiction by requiring all CAFOs to either apply for NPDES permits or otherwise demonstrate that they have no potential to discharge.”<sup>178</sup> The EPA responded with a 2008 rule requiring CAFO owners to determine whether the CAFO is discharging or will discharge from its production or land-spreading area.<sup>179</sup> Agricultural interests again sued in 2011, and the Fifth Circuit Court of Appeals considered the EPA’s 2008 Rule.<sup>180</sup> The Court found the EPA’s requirement that CAFOs must apply for an NPDES permit if the CAFO has only proposed to discharge was without authority, because the EPA only has authority to regulate the actual discharge of point sources into navigable waterways.<sup>181</sup> A 2012 EPA rule reflects the Fifth Circuit’s determination.<sup>182</sup> While the EPA’s current rule expresses the current status of CAFO regulation, challenges continue in court to determine whether specific runoff is agricultural storm water discharge.<sup>183</sup>

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173. U.S. DEP’T OF AGRIC. & U.S. ENVTL. PROT. AGENCY, UNIFIED NATIONAL STRATEGY FOR ANIMAL FEEDING OPERATIONS 1.1 (1999), <https://www3.epa.gov/npdes/pubs/finafost.pdf>.

174. *Id.*

175. See *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486, 498–99 (2d Cir. 2005) (challenging the validity of the EPA permitting scheme for CAFOs); *Save the Valley, Inc. v. EPA*, 223 F. Supp. 2d 997, 1014 (S.D. Ind. 2002) (“[V]iolations of permit conditions . . . [were] so widespread that such violations appear to result from a failure of the State to enforce . . . permit conditions . . .” (quoting 33 U.S.C. § 1319(a)(2) (1990))).

176. See National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7176 (Feb. 12, 2003) (to be codified at 40 C.F.R. pts. 9, 122, 123, & 412).

177. *Waterkeeper All., Inc.*, 399 F.3d at 497; see William M. McLaren, *The Death of the Duty to Apply: Limitations to CAFO Oversight Following Waterkeeper & National Pork Producers*, 11 J. ANIMAL & NAT. RESOURCE L. 87, 89–90 (2015).

178. *Waterkeeper All., Inc.*, 399 F.3d at 504.

179. U.S. ENVTL. PROT. AGENCY, CONCENTRATED ANIMAL FEEDING OPERATIONS FINAL RULEMAKING—FACT SHEET (2008), [https://www3.epa.gov/npdes/pubs/cafo\\_final\\_rule2008\\_fs.pdf](https://www3.epa.gov/npdes/pubs/cafo_final_rule2008_fs.pdf).

180. *Nat’l. Pork Producers Council v. EPA*, 635 F.3d 738, 749–51 (5th Cir. 2011).

181. *Id.* at 750–51.

182. 33 U.S.C. § 1342(a) (2012).

183. *Alt v. EPA*, 979 F. Supp. 2d 701 (N.D. W. Va. 2013).

which would render the runoff exempt from the NPDES permit requirement.<sup>184</sup> AFOs also remain exempt from the permit requirement because they are not expressly defined as point sources under the EPA.<sup>185</sup>

In sum, falling under the point source categorization will not immediately cure other significant barriers to cleaner water. First, simple implementation and enforcement procedure, should drainage districts with drainage tile be considered point sources, will strain the current state of the IDNR's current permit process. Financial costs and time pressures become immediate problems with the potential of a significant increase in permit requests, and the potential requirements for the drainage districts have yet to be addressed. Neil Hamilton, the Director of the Agricultural Law Center at Drake University, described the situation simply: "Assuming the federal court rules the drainage districts are point sources and need NPDES permits from EPA—the implications of the ruling or 'what happens next' are uncertain."<sup>186</sup> Second, as evident in the evolution of CAFOs regulation, a finding that drainage tile falls within the point source definition will lead to substantial subsequent litigation if not fully fleshed out. The judiciary eventually answered questions about the timing of CAFOs permit applications and the EPA adopted those answers. However, questions still remain about the scope of CAFOs and the specific types of runoff being regulated. Drainage districts with drainage tile will likely have the same difficulties as CAFOs in achieving the CWA's intended purpose should they be considered point sources.

#### IV. SOLUTIONS FOR AGRICULTURAL INTERESTS AND THE CLEAN WATER ACT

The Des Moines Water Works lawsuit presented significant environmental questions for farmers, counties, businesses, and citizens.<sup>187</sup> While the litigation ended at the district court level after the Des Moines Water Works faced dissolution,<sup>188</sup> the legal question concerning whether the

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184. See *supra* Part II.B.

185. 33 U.S.C. § 1362(14) (2012); 40 C.F.R. § 401.11(d) (2016).

186. Neil D. Hamilton, Dir., Drake Univ. Agric. Law Ctr., Address at the 2015 Iowa Water Conference at Iowa State University, Sixteen Things to Know About the DMWW Proposed Drainage District Lawsuit (Mar. 3, 2015), <http://www.law.drake.edu/clinicsCenters/agLaw/docs/agInstConf-sixteenThingsToKnow.pdf>.

187. See Complaint, *supra* note 1, at 9.

188. MacKenzie Elmer, *Bill Would Dismantle Des Moines Water Works*, DES MOINES REG. (Feb. 17, 2017, 8:32 PM), <http://www.desmoinesregister.com/story/news/2017/02/17/des-moines-water-works-regional-iowa-house-water-utility-authority/98042502>. Before Des Moines Water Works faced dissolution, many people believed the lawsuit would continue for years. Environmental Journalist David Biello predicted that "[t]he lawsuit could be tied up in court for years, maybe even a decade." David Biello, *Who Will Pay for Water Pollution Cleanup Divides Urban and Rural Iowa*, PBS NEWSHOUR (Oct. 25, 2016, 7:38 PM), <http://www.pbs.org/newshour/bb/will-pay-water-pollution-cleanup-divides-urban-rural-iowa>. A variety of local and state interest groups pushed for a settlement outside of court. Bill Northey, Iowa Secretary of Agriculture, stated the money should have been spent on truly addressing water quality rather than on

CWA could apply to drainage districts remains to be determined.<sup>189</sup> The court found that drainage districts could not remedy Des Moines Water Works' claim under CWA, so it ruled the CWA claim was moot.<sup>190</sup> In other words, the court allowed farmers and drainage districts to keep with the status quo and voluntarily regulate water discharge,<sup>191</sup> while not ruling out that drainage districts still might be point sources.<sup>192</sup>

First, this Part considers whether drainage districts with drainage tile should be classified as point sources under the CWA's statutory language and thus be subject to the CWA NPDES permit requirements.<sup>193</sup> This Part identifies what makes drainage districts with drainage tile distinct from other agriculturally exempted water runoff to illustrate that a court, should it address the issue, could reasonably interpret the point source language to include these drainage districts.<sup>194</sup> Next, this Part addresses public policy concerns about the permitting process by suggesting that IDNR could implement such a policy so long as it clearly established a specific criteria and garnered public support for efficient, effective permit implementation.<sup>195</sup> Finally, this Part considers the remaining risks that may prevent drainage districts from successfully reducing water pollutants should drainage districts be classified as point sources.<sup>196</sup>

A. *THE COURT SHOULD DETERMINE DRAINAGE DISTRICTS ARE POINT SOURCES AND THEREFORE FALL UNDER THE NPDES PERMIT REQUIREMENT*

The government has not traditionally regulated drainage districts as point sources. Instead, the EPA and states have interpreted drainage districts

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attorneys and legal fees. *See id.* Iowa Partnership for Clean Water claimed the legal path would only leave the ratepayers with more expenses and no more infrastructure improvements. *Iowa Partnership for Clean Water Responds to Des Moines Water Works' Decision to Direct an Additional \$650,000 to Lawsuit*, IOWA PARTNERSHIP FOR CLEAN WATER (May 25, 2016), <http://iowapartnershipforcleanwater.org/2016/05/iowa-partnership-for-clean-water-responds-to-des-moines-water-works-decision-to-direct-an-additional-650000-to-lawsuit>.

189. Des Moines Water Works CEO Bill Stowe ruled out any appeal, even though at one point he was adamant that building and maintaining one of the world's largest nitrate-removal facilities should be funded by the polluters. *See* Biello *supra* note 188; MacKenzie Elmer, *Des Moines Water Works Won't Appeal Lawsuit*, DES MOINES REG. <http://www.desmoinesregister.com/story/news/2017/04/11/des-moines-water-works-not-appeal-lawsuit/100321222> (last updated Apr. 11, 2017, 8:19 PM); William Stowe, *Stowe: When Iowa's Water Quality Reached Turning Point*, DES MOINES REG. (Jan. 9, 2016, 7:04 PM), <http://www.desmoinesregister.com/story/opinion/columnists/iowa-view/2016/01/09/stowe-when-iowas-water-quality-reached-turning-point/78448416>.

190. *See* Memorandum Opinion, *supra* note 4, at \*5–6.

191. IOWA NUTRIENT REDUCTION STRATEGY, *supra* note 98, at 2.

192. *NPDES/Wastewater Permitting*, *supra* note 92.

193. *See infra* Part IV.A.

194. *See infra* Part IV.A.

195. *See infra* Part IV.B.1.

196. *See infra* Part IV.B.2–3.

to be classified as agricultural water and thus exempt from regulation.<sup>197</sup> However, this question of CWA interpretation has yet to be adequately addressed, so solely considering how drainage districts historically have been regulated is not productive. Instead, the statutory question requires statutory interpretation and an application of reasoning expressed in other recent point source litigation. By consulting the CWA's text along with recent court decisions,<sup>198</sup> the court should determine drainage districts carrying drainage tile discharge are point sources and fall under the NPDES permit requirement.

Congress has clearly expressed an intent to exempt many agricultural processes from point source requirements. In 1972, Congress identified several forms of agricultural discharge that would constitute nonpoint sources: "[R]unoff from manure disposal areas, and [runoff] from land used for livestock and crop production" are "agriculturally . . . related nonpoint sources of pollution."<sup>199</sup> In 1977, Congress amended the CWA to exclude from any point source definition "return flows from irrigated agriculture."<sup>200</sup> This addressed issues with regulating surface runoff from agricultural land. In 1987, Congress again amended the CWA and explicitly exempted "agricultural stormwater discharges" from being defined as a point source.<sup>201</sup> Silvicultural activities have also been exempted from regulation.<sup>202</sup>

While agricultural waters have largely been exempt, the Des Moines Water Works case fails to work through the specific tension within the current statutory interpretation.<sup>203</sup> The plain language of section 1362(14) states that a point source is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, [or] conduit,"<sup>204</sup> and, notably, drainage tile is nothing more than pipe laid under the root line of a farmer's field.<sup>205</sup> But later in section 1362(14), the statute explicitly exempts return flows of entirely irrigated agriculture and agricultural

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197. Ryan, *supra* note 5, at 50; *Exemptions to Permit Requirements*, *supra* note 135.

198. See *Decker v. Nw. Envtl. Def. Ctr.*, 133 S. Ct. 1326, 1334–38 (2013) (overruling the lower court's decision to regulate ditches along logging roads as point sources); *Fishermen Against the Destruction of the Env't, Inc. v. Closter Farms, Inc.*, 300 F.3d 1294, 1297–98 (11th Cir. 2002) (determining drainage tile does not fall under the CWA's definition of point source); *Pac. Coast Fed'n of Fishermen's Ass'ns v. Glaser*, No. CIV S–2:11–2980–KJM–CKD, 2013 WL 5230266, at \*15 (E.D. Cal. Sept. 16, 2013) (following the eleventh Circuit's precedent in determining drainage districts are not point sources subject to regulation). The *Decker* case originally held that logging roads were point sources, so the legal rationale in that case and the Supreme Court's rationale in overruling that determination prove particularly useful in crafting a drainage district argument. See *Decker*, 133 S. Ct. at 1333–34.

199. Act of Oct. 18, 1972, Pub. L. No. 92–500, § 208, 86 Stat. 816, 841.

200. Act of Dec. 27, 1977, Pub. L. No. 95–217, § 33, 91 Stat. 1566, 1577.

201. Act of Feb. 4, 1987, Pub. L. 100–4, § 503, 101 Stat. 7, 75.

202. *Exemptions to Permit Requirements*, *supra* note 135.

203. See *Complaint*, *supra* note 1, at 9.

204. 33 U.S.C. § 1362(14) (2012).

205. BURKE, *supra* note 103, § 5.2-1.



stormwater from the point source definition.<sup>206</sup> In other words, either drainage tile are conveyances through pipe, and are therefore point sources, or they are exempted as merely agricultural return flow or stormwater, and are therefore nonpoint sources.

Seemingly, an interpretation of the statute could be that drainage districts with drainage tile discharge are point sources but nonetheless are exempted from the statute under the irrigation exception, but such an interpretation would ignore drainage districts' actual use.<sup>207</sup> Undoubtedly, drainage tile is simply pipe laid out to collect excess water and funnel it into a channel (drainage district) which carries the water into a navigable waterway.<sup>208</sup> But drainage tile is not merely agricultural return flow. Drainage districts with drainage tile cannot fall within the irrigation return flow exception because no irrigation is taking place.<sup>209</sup> Unlike the two other cases in this area,<sup>210</sup> irrigation is distinctly not a factor here. The fields in the specific drainage districts subject to suit are not irrigated.<sup>211</sup> Moreover, the subsurface water running through drainage tile is collecting high levels of nitrates during periods where the soil is oversaturated, not during any irrigation process.<sup>212</sup> The water, with the high levels of nitrates, is then channeled away through the drainage districts.<sup>213</sup> Unlike irrigation return flow, this drainage tile discharge also washes away nutrients valuable to crop production.<sup>214</sup> For the aforementioned reasons, drainage districts with drainage tile are not exempted under an irrigation return flow exception. Therefore, the only question remaining is whether these drainage districts fall under the exempted "agricultural stormwater."<sup>215</sup>

The CWA and the EPA do not specifically define agricultural stormwater discharge. However, discharge is defined in 40 C.F.R. 122.2 as "discharge of a pollutant," while stormwater is defined as "storm water runoff, snow melt

206. 33 U.S.C. § 1362(14) ("This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.").

207. *Id.*

208. BURKE, *supra* note 103, § 5.2-1.

209. *See* Hofstrand, *supra* note 143.

210. *Fishermen Against the Destruction of the Env't, Inc. v. Closter Farms, Inc.*, 300 F.3d 1294, 1297-98 (11th Cir. 2002); *Pac. Coast Fed'n of Fishermen's Ass'ns v. Glaser*, No. CIV S-2:11-2980-KJM-CKD, 2013 WL 5230266, at \*15 (E.D. Cal. Sept. 16, 2013).

211. Only 162,838 acres of 527 farms are irrigated in Iowa because most farms receive sufficient rainfall. Cindy Hadish, *Some Iowa Farmers Turning to Irrigation to Help Crops*, GAZETTE (July 28, 2012, 5:30 AM), <http://www.thegazette.com/2012/07/28/some-iowa-farmers-turning-to-irrigation-to-help-crops>. The percentage of Iowa farmland requiring irrigation is "well below [that of] neighboring state[s]." *Id.* For example, California irrigates over 7 million acres while Nebraska irrigates over 8 million acres. *Id.*

212. *See* Rao & Puttanna, *supra* note 118, at 1163.

213. Randall et al., *supra* note 145, at 1241-42.

214. *Id.*

215. 33 U.S.C. § 1362(14) (2012).

runoff, and surface runoff and drainage.”<sup>216</sup> These definitions together suggest agricultural stormwater refers to *surface* water discharge as a result of heavy rain or snow. While drainage districts do collect surface water discharge from storms, the *subsurface* drainage from the drainage tile also flows into the drainage districts.<sup>217</sup> The drainage tile is not excess runoff, but discrete channels controlling and directing subsurface waters and pollutants out from under the fields and into the drainage districts. In other words, drainage districts collect stormwater that is exempt and water through drainage tile that is not exempt. Therefore, the agricultural stormwater discharge exception also does not apply.

Besides the reasonable textual interpretation suggesting drainage districts with drainage tile are point sources, a point source interpretation would also benefit the public. Regulating drainage districts with drainage tile balances the needs of both the agricultural interests and local citizens.<sup>218</sup> While imperfect, regulations and sanctions ensure compliance and close up a loophole currently existing in waterway regulation.<sup>219</sup> The purpose of the CWA is to ensure water is safe for human and animal life.<sup>220</sup> Recognizing drainage districts as point sources continues moving that mission forward. Iowa, along with other agricultural states, relies heavily on farm production to drive its economy.<sup>221</sup> However, this reliance does not require sacrificing basic living necessities in healthy, sustainable communities—clean water and clean air.<sup>222</sup> By recognizing drainage districts as point sources, farmers, along with their respective counties, can combat a serious issue facing the state to ensure a healthy environment for farming in the short and long-term future.

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216. 40 C.F.R. § 122.2 (2016); *Id.* § 122.26(13).

217. See EVERYTHING YOU WANTED TO KNOW ABOUT DRAINAGE DISTRICTS IN IOWA, *supra* note 6.

218. See Randall et al., *supra* note 145, at 1247.

219. John A. Sheehan, *Agriculture: The Forbidden Fruit Under the Clean Water Act?*, 42 TRENDS 15, 15 (2011).

220. See *supra* text accompanying notes 48–60.

221. See Daniel Otto et al., *Study Measures Significance of Agriculture to Iowa Economy*, IOWA ST. U. EXTENSION & OUTREACH (Oct. 16, 2009), <http://www.extension.iastate.edu/news/2009/oct/161501.htm> (“Production agriculture and ag-related industries directly and indirectly employ one of every six Iowans . . . They also are responsible for adding \$72.1 billion to the state’s economy, or 27 percent of the state’s total. . . . [A]gricultural[al] . . . jobs account for over 50 percent of employment in 20 Iowa counties.”).

222. Eller, *supra* note 1414; Graham Gillette, *It’s Time for More Than Talk on Iowa’s Water Pollution*, DES MOINES REG., <http://www.desmoinesregister.com/story/opinion/columnists/iowa-view/2016/05/06/s-time-more-than-talk-iowas-water-pollution/84017370> (last updated May 6, 2016, 3:49 PM); see also Donnelle Eller & Jeffrey C. Kummer, *Iowa Ranks in Top 20 for Toxic Air Releases*, DES MOINES REG., <http://www.desmoinesregister.com/story/news/health/2016/09/29/iowa-ranks-top-20-toxic-air-releases/90435546> (last updated Sept. 29, 2016, 8:43 PM) (explaining how Iowa is attempting to balance an agricultural economy and a healthy living environment).

*B. PERMITTING PLAN FOR DRAINAGE DISTRICTS*

If a court were to determine that drainage districts are point sources under the CWA, the next step for Iowa, as well as other agricultural states, is to determine how to best implement regulation of drainage districts.<sup>223</sup> This Subpart first proposes that Iowa should implement a general permitting process to ensure compliance while maintaining sufficient flexibility for the drainage districts.<sup>224</sup> Second, this Subpart identifies which drainage districts will require permits and provides recommendations for enforcing permits.<sup>225</sup> Last, this Subpart offers suggestions for building community support around the regulation to help aid the farmers and the environment.<sup>226</sup>

1. Using General Permits

IDNR will first need to determine whether to regulate drainage districts with individual or general NPDES permits.<sup>227</sup> Given the nearly 3,700 drainage districts in the State of Iowa,<sup>228</sup> the permitting implementation process will be difficult but attainable.<sup>229</sup> The IDNR is able to select the permit that is the most administratively feasible and will eliminate any undue delay.<sup>230</sup> A delay in the permitting process could wreak havoc for farmers attempting to remain in compliance while farming their fields, so a streamlined permitting process is absolutely necessary.<sup>231</sup>

The NPDES general permit is the proper permit for regulating drainage districts because of its distinct scope, implementation, and enforcement.<sup>232</sup> The EPA developed general permits specifically to address difficult and numerous stormwater and agricultural discharges.<sup>233</sup> As a result, individual permits are generally issued for discrete facilities, while general permits cover land-use discharges like CAFOs and stormwater discharge.<sup>234</sup> General permits are also much quicker to implement than individual permits.<sup>235</sup> Individual

223. See *supra* text accompanying notes 135–45.

224. See *infra* Part IV.B.1.

225. See *infra* Part IV.B.2.

226. See *infra* Part IV.B.3.

227. See *supra* text accompanying notes 151–59.

228. See *supra* text accompanying notes 149–50.

229. Nat. Res. Def. Council, Inc. v. Costle, 568 F.2d 1369, 1379 (D.C. Cir. 1977) (“The technological or administrative infeasibility of such limitations may result in adjustments in the permit programs, as will be seen, but it does not authorize the Administrator to exclude the relevant point source from the NPDES program.”).

230. *Id.*

231. A similar concern took place after *Northwest Environmental Defense Center v. Brown*, where the timber industry feared delays in permit approval would result in harsh economic consequences. Cecchini-Beaver, *supra* note 160, at 504.

232. See *supra* text accompanying notes 156–62.

233. Gaba, *supra* note 36, at 411–14.

234. *Id.* at 410–11.

235. *NPDES General Permits*, *supra* note 99.

permits require highly technical and legal assistance, while general permits allow the permittees to develop pollution plans and submit notices of intent to pollute to the IDNR.<sup>236</sup> The pollution plans are based on best management practices (“BMPs”) and will likely require additional strategies to reduce the nitrate levels.<sup>237</sup>

The Multi-Sector General Permit (“MSGP”) will most likely be the type of general permit issued to regulate the drainage district because it already had been utilized in CAFOs and logging operations.<sup>238</sup> A MSGP also allows the state to develop more specialized provisions with BMPs along with monitoring and Notice of Intent procedures.<sup>239</sup> As agricultural interests continue to improve technologies that reduce nitrate levels, MSGPs could even allow for technologies to be more quickly shared and implemented in the drainage districts because of the required annual reporting.<sup>240</sup> However, the threshold question of which drainage districts fall under the general permitting requirement still needs to be addressed.

## 2. Defining Point Source Drainage Districts

Determining which drainage districts require permits and how to measure the water quality is no small feat.<sup>241</sup> Drainage districts transport water from a variety of sources, many of which are exempt from NPDES requirements.<sup>242</sup> For example, surface water runoff and ground water discharge both flow through drainage districts.<sup>243</sup> Agricultural discharge from other property also flows through the drainage districts, making it difficult to track the source of the water pollutants.<sup>244</sup> Finally, some drainage districts may not even have drainage tile to direct water to the drainage areas.

Only drainage districts with drainage tile water discharge as its primary source of water should fall under the point source definition and be subject to a general permitting requirement. The drainage districts that channel this specific type of water discharge are the intended targets for NPDES permitting because these drainage districts transport significant levels of

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236. *NPDES Wastewater Forms*, IOWA DEP’T NAT. RESOURCES, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-Forms> (last visited Dec. 9, 2017).

237. Gaba, *supra* note 36, at 438–39.

238. See *NPDES General Permits*, *supra* note 99. See generally Andrew King, Note, Northwest Environmental Defense Center v. Brown: *Delivering the Back Cuts? The Ninth Circuit Leaves the Silvicultural Rule in the Balance*, 24 TUL. ENVTL. L.J. 159 (2010) (explaining how some legal scholars saw the Environmental Defense Center case as a potential first step toward applying CWA regulations to logging roads).

239. See *NPDES General Permits*, *supra* note 99.

240. See *id.*

241. See *supra* notes 148–51 and accompanying text.

242. See *supra* notes 135–36 and accompanying text.

243. See *supra* notes 6–9 and accompanying text.

244. See *supra* notes 6–9 and accompanying text.

water pollutants that are capable of being filtered. By using general permits for these specific drainage districts, drainage districts will have flexibility, but still be held accountable, as they devise a workable plan for reducing water pollutants.

To successfully apply the NPDES permit to these specific drainage districts, IDNR would first need to establish a new, working “point source drainage district” definition based on the sources of water being distributed into drainage districts. A clear and concise definition will make the transition to the point source regulatory scheme much easier. Currently, the Iowa Code refers to drainage districts as quasi-public associations facilitating drainage in a specific watershed area.<sup>245</sup> While beneficial in determining responsibility for the area, the lack of a concise definition fails to identify what areas require permitting.

Drafters of the new definition must (1) state that a point source drainage district has “majority drainage tile discharge”; (2) clearly identify what is considered drainage tile for the purposes of this definition; and (3) define the schedule for measuring the levels of various water discharge. While this Note does not lay out exact language for the “point source drainage district” definition, it does provide the necessary ingredients to ensure a proper understanding of the rule. A clear definition benefits the local governments, the farmers and drainage district supervisors, and the court system in the event of a lawsuit.

In 2011, logging entities panicked when the Ninth Circuit found that logging ditches fell under point source regulation.<sup>246</sup> The NPDES permit requirement seemed too ambiguous and loggers struggled to distinguish logging roads and forest roads.<sup>247</sup> The court had attempted to differentiate the two but ultimately failed to clarify the distinction.<sup>248</sup> Agricultural interests worried a similar result could take place with a point source determination for drainage districts,<sup>249</sup> but the *Des Moines Water Works* case ultimately did not answer the point source question. While the Ninth Circuit’s decision was eventually overruled and the *Des Moines Water Works* case avoided any change to agricultural operations,<sup>250</sup> the lasting lesson on point-source regulation remains: A general rule clearly distinguishing between the point-source variant and the non-point-source variant is a necessity for the regulation’s success.<sup>251</sup> With a focus on inputs into the drainage districts, proper permitting can take place to ensure the water outputs are in compliance.

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245. IOWA ADMIN. CODE 468.3(4) (2014).

246. *Nw. Env'tl. Def. Ctr. v. Brown*, 640 F.3d 1063, 1085 (9th Cir. 2011).

247. *Id.* at 1084.

248. Cecchini-Beaver, *supra* note 160, at 506–10.

249. See King, *supra* note 238, at 171.

250. *Decker v. Nw. Env'tl. Def. Ctr.*, 133 S. Ct. 1326, 1338 (2013).

251. See Cecchini-Beaver, *supra* note 160, at 477–80.

### 3. Building Community Support

The final aspect of the permitting process necessitating consideration is the need to build community support around the regulation.<sup>252</sup> With broad support, the farmers and the environment can have success.<sup>253</sup> With little support, the result will likely be a lack of compliance and decreased innovation when dealing with the pollutants.<sup>254</sup> Wisconsin citizens are already experiencing this phenomenon with CAFOs, where many of the facilities in their state are out of compliance with what their CWA permits require.<sup>255</sup> Moreover, many of the CAFOs are not being held accountable for their failure to comply.<sup>256</sup> Unless local communities buy into the underlying purpose of a point source regulation, the agricultural interests may not feel the need to comply. This is especially so given the significant number of drainage districts and the difficulties in frequent testing.

Two ways to encourage broad-based community support are readily available. First, the facts behind nitrate levels and the amount of nitrate discharge into waterways must be made completely clear to the public. Scientific research has already produced sufficient evidence to persuade citizens of the negative consequences of nitrates in water, but the dominate narrative continues to be that regulations are merely attacks on farmers and agriculture.<sup>257</sup> In fact, retaining nitrates and keeping clean water is just as much in the farmer's interest as it is the community's interest downstream.<sup>258</sup> Second, an emphasis must be placed on encouraging local innovators to assist with new ways to reduce nitrate levels; local innovation demonstrates that communities are not expecting drainage districts to fix water pollution problems by themselves. For example, a small company developing biochar—a carbon negative material that retains nitrates—could both help point source drainage districts comply with the CWA and demonstrate the local community's value in keeping local waters clean.<sup>259</sup> By supporting and

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252. For examples of the work that lies ahead see *supra* notes 2–5 and accompanying text.

253. David R. Hodas, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority Is Shared by the United States, the States, and Their Citizens?*, 54 MD. L. REV. 1552, 1557–58 (1995).

254. *Id.*

255. Associated Press, *Audit: Wisconsin Failing to Monitor Wastewater*, WISCONSINGAZETTE.COM (June 4, 2016), <http://wisconsingazette.com/2016/06/04/audit-dnr-failing-to-monitor-wastewater>.

256. See Greg Neumann, *Update: Audit Finds DNR Not Enforcing Own Rules on Wastewater Pollution Violations*, WKOW.COM, <http://www.wkow.com/story/32133607/2016/06/03/audit-finds-dnr-not-enforcing-their-own-rules-on-wastewater-violations> (last updated June 18, 2016, 12:18 PM).

257. See Gary Baise, *Des Moines Water Works Attacks Agriculture Again!*, FARM FUTURES (May 9, 2016), <http://farmfutures.com/blogs-des-moines-water-works-attacks-agriculture-again-10906>.

258. See Nancy Anders Norton et al., *Role of Voluntary Programs in Agricultural Nonpoint Pollution Policy*, 12 CONTEMP. ECON. POL'Y 113, 113–14 (1994).

259. See generally *Our Work*, ARTI, <http://artichar.com> (last visited Dec. 9, 2017) (“Arti was founded by [Iowa State University] students in 2013 . . . [with the] goal . . . to develop and implement biorenewable technologies.”).

encouraging the local industry to collaborate with local farmers, the public can hold agricultural interests accountable for following through with their responsibilities to keep the waterways clean while working with them along the way.

## V. CONCLUSION

Congress implemented the Clean Water Act with a vision of one day restoring the chemical, physical, and biological integrity of the United States's waterways. While it quickly became apparent that the country's industries and reliance on waterways for navigation would prevent waterways from regaining their once pristine condition, Congress continued to take steps through the CWA to keep the waterways at a reasonably clean level. Today, the CWA remains a powerful tool to ensure clean water for the public and the larger ecosystems.

Drainage districts can be another success for the CWA. Agricultural water has been largely outside the reach of the CWA for a variety of reasons, but modern drainage tile and drainage districts have led to increased nitrate levels in waterways to the point that they should no longer escape the CWA's purview. Because of the drainage tiles' pipe-like characteristics and high pollutant levels, a correct statutory interpretation would lead the courts to determine that drainage districts are point sources and subject to the CWA's permitting process. Succeeding in implementing the permitting process, however, will not simply result in a success story. The IDNR, local community members, and even the EPA must continue their role in ensuring the permitting process is a success. With general permits, clearly defined language for drainage districts, and community support, agriculture and the adjacent waterways' integrity will continue to be restored.