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Agricultural Discharges Under the CWA: Old Questions and New Insights

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Agricultural Discharges Under the CWA: Old Questions and New Insights

Anthony B. Schutz*

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I. INTRODUCTION

Agriculture loves the environment; it depends on natural resources to thrive.¹ But agriculture resists environmental law; it is best to keep environmental costs off the balance sheet. As a result, the greatest stewards often ask lawmakers for exemptions to environmental regulation,² seek regulatory favoritism from agencies, and sue regulators for expansive interpretations of statutory or regulatory language or narrow interpretations of favorable statutory or regulatory

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1. It also loves laws that allocate natural-resource rights to it, often seeking preferred status among users. Water law is an example. See NEB. REV. STAT. § 46-294(1)(i) (2020) (prohibiting permanent transfers of water rights from agricultural use to other types of uses).

2. Jacqueline Comito et al., *Stewards, Businessmen, and Heroes?: Role Conflict and Contradiction Among Row-Crop Farmers in an Age of Environmental Uncertainty*, 72 HUM. ORG. 283 (2013) (evaluating farmers' stewardship claim from an anthropological perspective in light of the conflicting role of farm profits and concluding that farmers use feed-the-world heroism to resolve the moral conflict in favor of profitmaking).

exemptions.³

The most famous article on agriculture and environmental law is J.B. Ruhl's *Farms, Their Environmental Harms, and Environmental Law*, written in 2000.⁴ After more than twenty years, very little has changed. Production has intensified and environmental policy's blind spot for agriculture remains. A push for ethanol production increased farm profitability during the most recent ethanol boom for crop producers,⁵ and profitability remains relatively high.⁶ This boom did not spark interest in implementing previously unaffordable conservation practices. Rather, it drove the push for less conservation, bringing land into production from the Conservation Reserve Program and from lands that had never been broken.⁷ And as crop prices have risen, livestock production has been squeezed between high feed costs and a powerful and small class of livestock buyers. As a result, livestock operations have gotten bigger, with larger environmental impacts.⁸

The future probably contains more of the same. The corn ethanol boom and its high hopes for cellulosic feedstocks may have been a bridge to nowhere. As the auto industry moves to electrifying transportation, new uses for field crops will likely develop. The most likely candidate for continuing consumption of the current levels of field-crop production is probably increased livestock production domestically and abroad, especially as we pursue the goal of putting meat in the

3. The agricultural sector also has a long history of seeking compensation for environmentally beneficial practices, even as it resists conditional funding branded as risk management. William S. Eubanks II, *A Rotten System: Subsidizing Environmental Degradation and Poor Public Health with Our Nation's Tax Dollars*, 28 STAN. ENVTL. L.J. 213, 240–51 (2009). For a proposal to expand conditional funding, see Linda Breggin & D. Bruce Myers Jr., *Subsidies with Responsibilities: Placing Stewardship and Disclosure Conditions on Government Payments to Large-Scale Commodity Crop Operations*, 37 HARV. ENVTL. L. REV. 487 (2013).

4. J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263 (2000).

5. James A. Duffield et al., *Ethanol Policy: Past, Present, and Future*, 53 S.D. L. REV. 425 (2008).

6. *2021 Farm Sector Income Forecast*, USDA ECON. RES. SERV., <https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-sector-income-forecast/> (last updated Feb. 5, 2021) (on file with the *University of the Pacific Law Review*).

7. ROGER CLAASSEN ET AL., USDA, ECONOMIC RESEARCH REPORT NO. 120, GRASSLAND TO CROPLAND CONVERSION IN THE NORTHERN PLAINS: THE ROLE OF CROP INSURANCE, COMMODITY, AND DISASTER PROGRAMS (2011); Tyler J. Lark et al., *Cropland Expansion in the United States Produces Marginal Yields at High Costs to Wildlife*, 11 NATURE COMM. (2020); Michael C. Wimberly et al., *Cropland Expansion and Grassland Loss in the Eastern Dakotas: New Insights from a Farm-Level Survey*, 63 LAND USE POL'Y 160 (2017).

8. Growth in the swine industry is one example. USDA, ISSN NO. 1949-1921, QUARTERLY HOGS AND PIGS (2020); see also James M. MacDonald, *Tracking the Consolidation of U.S. Agriculture*, 42 APPLIED ECON. PERSP. & POL'Y 361 (2020). Poultry is another. SHEILA E. PURDUM & RICHARD K. KOELSCH, NEBRASKA EXTENSION PUBLICATIONS, NO. G2309, NEBRASKA POULTRY EXPANSION (2018); Ken Anderson, *Nebraska's Livestock Industry Poised for Growth*, BROWNFIELD AG NEWS (Nov. 29, 2019), <https://brownfieldagnews.com/news/nebraskas-livestock-industry-poised-for-growth/> (on file with the *University of the Pacific Law Review*); Margaret Kyakuwaire et al., *How Safe is Chicken Litter for Land Application as an Organic Fertilizer?: A Review*, 16 INT'L J. ENVTL. RES. & PUB. HEALTH (2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6801513/> (on file with the *University of the Pacific Law Review*).

stomachs of an expanding global middle class.

While expansions and intensification exacerbate environmental policy gaps (and there are many with agriculture), it has an impact on the political and practical feasibility of environmental regulation. On this front, support for regulatory approaches may be on the rise. Fewer producers means fewer operations to find, regulate, and monitor. Moreover, political resistance may be waning. The decline in political resistance is not just because fewer voters are growing animals. Rather, more and more people disassociate the bucolic countryside (illusory as it is) with animal production,⁹ and they increasingly see commodity landscapes as industrial landscapes, devoid of much of their ecological function.¹⁰ As a result, agricultural environmental policy may become more about regulating a polluting industry than it is about telling farmers what to do.¹¹ While a push for better environmental performance is often met with claims of economic difficulty and rural development, public sentiment may change in important ways as agriculture's story unfolds.¹² In the end, the need for better environmental performance remains strong, and the door for demanding better performance may be opening.¹³

The Clean Water Act ("CWA") was one demand for better environmental performance. Agriculture did not heed that demand. From statutory exemptions concerning wetlands regulation to definitional exclusions on key terms, the farm lobby's fingerprints are all over this hallmark of environmental law. Where statutory coverage potentially exists, agricultural interests have successfully waged war over regulatory implementation. In fact, agriculture's success at

9. Jim Chen, *The American Ideology*, 48 VAND. L. REV. 809, 872–73 (1995).

10. BRUCE BABBITT, *CITIES IN THE WILDERNESS*, chs. 3–4 (2007).

11. See Kenneth M. Murchison, *Learning from More than Five-and-a-Half Decades of Federal Water Pollution Control Legislation: Twenty Lessons for the Future*, 32 B.C. ENVTL. AFF. L. REV. 527, 584 (2005) (discussing the politics of pollution control and agriculture).

12. As for evidence of rural impact of livestock production, Joseph A. Herriges, Silvia Secchi & Bruce A. Babcock, *Living with Hogs in Iowa: The Impact of Livestock Facilities on Rural Residential Property Values*, 81 LAND ECON. 530 (2005). And for an account of rural landscapes from a property perspective, see Jessica A. Shoemaker, *Fee Simple Failures: Rural Landscapes and Race*, MICH. L. REV. (forthcoming 2021), <https://papers.ssrn.com/abstract=3714326> (on file with the *University of the Pacific Law Review*).

13. The environmental impact of livestock and agricultural production so well-known at this point, it hardly needs to be substantiated. But the problem is not getting any better. A good collection of resources can be found in Emily Kenyon, Note, *Enough of This Manure: Why the EPA Needs to Define the Agricultural Stormwater Exemption to Limit the Runoff from the Alt Court*, 92 N.Y.U. L. REV. 1187 (2017); in the technical literature, see JoAnn Burkholder et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, 115 ENVTL. HEALTH PERSP. 308 (2007); Patricia M. Glibert, *From Hogs to HABs: Impacts of Industrial Farming in the US on Nitrogen and Phosphorus and Greenhouse Gas Pollution*, 150 BIOGEOCHEMISTRY 139 (2020); Christopher S. Jones et al., *Livestock Manure Driving Stream Nitrate*, 48 AMBIO 1143 (2019); Christopher S. Jones, Philip W. Gassman & Keith E. Schilling, *The Urgent Need to Address Nutrient Imbalance Problems in Iowa's High-Density Livestock Regions*, AGRIC. POL'Y REV., Fall 2019, art. 3, https://www.card.iastate.edu/ag_policy_review/pdf/fall-2019.pdf (on file with the *University of the Pacific Law Review*); Zach Raff & Andrew Meyer, *CAFOs and Surface Water Quality: Evidence from Wisconsin* (Jan. 25, 2021) (unpublished manuscript), <https://papers.ssrn.com/abstract=3379678> (on file with the *University of the Pacific Law Review*).

resisting the CWA explains its enlistment as a veteran property-rights (or anti-environmentalist) warrior to fight the “expansion” of “waters of the United States,”¹⁴ even though the subject has almost no legal or practical impact on farmland ownership or use.¹⁵

Some aspects of these fights are understandable. They arise because water quality is a difficult subject to regulate. The difficulty stems from water’s importance and complexity. Stakeholders are found everywhere, and polluting activities are scattered throughout the hydrologic system. As a result, the subject defies the geographic boundaries of government and wreaks havoc on its horizontal and vertical dimensions. So it is expected that the CWA, its regulations, and its case law are unclear and complicated.¹⁶

As with any legally complex subject, changes in one area have effects in others. Revelations can provide new understandings of how things fit together. This Article explores an example: indirect discharges. Recent case law is clarifying the scope of the CWA, and it has the potential to clarify the CWA’s coverage of agricultural polluters, perhaps assisting with some of the environmental challenges of the day.

In April 2020, the United States Supreme Court decided *County of Maui v. Hawaii Wildlife Fund*,¹⁷ which dealt with injection wells releasing pollutants underground where groundwater carried them to navigable waters. The Court embraced a functional-equivalence standard to discern the difference between unregulated sub-terranean wastewater disposal and a regulated addition of pollutants to navigable waters.¹⁸

The problem the Court confronted in *Hawaii Wildlife Fund* is a problem that has faced agricultural applications of the CWA for decades. Ever since “concentrated animal feeding operations” (“CAFOs”) were included in the CWA’s definition of point source, courts have struggled to figure out how to regulate them.¹⁹ For CAFOs, the release of pollutants is unlike many of the other

14. See generally *Articles and Videos about WOTUS from the American Farm Bureau Federation*, AM. FARM BUREAU FED’N, <https://www.fb.org/related/WOTUS> (last visited Feb. 13, 2021) (on file with the *University of the Pacific Law Review*) (showing articles and videos about the agriculture community’s battles over “waters of the United States”).

15. I sit on the Lower Platte South Natural Resources District in Lincoln, Nebraska. I often hear farmers railing against the U.S. Army Corps of Engineers, which administers the § 404 program, claiming it overreaches and threatens their way of life. Farmers do this even though there is practically no impact on farming here that would come from defining WOTUS in the way the Obama administration defined it. The reasons for this limited impact are beyond the scope of this article, but between the 404(f) exclusions, nationwide permitting, and Swampbuster, the likelihood that a producer would violate the CWA, legally and practically, is remote. 16 U.S.C. § 3821 (2021) (known colloquially as “Swampbuster”); 33 U.S.C. § 1344 (2021) (showing 404(f) exemptions); Ruhl, *supra* note 4, at 327; Jonathan Coppess, *A Return to the Crossroads: Farming, Nutrient Loss, and Conservation*, 39 U. ARK. LITTLE ROCK L. REV. 351, 370–72 (2017) (explaining Swampbuster).

16. One very good effort to bring clarity to the subject is Robert W. Adler & Brian House, *Atomizing the Clean Water Act: Ignoring the Whole Statute and Asking the Wrong Questions*, 50 ENVTL. L. 45 (2020).

17. *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020).

18. *Id.* at 1468.

19. See Terence J. Centner, *Clarifying NPDES Requirements for Concentrated Animal Feeding*

industries that the CWA regulates; CAFOs discharge by applying manure to land where precipitation often carries pollutants to nearby water bodies. One fighting issue has been whether the CWA requires a direct or less-direct link between the origin of CAFO pollutants and the CWA's protected destination—navigable waters. This is the same question presented to the Court in *Hawaii Wildlife Fund*.

CAFO pollution, however, has been particularly vexing because of the agricultural-stormwater-discharge exception to the CWA and the concept of nonpoint-source pollution. *Hawaii Wildlife Fund* provides a means of reconciling the ag-stormwater-discharge exemption, the nonpoint-source-pollution concept, and the treatment of CAFOs as point-source dischargers involving land application. Its functional-equivalence standard unlocks the mystery of CAFO discharges. It also may help courts and regulators narrow the scope of the agricultural-stormwater-discharge provision, which has been used in ways that are inconsistent with both its text and its purpose. Finally, it may provide courts and regulators with a clearer understanding of what nonpoint-source pollution is, opening the door to greater agricultural coverage under the CWA.

This Article proceeds in two parts. The first part provides background information about the CWA and its agricultural provisions. The second part explains the indirect-discharge issue in *Hawaii Wildlife Fund* and applies the Court's solution to CAFO land-application discharges. In the end, the indirect-discharge test may change how we think of discharges from CAFOs and other agricultural sources.

Change is needed. Agriculture continues to press the gaps in our environmental policy, exploiting forty-year-old political winds.²⁰ Our knowledge of ecologic systems has changed. It is sophisticated and evolving, as is the expertise associated with agricultural production. Sensing technologies and computing capacity aid geospatial data assimilation and analyses in ways that create predictive and explanatory models that can be used to understand the environmental performance of our agricultural landscapes.²¹ Indeed, this sort of technology is the basis for much of our increased productive capacity. And there is very little reason it cannot be deployed to solve the pressing problems of agricultural pollution. The law, of course, often plays catch-up with these developments, but it can be applied in ways that accommodate advancements in our understanding of complex systems. Indeed, it can drive such advancements.

Operations, 13 PENN ST. ENVTL. L. REV. 361 (2006).

20. John H. Davidson, *Factory Fields: Agricultural Practices, Polluted Water and Hypoxic Oceans*, 9 GREAT PLAINS NAT. RESOURCES J. 1 (2004).

21. See, e.g., Awoke D. Teshager et al., *Assessment of Impacts of Agricultural and Climate Change Scenarios on Watershed Water Quantity and Quality, and Crop Production*, 20 HYDROLOGY & EARTH SYS. SCI. 3325 (2016); Awoke Dagne Teshager et al., *Simulation of Targeted Pollutant-Mitigation-Strategies to Reduce Nitrate and Sediment Hotspots in Agricultural Watershed*, 607-608 SCI. TOTAL ENV'T 1188 (2017); Tiffany Lee, *Husker Team Leading \$6M Project to Study Waterways' Changing Ecology*, NEB. TODAY, <https://news.unl.edu/newsrooms/today/article/husker-team-leading-6m-project-to-study-waterways-changing-ecology/> (last visited Feb. 16, 2021) (on file with the *University of the Pacific Law Review*).

The CWA is an example of such a law, and *Hawaii Wildlife Fund* is one example of a helpful interpretive development that may accommodate modern water-quality analysis and drive further technological advances.²²

II. BACKGROUND

A. CWA Basics

Section 301 of the CWA generally prohibits “the discharge of any pollutant by any person.”²³ Discharges of pollutants occur when “point sources” add pollutants to navigable waters. Point sources are “any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged.”²⁴ These discharges are allowed, however, if the discharger has a permit. The two most common discharge permits are found in §§ 402 and 404 of the CWA.²⁵

1. Section 404

Section 404 permits allow the discharge of pollutants that involve the placement of dredge and fill material in protected waters. While this Article focuses on the § 402 implications of *Hawaii Wildlife Fund*, the § 404 case law informs significant aspects of the regulated origins of pollution (i.e., point sources) and the regulated destination (i.e., navigable waters). The point sources at issue in the § 404 program are typically pieces of equipment that move dredge or fill material and place it “into the navigable waters.”²⁶ Such a placement requires a permit because the point sources add pollutants to navigable waters. These kinds of discharges require permits that specify the conditions under which dredge or fill material can be discharged.

The § 404 permitting program protects the water quality values of wetlands by regulating the discharge of dredge or fill material within them. Those discharges often accompany drainage activities. For this protection to happen,

22. This article focuses on a relatively narrow means of accommodation, focusing on the existence of a discharge, the agricultural-stormwater-discharge exception and the distinction between point and nonpoint sources in light of *Hawaii Wildlife Fund*. The CWA, however, has other tools and there is a substantial body of work on these and other tools. See Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment*, 17 GEO. MASON L. REV. 593 (2009); Mary Jane Angelo & Jon Morris, *Maintaining a Healthy Water Supply While Growing a Healthy Food Supply: Legal Tools for Cleaning up Agricultural Water Pollution*, 62 U. KAN. L. REV. 1003 (2013).

23. 33 U.S.C. § 1311 (2021). One of the most helpful guides to understanding the basics (and some of the more advanced subjects) within the CWA is AM. BAR ASS’N, THE CLEAN WATER ACT HANDBOOK (Mark A. Ryan ed., 4th ed. 2018); see also CLAUDIA COPELAND, CONG. RESEARCH SERV., RL30030, CLEAN WATER ACT: A SUMMARY OF THE LAW 13 (2016). For a comprehensive discussion of the development of the CWA, see Murchison, *supra* note 11.

24. 33 U.S.C. § 1362(14) (2021).

25. 33 U.S.C. §§ 1342, 1344 (2021).

26. 33 U.S.C. § 1344(a) (2021).

wetlands must be “navigable waters.” Before the CWA, the term was defined for other purposes to involve considerations of actual navigation, which is a channel of commerce and obviously something within federal congressional—and thus executive—authority. But the statutory definition departed from this definition and defined the term as the “waters of the United States” (“WOTUS”). WOTUS has, in turn, been defined in various ways over the last four decades with three major Supreme Court cases.²⁷

2. Section 402

Section 402 permits allow the discharge of pollutants that meet several requirements, the most important of which are effluent limitations. Two broad sorts of effluent limitations exist under the act: technology-based effluent limitations and water-quality-based effluent limitations.²⁸ These two categories of limitations focus on different things. Technology-based effluent limitations control the substance of the discharge. A water quality-based effluent limitation focuses on the quality of the receiving water.²⁹ Both are applied through permits to limit pollution at its origin. And both assume some point at which effluent limitations can improve water quality.

Technology-based limitations are developed by considering the costs and availability of pollution control technology on an industry-by-industry basis. The requirement to meet technology-based effluent limitations generally does not require that the permittee use any particular technology to attain the limit. Rather, the limits dictate the quality of the effluent. The discharger may achieve the dictated level of effluent quality through whatever means it deems appropriate. This, in turn, drives the development of better pollution-control technologies that, when limitations are revisited, will be used to set more stringent but as cost-effective limits. If no technology-based limitation is promulgated, the Environmental Protection Agency (“EPA”) has the authority to impose a limitation in a permit based on its best professional judgment.

Water quality-based effluent limitations require states to promulgate water quality standards according to the desired use of the navigable waters found within the state. Depending on the designated use (e.g., as a cold-water fishery), different levels of pollution will be allowed. If a body of water fails to meet the

27. *Rapanos v. United States*, 547 U.S. 715, 730, 739 (2006); *Solid Waste Agency of N. Cook Cty. v. Army Corps of Eng’rs*, 531 U.S. 159, 167 (2001); *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 132–35 (1985); AM. BAR ASS’N, *supra* note 23, at ch. 2. Further developments can be found here: STEPHEN P. MULLIGAN, CONG. RESEARCH SERV., R44585, EVOLUTION OF THE MEANING OF “WATERS OF THE UNITED STATES” IN THE CLEAN WATER ACT (2019); Jesse J. Richardson, Tiffany Dowell Lashmet & Gatlin Squires, *Turtles All the Way Down: A Clearer Understanding of the Scope of Waters of the United States Based on the United States Supreme Court Decisions*, WM. & MARY ENVTL. L. & POL’Y REV. (forthcoming 2021).

28. 33 U.S.C. §§ 1311, 1312 (2021).

29. This method of control was originally implemented in the 1965 act. In 1972, the focus shifted to technology-based limitations on effluent and that focus has largely remained in the 1977 and 1987 amendments. AM. BAR ASS’N, *supra* note 23, at ch. 1.

requisite water quality standard, further limitations can be placed in § 402 permits. This brings a political dynamic to water quality-based effluent limitations. As pressure mounts on § 402 permittees to meet the standards, they will push for action on other contributors to degraded water quality, which are commonly referred to as nonpoint sources of pollution.

Section 402 permits can be issued on a general or an individual basis. There are regional and state-specific general permits for some livestock operations.³⁰

3. *Scoping Approaches*

Most CWA disputes involve scoping questions with institutional and technical aspects. The institutional aspect concerns the extent and effectiveness of the federal government vis-à-vis the states in matters pertaining to the environment and land use, and all the associated activities those bodies of law affect (which is to say, nearly everything). For a time, arguments about the federal Commerce Clause proliferated, until the Court concluded the statutory language was not susceptible to a commerce-based construction, even in the hands of the EPA.³¹ Since then, a continued strong sense of a limited federal government attends efforts at providing a scope to the CWA.

The CWA's ambitious goal, however, cuts against limited-scope understandings: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."³² This goal has, at times, driven EPA's efforts at expansiveness in CWA implementation. Achieving this goal is technically far-reaching. Water quality is everywhere. The nation's main rivers collect water from overland runoff and aquifer discharges. That is why they are navigable, in fact. Therefore, through precipitation, everything that humans do on land has some impact on water quality.

The CWA does not regulate precipitation, obviously, but its concern for water quality at one place in the system (navigable waters) means that it necessarily must look beyond that place to improve water quality. How far it may go is the great question facing the CWA's scope. For decades, we have focused on the destination of pollutants to define this scope in the extended fights over WOTUS.³³

In addition to WOTUS, CWA scoping has involved some attention to the origins of pollution—point sources. The term "point source" has a corollary in the concept of nonpoint-source pollution. While the term "nonpoint" is used in the statute,³⁴ it is not defined.³⁵ Generally, it is regarded as anything that is not a

30. Though general permitting for CAFOs has been somewhat controversial, see Terence J. Centner, *Courts and the EPA Interpret NPDES General Permit Requirements for CAFOs*, 38 ENVTL. L. 1215 (2008).

31. *Solid Waste Agency of N. Cook Cty.*, 531 U.S. at 173; *Cargill, Inc. v. United States*, 516 U.S. 955 (Thomas, J., dissenting from denial of cert.).

32. 33 U.S.C. § 1251(a) (2021).

33. See *supra* note 27.

34. 33 U.S.C. §§ 1329, 1288(b)(2)(F) (2021).

point source.³⁶ But given the breadth of point sources, it is difficult to discern what sources are nonpoint sources.³⁷ The question becomes significant to the scoping issue because the CWA largely leaves nonpoint sources in the hands of states. The provisions found in the CWA try to spur state action by requiring planning, funding, and state-chosen controls; but they do not force state action.³⁸

To confuse matters somewhat (which further opens the door for scoping arguments) there are explicit and implicit variants of nonpoint sources under the CWA. Explicit nonpoint sources arise because the definition of “point source” specifically excludes some things that would otherwise qualify as point sources, including agricultural-stormwater discharges and return flows from irrigated agriculture.³⁹ Absent the explicit exception, both items would qualify as point sources. That is why they were specifically excluded.

Beyond explicit nonpoint sources, there lies a category of pollution that is referred to as nonpoint because it does not fulfill the general point-source definition, involving a discrete conveyance. This implicit negative variant of nonpoint sources lies in the shadow of a broad point-source definition, making it difficult to discern what types of pollutant releases are nonpoint.

Matters become even more murky when one considers how pollutants typically enter the environment. Nearly all human-caused pollution is introduced to the environment from a point source. If the CWA has any limits to its applicability (which it surely has), then it must not reach all releases of pollutants. As a result, the implicit variant of nonpoint source pollution has been used to separate regulated discharges from unregulated ones. This scoping use of the term is a heavy lift for an undefined and uncertain term.

Yet another scoping approach is also emerging, derived from the institutional and technical difficulties of federally regulating water quality. The link between origin and destination⁴⁰ is emerging as the primary limiting concept in point-source regulation.⁴¹ The Court in *Hawaii Wildlife Fund* recently discovered that concept’s relevance with groundwater-related discharges.⁴² But this scoping

35. Daniel R. Mandelker, *Controlling Nonpoint Source Water Pollution: Can It Be Done?*, 65 CHI.-KENT L. REV. 479, 480 (1989); Kyle W. Robisch, *Getting to the (Non)Point: Private Governance as a Solution to Nonpoint Source Pollution*, 67 VAND. L. REV. 539 (2014); Matthew A. Walker & A. Bryan Endres, *A Nudge or a Shove: Environmental Federalism and Non-Point Source Pollution*, 28 SAN JOAQUIN AGRIC. L. REV. 1, 2–3 (2018).

36. AM. BAR ASS’N, *supra* note 23, at 235, 319.

37. *Id.* at 235–36.

38. 33 U.S.C. §§ 1288, 1313, 1329 (2021); Mandelker, *supra* note 35.

39. There is a further exemption in § 402(l)(1) for “discharges composed entirely of return flows from irrigated agriculture” including silviculture. A much clearer way of excluding agricultural stormwater discharges from CWA permitting would have been to exclude such discharges from the definition of “discharge of pollutants,” or to have written an exception like § 402(l). Instead, they used the “discharge” to operate as an exception to a definition of a term (“point source”) that is used to define the term they used (“discharge”). Such circles are not a sign of good statutory drafting.

40. Adler & House, *supra* note 16.

41. Walker & Endres, *supra* note 35; Mandelker, *supra* note 35.

42. *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020); *Upstate Forever v. Kinder Morgan*

approach has been at work for decades in the analysis of precipitation-related CAFO discharges. This Article argues that the emerging case law is placing new emphasis on the link between destination and origin. Its development may better define the concept of nonpoint-source pollution, both the explicit and, more importantly, the implicit variant. In so doing, it may clarify difficult questions we have long wrestled with in the agricultural applications of the CWA.

B. Agriculturally Relevant Provisions of the CWA

Agriculture gets special treatment in both the § 404 and § 402 contexts. For present purposes, agriculture's § 404 favoritism is not directly relevant.⁴³ There are two other places in the CWA where agriculture gets special attention for § 402 purposes. The first is in the definition of pollutants. Pollutants are defined to include "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."⁴⁴ Agricultural interests have not (yet) made much of a fuss about how this definition limits the scope of the CWA's application in agriculture.⁴⁵

The second is in the concepts of point and nonpoint sources.⁴⁶ "Point source" is defined as "any discernible, confined and discrete conveyance, including but not limited to any . . . concentrated animal feeding operation . . . from which pollutants are or may be discharged."⁴⁷ Here, the textual reference to CAFOs

Energy Partners, L.P., 887 F.3d 637 (4th Cir. 2018); *Tenn. Clean Water Network v. TVA*, 274 F. Supp. 3d 775 (M.D. Tenn. 2017), *rev'd* 905 F.3d 436 (6th Cir. 2018).

43. See 33 U.S.C. § 1344 (2021). Section 404(f), provides exceptions for "normal farming activities," for maintaining drainage ditches and farm ponds, and for the construction and maintenance of irrigation ditches. The exemptions are limited by a recapture provision that strips the activities of their exemptions if the discharge is "incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced, shall be required to have a permit under this section." *Id.* In addition to 404(f), there are several regulatory exceptions placed in the WOTUS regulations, as well as nationwide permits that functionally implement the 404(f) exception.

44. 33 U.S.C. § 1362(6) (2021).

45. It is an open question as to whether the clause "discharged into water" modifies "industrial, municipal, and agricultural waste" in a way that distinguishes it from the other listed pollutants. Another construction is that the "discharged into water" clause modifies the entire list and, thus, serves only to duplicate the concept of discharge that is required under 33 U.S.C. § 1311 and defined in 33 U.S.C. § 1362. The question arises with provisions of the CWA that pertain to non-point sources of pollution, like the development of TMDLs. A reading that defines pollutants to include only things that are discharged into water would limit TMDL development to point sources of pollutants because discharges require a point source. As a result, courts have largely ignored this language. *Pronsolino v. Marcus*, 91 F. Supp. 2d 1337, 1351–52 (N.D. Cal. 2000) (considering sediment a pollutant for which a TMDL may be created even though it does not involve a point source and, thus, cannot be discharged into water).

46. John H. Davidson, *Thinking About Nonpoint Sources of Water Pollution and South Dakota Agriculture*, 34 S.D. L. REV. 20 (1989).

47. 33 U.S.C. § 1362(14) (2021).

requires regulation, in the event they discharge (i.e., add pollutants to navigable waters).

As for nonpoint-sources, the definition goes on to exclude “agricultural stormwater discharges and return flows from irrigated agriculture.”⁴⁸ As mentioned, the explicit and implicit variants of nonpoint sources gleaned from this language make this area difficult, especially when combined with the institutional and technical drivers of the scoping effort that accompanies the CWA’s implementation.

Matters come to a head with agriculture. The explicit exclusions are for agricultural-stormwater discharges and return flows from irrigated agriculture.⁴⁹ And agriculture is a widespread contributor of large amounts of pollutants into the environment, which are carried to navigable waters through the hydrologic system. As a result, reaching agriculture’s water-quality impact through the CWA puts a great deal of pressure on the nonpoint source provisions that are used to define the CWA’s scope.

The nonpoint planning and funding provisions of the CWA also mention agriculture, but they only add to the confusion. In a state planning provision, the statute calls for the creation of the following:

[A] process to (i) identify, if appropriate, agriculturally . . . related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources.⁵⁰

It is unclear to what extent this provision is referring to the explicit nonpoint sources of pollution, those sources that are implicitly nonpoint because they somehow do not involve discrete conveyances, or both.

Taken together, these definitions and concepts impose a permitting requirement on CAFOs and other agricultural point sources that add pollutants to navigable waters. But “agricultural stormwater discharges” and irrigation return flows are not required to have a permit. These explicit agricultural nonpoint sources (along with an unknown set of implicitly nonpoint sources) are left to states without much federal oversight. And while nonpoint-source pollution may involve “runoff from manure disposal areas and from land used for livestock and

48. *Id.*

49. *Id.*

50. 33 U.S.C. § 1288(b)(2)(F) (2021). Subsection (j) includes a cost-sharing program with USDA that allows it to enter contracts with “owners and operators having control of rural land for the purpose of installing and maintaining measures incorporating best management practices to control nonpoint source pollution for improved water quality” to deal with the problems identified in subsection (b). § 1288(j). Another part of the CWA refers to “agricultural and silvicultural activities, including runoff from fields and crop and forest lands.” 33 U.S.C. § 1314(f)(A) (2021).

crop production,” CAFOs are point sources that must have a § 402 permit if they discharge pollutants to navigable waters.

III. AGRICULTURAL INDIRECT DISCHARGES AND HAWAII WILDLIFE FUND

Agriculture’s contribution to water quality problems usually does not involve placing pollutants directly in navigable waters. Rather, its contribution typically involves an application of pollutants on land. Those pollutants are then carried to navigable waters through precipitation, or they may travel to navigable waters through groundwater. In either event, these indirect discharges are the primary source of uncertainty for § 402 permitting in agriculture.⁵¹

The statutory language responsible for this uncertainty is the term “discharge of pollutants,” which is defined as “the addition of any pollutant to navigable waters from any point source.”⁵² Stated more clearly, a discharge occurs when a point source adds pollutants to navigable waters. The crux of the uncertainty comes from what this language does not say. It does not say that point sources must *directly* add pollutants to navigable waters.⁵³ To further complicate matters, the concepts of agricultural stormwater and nonpoint-source pollution muddle the discharge issue when precipitation contributes to the conveyance of pollutants to navigable waters. And because groundwater is generally excluded from CWA coverage, those pollutants traveling to navigable waters through groundwater raise indirect-discharge complications as well.

Consider, for example, a CAFO in Nebraska. The Missouri River forms our eastern border. A release of manure into the Missouri River at Plattsmouth,

51. Adler & House, *supra* note 16, at 67, is a helpful read on the subject. The analysis here differs only slightly with their read of the statute. First, they spend no time on agricultural stormwater discharges, which is understandable. However, they spill considerable ink on *Southview Farm* as part of their evaluation of the conduit cases (of which *Hawaii Wildlife Fund* is a part). Agricultural stormwater was a significant part of that case, and the analysis presented here helps shed some light on the concept. Hopefully, I do so without atomizing the statute. In addition, I have a slightly different view of nonpoint sources of pollution, viewing them post-*Hawaii Wildlife Fund* and in light of the agricultural-stormwater cases as those sources of pollution that are either excluded from the definition of point source (agricultural stormwater discharges or irrigation return flows) or those contributions that cannot be traced to a specific point source.

52. 33 U.S.C. § 1362(12) (2021). This paper focuses on the “from” and “to” of the discharge definition. There has also been litigation on “addition.” Specifically, this line of authority questions whether the transfer of polluted water from different water bodies constitutes the addition of pollutants. On the one hand, such a transfer could involve moving polluted water to a less-polluted or un-polluted water body. But, on the other hand, the transferor (often a pumping station) adds no pollutants to the water it is moving. Both EPA and the Second Circuit have settled on the unitary-waters theory, which holds that simply moving water from one navigable water to another is not an addition of pollutants because the pollutants were already in the navigable waters, even if the receiving waters do not contain the same pollutants. *See Catskill Mountains Chapter of Trout Unlimited, Inc. v. EPA*, 846 F.3d 492 (2d Cir. 2017), which collects the authorities and decides the issue.

53. Justice Scalia famously identified this aspect of the CWA in his *Rapanos* opinion, when he responded to a criticism about the impact his restricted view of navigable waters might have on the § 402 program. As he noted, § 301 and § 402 do not require that pollutants be added “directly” or “immediately,” unlike § 404, which operates to permit only the placement of dredge and fill material in navigable waters. *Rapanos v. United States*, 547 U.S. 715, 742–45 (2006), *cited in* *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462, 1475 (2020).

Nebraska, would, of course, add pollutants to a navigable water. And since the CAFO is a point source, there would be a discharge. A release of manure into the Platte River (tributary of the Missouri River) near Columbus, Nebraska, about one hundred miles away, would as well. This could be because the Platte is navigable or because anything dumped in the river there will flow to Plattsmouth.

Now, place the manure in the Dismal River—a much smaller stream that flows into the Platte—near Mullen, Nebraska, over three hundred miles from the Plattsmouth site. Or consider a release to a field abutting the Dismal where the manure is placed in a drainage way that leads from the field to the river, where the manure will be carried to the river when there is enough rain. Or consider an application to the surface of a sandy field near the Dismal where the nitrogen will be carried into the soils as it rains and will move through the spaces in the soil until it percolates to the Dismal with groundwater. Or consider any number of variations where the point source is farther removed from navigable waters and the confluence of time, rainfall, geography and geology impact the addition of pollutants to protected water. At what point does the release not add pollutants to those waters? Answering that question is both technically challenging and legally fraught, given the bounds of federal authority and the statutory text and purpose.⁵⁴

A. County of Maui v. Hawaii Wildlife Fund

In 2020, the United States Supreme Court decided *County of Maui v. Hawaii Wildlife Fund*,⁵⁵ a case involving injection wells that placed pollutants into the underground portion of a hydrologic system.⁵⁶ Those pollutants migrated to the navigable waters nearby because of the presence of water in the sub-surface geologic structure (i.e., groundwater). The placement of the pollutants into the hydrologic system involved a point source (the wells), so the question became whether there had been a discharge of pollutants—i.e., an addition of pollutants “from” the point source “to” navigable waters (the nearby coastal water surrounding the island). The matter was legally complicated because groundwater is not a navigable water under the CWA. Indeed, groundwater protection raises significant questions about the CWA’s scope.⁵⁷ Nonetheless, the Court concluded there may have been a discharge to navigable waters (the

54. The scope of indirect discharges is arguably much more important for § 402 permitting than the scope of the term navigable waters. The WOTUS question turns on which of these water bodies constitutes WOTUS (all of them do, probably), and what land features might qualify as WOTUS (none of them on these facts, probably). For § 402 purposes, the more important issue is where a point source could release pollutants and not add them to WOTUS. This is the indirect-discharge question.

55. 140 S. Ct. 1462 (2020).

56. LINDA TSANG, CONG. RESEARCH SERV., LSB10528, UNCHARTED WATERS: NAVIGATING THE SUPREME COURT’S NEW CLEAN WATER ACT PERMITTING TEST 5 (2020).

57. For an explanation of groundwater coverage, see Michael C. Blumm & Steven M. Thiel, *Ground(Waters) of the United States: Unlawfully Excluding Tributary Groundwater from Clean Water Act Jurisdiction*, 46 ENVTL. L. 333 (2016).

coastal waters) through groundwater, so long as the release of the pollutants was the “functional equivalent” of the quintessential end-of-pipe direct discharge into navigable waters.

According to the Court:

Time and distance are obviously important. Where a pipe ends a few feet from navigable waters and the pipe emits pollutants that travel those few feet through groundwater (or over the beach), the permitting requirement clearly applies. If the pipe ends 50 miles from navigable waters and the pipe emits pollutants that travel with groundwater, mix with much other material, and end up in navigable waters only many years later, the permitting requirements likely do not apply.

The object in a given scenario will be to advance, in a manner consistent with the statute’s language, the statutory purposes that Congress sought to achieve. As we have said (repeatedly), the word “from” seeks a “point source” origin, and context imposes natural limits as to when a point source can properly be considered the origin of pollution that travels through groundwater. That context includes the need, reflected in the statute, to preserve state regulation of groundwater and other nonpoint sources of pollution. Whether pollutants that arrive at navigable waters after traveling through groundwater are “from” a point source depends upon how similar to (or different from) the particular discharge is to a direct discharge.⁵⁸

In articulating that test, the Court identified seven factors:

(1) transit time, (2) distance traveled, (3) the nature of the material through which the pollutant travels, (4) the extent to which the pollutant is diluted or chemically changed as it travels, (5) the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, (6) the manner by or area in which the pollutant enters the navigable waters, (7) the degree to which the pollution (at that point) has maintained its specific identity. Time and distance will be the most important factors in most cases, but not necessarily every case.⁵⁹

Unfortunately, the Court tells us nothing about how much time and distance is too much for a release “from”⁶⁰ a point source to no longer constitute an addition to navigable waters.⁶¹ And without some indication of what the

58. *Hawaii Wildlife Fund*, 140 S. Ct. at 1476.

59. *Id.* at 1476–77.

60. While the Court focuses on “from” in the statute, one could easily focus on “to” as well. *See id.* In either event, the question is whether there is a sufficient link between the point source and navigable waters.

61. One possible way of considering the line that *Hawaii Wildlife Fund* wants courts to draw is to

functions of a direct discharge are, it is difficult to consider equivalency.⁶²

The Court added several observations about the common-law method and state regulation of groundwater and nonpoint-source pollution, nodding to the scoping approaches to the CWA outlined above.⁶³ It was, however, very cognizant of the potential for a strict direct-discharge rule to result in evasion of the CWA's coverage.⁶⁴

Importantly, and accurately, the Court did not use the feasibility of § 402 permitting or amenability to effluent limitations as indicators. The “discharge of pollutants” question logically and textually precedes the permit question, given the general prohibition on discharges found in § 301. The existence of a discharge (and by necessity a point source) should not be determined based on the permit opportunities under the CWA. In fact, some discharges might not qualify for permits under either § 402 or § 404.⁶⁵ This does not mean there is no

consider it in hydrogeologic terms, like what occurs with water-quantity management. In Colorado and Nebraska, for example, we regulate groundwater pumping when it has too much of an impact on surface water flows. While the regulations we implement are very different, both states must consider the scope of activities that affect surface-water availability enough to justify regulation. In Colorado, this concept is called “tributary groundwater.” J. David Aiken, *The Western Common Law of Tributary Groundwater: Implications for Nebraska*, 83 NEB. L. REV. 541 (2004).

In Nebraska, our integrated-management approach identifies areas subject to regulation by using a 10/50 rule. To facilitate the determination as a policy-based decision, the Nebraska Department of Natural Resources considers hydrologically connected area to be the area in which pumping of a well for 50 years would deplete streamflow by at least 10% of the amount pumped. Ruopu Li et al., *Evaluating Hydrologically Connected Surface Water and Groundwater Using a Groundwater Model*, 52 J. AM. WATER RESOURCES ASS'N 799 (2016).

The difficulty in applying this concept to the CWA is the language used. Interpreting the terms “addition”, “to”, and “from” do not easily bring to mind questions of the significance of the impacts. Nonetheless, perhaps similar modeling could be used to determine a geographic area within the reach of navigable waters where releases of pollutants will reach those waters soon enough and at high enough concentrations to qualify as discharges.

62. *Hawaii Wildlife Fund*, 140 S. Ct. at 1485–86 (Alito, J., dissenting).

For other tests that were under consideration, see Adler & House, *supra* note 16, at 93–94. The Court rejects the Ninth Circuit's “fairly traceable” test, but it is not clear how the two tests differ from one another. See *Tenn. Clean Water Network v. TVA*, 273 F. Supp. 3d 775 (M.D. Tenn. 2017) (“[T]he requirement that a plaintiff be able to trace pollutants’ passage from their source to navigable waters does not require that the plaintiff be able map every inch of that path with perfect precision. To some degree, a hydrologic connection’s traceability is a feature not of the connection itself, but the physical and technological limitations surrounding the parties’ observation of it. In a world of perfect knowledge, all hydrologic connections, no matter how general or attenuated, would be traceable—but that does not mean that Congress intended to reach all such connections with the CWA. By the same token, in the considerably more technologically primitive world of the past, one presumably could not trace water flows that could not be seen with the naked eye, but those invisible hydrological connections were no less real or substantial than they are today. Perfect traceability is ultimately a technological and epistemological issue, not a legal one. As long as a connection is shown to be real, direct, and immediate, there is no statutory, constitutional, or policy reason to require that every twist and turn of its path be precisely traced.”); see also *Hawaii Wildlife Fund v. County of Maui*, 886 F.3d 737 (9th Cir. 2018).

63. *Infra* Subsection II.A.3.

64. *Hawaii Wildlife Fund*, 140 S. Ct. at 1474–76 (majority opinion) (noting the “serious loophole” such an approach would create).

65. One example would be pipeline ruptures. Pipelines would likely not be amenable to § 402 permits or the creation of effluent limitations. *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637 (4th Cir. 2018) (providing an example of a case involving such a discharge). In such cases, a violation of the CWA

discharge. It only means the discharge cannot be permitted.

The EPA issued guidance that adds an eighth factor: “the design and performance of the system or facility from which pollutants is released.”⁶⁶ After setting forth this factor, the EPA adds that these designs can affect the application of all the other factors in the list. While this is true, it proves a bit too much. After all, the inquiry will be undertaken according to how the specific structure was designed and is performing. So that factor seems built into the analysis already. To the extent it is not, it could be that the EPA is looking at anticipated performance as an indicator of foreseeability or, perhaps, intent. Neither of those concepts, however, appear explicitly in the standard the Court adopted, but they are common concepts associated with causal inquiries that often focus on the appropriate connection between a stimulus and a result. That seems to fit with the inquiry in question—determining whether the release of pollutants from the point source was causally related enough to the pollutants’ presence in navigable waters to constitute a “discharge.”

The guidance also notes that conveyances through groundwater may involve much less pollutant than similar discharges that are directly to navigable waters. It is difficult to understand what this factor has to do with applying *Hawaii Wildlife Fund*. The amount of pollutant does not seem relevant to whether a point source adds pollutants, but perhaps very low volumes or concentrations are not the functional equivalent of a direct discharge from the same point source. In this regard, the observation seems to repeat the fifth *Hawaii Wildlife Fund* factor.

B. CAFO Discharges and Agricultural Stormwater

Hawaii Wildlife Fund raises as many questions as it answers, but it may turn over a new leaf in CAFO permitting and agricultural discharges generally. Indirect discharges have a long history in CAFO regulation.⁶⁷ Even though the CWA includes these operations explicitly as an example of a “point source,” their coverage has always been difficult to reconcile with the general definition of point sources, which describes structural conveyances: “any discernible, confined and discrete conveyance.”⁶⁸ That reconciliation is, however, necessary.

may occur.

66. Anna Wildeman, *Applying the Supreme Court’s County of Maui v. Hawaii Wildlife Fund Decision in the Clean Water Act Section 402 National Pollutant Discharge Elimination System Permit Program*, EPA, <https://www.epa.gov/npdes/guidance-memorandum-applying-supreme-courts-county-maui-v-hawaii-wildlife-fund-decision-clean> (last visited Feb 12, 2021) (on file with the *University of the Pacific Law Review*).

67. See *Am. Farm Bureau Fed’n v. EPA*, 836 F.3d 936 (8th Cir. 2016); *Nat’l Pork Producers Council v. EPA*, 635 F.3d 738 (5th Cir. 2011); *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486 (2d Cir. 2005); *Concerned Area Residents for the Env’t v. Southview Farm*, 34 F.3d 114 (2d Cir. 1994); *Carr v. Alta Verde Indus., Inc.*, 931 F.2d 1055 (5th Cir. 1991); *Nat. Resources Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977); *Alt v. EPA*, 979 F. Supp. 2d 701 (N.D.W. Va. 2013); Scott Jerger, *EPA’s New CAFO Land Application Requirements: An Exercise in Unsupervised Self-Monitoring*, 23 STAN. ENVTL. L.J. 91 (2004). For a helpful explanation of regulatory development, see Kenyon, *supra* note 13.

68. 33 U.S.C. § 1362(12) (2021).

After all, the CWA does not regulate additions of pollutants from “point sources and CAFOs.” Rather, it regulates the additions of pollutants from “point sources,” of which CAFOs are an example.

1. CAFO Discharges Generally

Early cases grappled with the idea of a CAFO as a point source, often looking for the discrete structural conveyances that may be found within such operations. Outfall structures, ditches, drains, and pipes all appear when we take a closer look at CAFOs,⁶⁹ and effluent limitations are written to deal with the design of such structures.⁷⁰ But the biggest contribution that CAFOs make to water quality problems is from the land-application areas where manure is applied for disposal. Drawing on the § 404 cases that found equipment to be a point source,⁷¹ courts decided that manure-application equipment is a point source, as well as any identifiable ditches or other discrete conveyors of pollutants from land-application areas.⁷²

With these intra-CAFO point sources in mind, devising effluent limitations for the CAFO becomes a more coherent task. Structural-design requirements, prescribed management practices, and record-keeping obligations can be imposed to ensure that discharges (releases from these structures and equipment) involve as little pollutant addition to nearby waters as is technically and economically achievable.⁷³ These permits can then be adjusted for any further water quality-based limits that nearby waters need.

But this is agriculture, and resistance is the backdrop. That resistance affected the original design of the CWA, including its nonpoint source provisions. Recall that this is where one finds mention of nonpoint source planning processes that seek to identify “agriculturally related nonpoint sources,” including “runoff from manure disposal areas, and from land used for livestock

69. *Concerned Area Residents for the Env't*, 34 F.3d at 118–19 (evaluating swale, pipe, and manure spreaders, and citing *U.S. v. Tull*, 615 F. Supp. 610, 622 (E.D. Va. 1983); *U.S. v. Weisman*, 489 F. Supp. 1331, 1337 (M.D. Fla. 1980); *Voyelles Sportsmen's League, Inc. v. Marsh*, 715 F.2d 897, 922 (5th Cir. 1983)).

70. 40 C.F.R. § 412 (2021). CAFO production areas, as opposed to land-application areas, are often said to have no-discharge limits. This is not entirely correct because the standards associated with their construction allow wastewater discharges in the event of significant rainfall events. *See* 40 C.F.R. § 412.31(a) (2021) (stating BPT for cattle that is used for BCT, BAT, and NSPS for cattle and swine production areas). These provisions are included in the regulations as effluent limitations, and those regulations have been reviewed in litigation as such. *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486 (2d Cir. 2005). As a result, the most coherent account of the provisions attending production areas is that they are effluent limitations, imposed through permitting requirements, that articulate the standards that must when the production area discharges.

71. *See Avoyelles Sportsmen's League, Inc. v. Marsh*, 715 F.2d 897, 922 (5th Cir. 1983) (interpreting point source to include bulldozers and backhoes); *Cnty. Ass'n for Restoration of the Env't (CARE) v. Sid Kooipan Dairy*, 54 F. Supp. 2d 976, 981 (E.D. Wash. 1999).

72. Elizabeth Williams, Annotation, *What Constitutes "Point Source" of Pollution Subject to Control by Provisions of Clean Water Act*, 29 A.L.R. Fed. 3d Art. 10 (2018).

73. 40 C.F.R. § 412 (2021).

and crop production.”⁷⁴ When that provision was not enough to eliminate CWA coverage of collected runoff discharges, Congress added an exception for agricultural stormwater discharges.⁷⁵ So by the time CAFO permitting was ramping up, the 1987 amendments put the agricultural-stormwater-discharge exemption in play. All of this gave CAFOs an opportunity to argue that precipitation-related discharges were explicitly exempt as nonpoint agricultural-stormwater discharges or that they fell within the implicit category of nonpoint-source pollution.

As a factual matter, the opportunity arose because precipitation plays a part in the conveyance of CAFO pollutants to navigable waters. To qualify as a discharge, the point source must add pollutants to navigable waters. With CAFO point sources, navigable waters were often some distance away from land-application areas and precipitation was involved to a lesser or greater extent in the addition of pollutants to navigable waters.⁷⁶

2. *CAFO Discharges and Hawaii Wildlife Fund*

Not all CAFOs raise precipitation-related discharge problems. In some parts of the country, CAFOs’ only connection to navigable waters is groundwater-related. Obviously, *Hawaii Wildlife Fund* requires a reconsideration of their status as dischargers.⁷⁷ In such areas, precipitation may infiltrate the earth’s surface and become groundwater, which then becomes surface water as it percolates to a stream.⁷⁸ Such a connection between origin and source is clearly within the scope of *Hawaii Wildlife Fund*.

As for precipitation-related discharges, *Hawaii Wildlife Fund* helps us better understand the concept of indirect discharge. If precipitation and overland runoff are basically like groundwater in the sense that released pollutants can sometimes travel through such runoff without eliminating the status of the release as a discharge, then the case provides a standard for when a CAFO discharges.⁷⁹

74. 33 U.S.C. § 1288(b)(2)(F) (2021).

75. Davidson, *supra* note 46, at 35–36.

76. CAFOs include production areas as well, but for present purposes, I will largely limit the discussion to land application areas, which is where most manure finds its way into navigable waters.

77. See, e.g., *Nat’l Cotton Council v. EPA*, 553 F.3d 927 (6th Cir. 2009) (requiring a discharge for CWA coverage); *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486 (2d Cir. 2005) (requiring a discharge for CWA coverage).

78. Because the focus here is on land-application areas, I have omitted discussion of manure storage structures. However, there is a strong argument that lagoons leaching pollutants to nearby surface waters via GW are discharges. In such a case, the most coherent view is that the conveyance to the lagoon was the point source. But the lagoon may be a point source as well. See *Tenn. Clean Water Network v. TVA*, 273 F. Supp. 3d 775, 828 (M.D. Tenn. 2017), *reversed* 905 F.3d 436 (6th Cir. 2018).

79. See *United States v. Velsicol Chemical Corp.*, 438 F. Supp. 945, 947 (W.D. Tenn. 1976) (evaluating a discharge to a city sewer system and concluding “the fact that defendant may discharge through conveyances owned by another party does not remove defendant’s actions from the scope of this Act. Defendant knows or should have known that the city sewers lead directly into the Mississippi River and this is sufficient to satisfy the requirements of discharging into ‘water of the United States.’”); *Sierra Club v. El Paso Gold Mines, Inc.*,

Whether or not a particular release of pollutants qualifies as a discharge, of course, turns on several factors related to functional equivalency. But the concept deals with the evasion problem, provides a workable scoping approach, and helps us understand how CAFO discharges qualify as such.

The biggest hurdle to the full recognition of *Hawaii Wildlife Fund* in the precipitation-related CAFO-discharge setting is the agricultural-stormwater-discharge exception. Some courts have used this provision to eliminate all precipitation-related discharges from coverage, in much the same way as some argued the Supreme Court should have done with groundwater in *Hawaii Wildlife Fund*.⁸⁰ Other courts have not taken this approach, preferring to focus on the causal link between CAFO releases of pollutants and their presence in navigable waters. EPA's regulatory treatment of CAFO land applications also appears to take this approach. *Hawaii Wildlife Fund* may settle this dispute, driving courts toward a causal inquiry that asks whether precipitation (as with groundwater) operates to distance the release of pollutants from navigable water too much.⁸¹

The following sub-sections explain how current doctrine and regulations are currently using the agricultural-stormwater-discharge exemption. These uses are flawed and unnecessary in light of *Hawaii Wildlife Fund*, which provides limits on the concept of indirect discharges falling within the scope of the CWA.

a. Doctrinal Impacts

Generally speaking, integrating the agricultural-stormwater-discharge exclusion with CAFO regulation produced case law that expressed a judgment about what rainfall had to do with the addition of pollutants to navigable water. This is, of course, no simple matter. Absent a direct addition of pollutants on a dry day, rainfall always has something to do with a discharge from land-application areas.⁸² For courts evaluating whether rainfall should sometimes or always preclude a discharge finding, they often framed the no-discharge conclusion in agricultural-stormwater terms, concluding that a covered CAFO is

421 F.3d 1133 (10th Cir. 2005).

80. *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462, 1488 (2020) (Alito, J., dissenting).

81. A similar limit is found in the evidentiary aspects of liability. That is, in order to prove a discharge of pollutants from a point source to navigable waters, it will be necessary to show that the person under examination released a pollutant from a point source that ended up in navigable waters. Tracking pollutants from water bodies to their source in a way that serves to attribute liability to the polluter limits the reach of the CWA. Such a link might be thought of as factual link, akin to but-for causation. The need for a proximate-cause overlay—as a way to implement liability justifications—is one way of looking at *Hawaii Wildlife Fund*.

82. Rainfall is often included in open storage structures too, like lagoons. But most would not say that such structures are merely holding agricultural stormwater that may be discharged at will. *But see* *Fishermen Against the Destruction of the Env't v. Closter Farms*, 300 F.3d 1294 (11th Cir. 2002). The key to understanding the treatment of such facilities is to look to the source of pollutants found in those structures. If those sources are point sources, then the lagoon is merely a conduit.

an exempt agricultural-stormwater discharger.⁸³

As the Second Circuit put it in *Concerned Area Residents for the Environment v. Southview Farm*, “there can be no escape for liability for agricultural pollution simply because it occurs on rainy days.”⁸⁴ Rather, the question is one of causation: “Whether the discharges were the result of precipitation,” or rather, “simply occurred on days when it rained.”⁸⁵ Applying this standard, the court found that the land-application discharges at issue were discharges because “the run-off was primarily caused by the over-saturation of the fields rather than the rain” and the discharge was “unaffected by rain.”⁸⁶ As a result, the court concluded that rainfall did not make the discharges at issue (from swales, pipes and manure spreaders) into agricultural stormwater discharges.

In *Alt v. EPA*,⁸⁷ the court concluded that rainfall-related conveyances of pollutants from a chicken CAFO were not discharges because they fell within the agricultural-stormwater-discharge exception. The alleged point sources in this case were exhaust fans that blew ammonia-laden dust, manure, and other pollutants out of the production barns where it settled on adjacent grassy areas. When it rained, these pollutants were carried to nearby navigable waters. The court concluded that “the manure and litter in the farmyard would remain in place and not become discharges of a pollutant unless and until stormwater conveyed the particles to navigable waters.”⁸⁸ To this court, an addition that would have occurred in the absence of rain is a discharge, but those additions that would not have occurred in the absence of rain are not discharges because they constitute agricultural-stormwater discharges.

The cases may be using different standards. *Southview Farm* seems open to the idea that causation is more nuanced than a but-for relationship. *Alt* does not have a similar tone. But, in both cases, the courts play fast and loose with the notion of agricultural-stormwater discharges, making it the focus of their inquiry.

The statutory text excludes “agricultural stormwater discharges” from permitting requirements. The plain-language view of this phrase is that it excludes discharges of agricultural stormwater. That is, it applies to those ditches, pipes, and the like which add agricultural stormwater to navigable waters. As such, it provides an important exclusion in agriculture. There are a number of drainage districts, for example, that convey agricultural runoff to navigable waters.⁸⁹ The exclusion clearly covers those point sources that add

83. Jerger, *supra* note 67 (containing a complete discussion of the land-application cases).

84. 34 F.3d 114 (2d Cir. 1994).

85. *Id.* at 121.

86. *Id.* (emphasis added).

87. *Alt v. EPA*, 979 F. Supp. 2d 701 (N.D.W. Va. 2013); a thorough discussion of *Alt* can be found in Kenyon, *supra* note 13.

88. *Alt*, 979 F. Supp. 2d at 714.

89. Recent litigation concerning the Des Moines water works sought to attribute CWA liability to drainage districts. To the extent such entities carry “agricultural stormwater”, they are excluded by this exception. There is, however, an argument that they are carrying percolating groundwater, which originates as

agricultural stormwater to navigable waters.⁹⁰ But it does not clearly cover those point sources releasing pollutants onto landscapes where they are then carried to protected waters in stormwater. The point sources making such releases are not discharging agricultural stormwater.

Limiting the exception to channelized conveyances of agricultural stormwater is consistent with the purpose and history of the exception. The agricultural-stormwater-discharge exception was added to the CWA in 1987, alongside amendments dealing with municipal and industrial stormwater.⁹¹ These other amendments also clearly referred to the conveyances of stormwater, which were determined to qualify as discharges through litigation.⁹² Excluding agricultural stormwater reflects a judgment that agricultural drainage systems should not be treated as point sources (even though they are point sources).⁹³ It does not, however, mean that originating releases of pollutants should not be regulated. That question is simply unaddressed by the agricultural-stormwater-discharge exception.

Southview Farm and *Alt* do not read the exception this way. Abandoning the text, they read it as precluding at least some precipitation-caused discharges.⁹⁴

rainfall, but does not move on the surface. Whether or not this distinction matters is an open question. The plaintiffs in the Des Moines Water Works case argued that it did matter and, because the defendant districts were conveying contaminated groundwater, they fell outside of the agricultural stormwater exception. For a description of the litigation, see Coppess, *supra* note 15, at 364–66. The definition of “storm water” found in the regulations appears to cover only surface sources: 40 C.F.R. § 122.26(b)(13) (2021) (“Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.”). The Oxford comma preceding the first “and” indicates that the last “and” operates conjunctively to make “surface” a modifier of “runoff and drainage.” This scope of this definition’s applicability is also unclear. The statute does not define “stormwater.”

One must also draw a distinction between the sort of conveyance that would qualify as a discharge in the absence of the agricultural-stormwater exception and water transfers which do not qualify as discharges for lack of an “addition” of pollutants to navigable waters. See Chase Corey, Note, *Concerning Catskill: Missed Opportunity, Broken Precedent and the Plight of American Waters*, 44 WM. & MARY ENVTL. L. & POL’Y REV. 597 (2020).

Even though drainage-district permittees would not add pollutants to the stormwater they are carrying, they do convey polluted water (which has not yet become part of the navigable waters) to navigable waters. In such a case, the “unitary waters” theory does not hold up. Rather, the pollutants come from the “outside world.” *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481, 491 (2d Cir. 2001).

90. For a similar result, see *Decker v. Nw. Env’tl. Def. Ctr.*, 568 U.S. 597 (2013) (concluding that logging road ditches discharging stormwater were exempt under 33 U.S.C. § 1342(p)(1) (2013)).

91. Davidson, *supra* note 46, at 35.

92. *Nat. Res. Defense Council, Inc. v. Train*, 396 F. Supp. 1393 (D.D.C. 1975), *aff’d sub nom. Nat. Res. Defense Council, Inc. v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977).

93. Such a construction is also consistent with the CWAs notion of effluent limitations. Whether technology-based or water-quality-based, applying them to outlet structures of agricultural stormwater is exceedingly difficult because the composition of stormwater varies depending on unpredictable factors like land-use practices and rainfall. For the same reason, the permitting scheme for municipal and industrial stormwater was modified and placed in § 402(p). Agriculture was relieved of that obligation. But it remains responsible for its remaining point source discharges.

94. There is, however, one reading of *Southview Farm*, but not *Alt*, that involves a correct application of the agricultural-stormwater-discharge exception. Recall that one of the point sources that the court recognized were ditches and swales carrying runoff from the land-application area to navigable waters. These point sources may well enjoy an exception from the CWA, if they are carrying agricultural stormwater. Whether they are or

This is an understandable error given the amorphous nature of CAFOs as point sources and the lack of any apparent limit on precipitation-related discharges.⁹⁵ The need for a causal limit on the CWA's scope drove the courts toward this textually flawed interpretation of the exception. *Hawaii Wildlife Fund* deals with the same problem, but it provides a better solution. It requires courts and regulators to focus on the concept of discharge, which tends to the specific origin of pollutants and evaluates the connection between it and navigable waters. Unpermitted direct discharges, or their functional equivalents, violate the CWA. The presence of stormwater, as with groundwater, does not eliminate the possibility of a discharge.

b. Regulatory Impacts

The EPA's regulation of land-application discharges⁹⁶ rejects the strict view of precipitation-related discharges found in *Alt* and the somewhat broader causal connection used in *Southview Farm*. However, like those cases, the regulation also confusingly involves the agricultural-stormwater-discharge exception.⁹⁷ The regulation begins with a relatively uncontroversial rule concerning what a discharge is: "The discharge of manure . . . to waters of the United States from a

not depends on what they are conveying. The presence, or not, of precipitation in that collection may be the determining factor. See *Fishermen Against the Destruction of the Env't v. Closter Farms*, 300 F.3d 1294 (11th Cir. 2002) (concluding that pumping collected rainfall runoff from a farm into a neighboring lake was an agricultural stormwater discharge); see also *Alt v. EPA*, 979 F. Supp. 2d 701 (N.D.W. Va. 2013) (involving a dispute about industrial v. agricultural). This reading of *Southview Farm* is consistent with a proper understanding of the exception. But it does not affect the existence of discharges preceding the exempted stormwater discharge that are added to navigable waters through stormwater. That is a question that *Hawaii Wildlife Fund* answers.

95. I am indulging the assumption that such a limit is necessary, as does every argument concerning the proper scope of the CWA. It would appear that it is, but not necessarily from the text of the CWA. Rather, as the Court in *Hawaii Wildlife Fund* concluded, such limits derive from state authority over land use and non-point source pollution, and perhaps other factors like legislative history.

96. Notably, the EPA regulations of production areas and storage facilities do not mention the agricultural-stormwater exception. The basis appears to be that these structures are not mere conveyors of agricultural stormwater (even though they may contain some rainfall). They are the sources of agricultural pollutants that add pollutants to navigable waters and under certain conditions may be allowed to. This gets at the heart of the CWAs approach to pollution control. To the extent excessive rainfall means that a particular discharge will not be harmful to navigable waters, criteria can be written as effluent limitations to incorporate that idea. And they are. See, e.g., 40 C.F.R. § 412.31 (2021); *supra* note 70.

97. To make matters worse, the court in *Waterkeeper* affirmed the EPAs effort as a reasonable interpretation of the statute, drawing on *Southview Farm's* causal analysis and an undocumented legislative purpose. The court cited *Southview Farm's* "primary cause" test with approval. *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486, 509 (2d Cir. 2005). The regulation was also consistent with legislative purpose according to the court: "With respect to legislative purpose, we believe it reasonable to conclude that when Congress added the agricultural stormwater exemption to the Clean Water Act, it was affirming the impropriety of imposing, on 'any person,' liability for agriculture-related discharges triggered not by negligence or malfeasance, but by the weather — even when those discharges came from what would otherwise be point sources. There is no authoritative legislative history to the contrary." *Id.* at 508. Of course, there was no legislative history in support of this conclusion either. The court concluded: "The CAFO Rule seeks to remove liability for agriculture-related discharges primarily caused by nature, while maintaining liability for other discharges." *Id.* at 508–09.

CAFO as a result of the application of that manure . . . by the CAFO to land areas under its control is a discharge from that CAFO.”⁹⁸ This identifies the “application of that manure” as the source of the ensuing discharge of the manure to waters of the United States and frames the causal connection as “from” or “as a result of” such applications.

The regulation then provides an exception to this rule that invokes the agricultural-stormwater-discharge exception:

[E]xcept where it is an agricultural storm water discharge. . . . For purposes of this paragraph, where the manure . . . has been applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure . . . as specified in § 122.42(e)(1)(vi)-(ix), a precipitation-related discharge of manure . . . from land areas under the control of a CAFO is an agricultural stormwater discharge.⁹⁹

The inline reference to § 122.42(e)(1) is a reference to the nutrient management plan. The nutrient management plan described in § 122.42(e)(1) includes several items related to storage and handling, all of which are imposed on discharging CAFOs as effluent limitations.¹⁰⁰ The agricultural-stormwater-discharge exception references a portion of these requirements—items (vi)–(ix). Those items require the CAFO to meet certain standards with its land application. Complying with those standards, in turn, means that the land-application activities will qualify for the agricultural-stormwater-discharge exemption, shielding the CAFO from any permitting requirements if there are no other discharges from the facility.¹⁰¹

With the cross-reference spelled out, the regulatory exception for agricultural-stormwater discharges refers to a “precipitation-related discharge” where the manure was applied in a way that ensures adequate nutrient management and “site specific conservation practices . . . to control runoff” (among other things).¹⁰² Much like in *Southview Farm* and *Alt*, the exception is dealing with the causal role of precipitation in land-application discharges, but it does not appear to ask whether a discharge would have occurred but-for the rain or if it was “primarily caused by” the land application. Instead, if manure is applied according to the NMP standards, then any subsequent precipitation-related conveyance of pollutants will not violate the CWA. But if manure is applied in violation of these standards, then rainfall carrying it will result in a

98. 40 C.F.R. § 122.23(e) (2021).

99. *Id.*

100. *See also* 40 C.F.R. § 412.4 (2021).

101. *See* Terence J. Centner, *Addressing Water Contamination from Concentrated Animal Feeding Operations*, 28 LAND USE POL’Y 706 (2011); Jerger, *supra* note 67.

102. 40 C.F.R. §§ 122.23(e), 122.42(e)(1)(vi) (2021).

discharge, so long as the pollutants come “from” the CAFO “as a result of” land application.

These regulations are far from a model of clarity, at least insofar as the precise point source is concerned. The opening rule refers to the land application as the point source. But the rule’s exception seems to refer to the means by which pollutants migrate from the land to protected waters (e.g., through ditches and swales), which might be point sources. If the exception is deeming those conveyances as discharges comprised of agricultural stormwater, then the exception presents a somewhat proper use of the agricultural-stormwater-discharge exemption. But it is not clear why compliance with a NMP would make the content of such conveyances any more or less agricultural stormwater. And this account of the exception does little to explain why the initial land-application is not a discharge. *Hawaii Wildlife Fund* provides a possible explanation: compliance with the NMP serves to eliminate the functional equivalence of the discharge.

Like *Southview Farm* and *Alt*, the regulations use the agricultural-stormwater-discharge exemption to express the idea that there is sometimes no discharge. This is unfortunate. The regulations effectively hold that the NMP-compliant application of manure to land does not add pollutants to navigable waters because the pollutants should be taken up by the vegetation and contained by the structures.¹⁰³ This is a conclusion about the existence of a discharge, reflecting a reasonable choice about when precipitation-related discharges of pollutants occur. It has very little to do with whether the CAFO is discharging agricultural stormwater.

To say that compliance with an NMP means that the discharge now involves agricultural stormwater is inconsistent with the text of the agricultural-stormwater-discharge provision and its purpose, which prohibit the regulation of those point sources discharging agricultural stormwater. With agricultural-stormwater discharges properly understood, the regulation can be seen as a limit on indirect discharges.¹⁰⁴ *Hawaii Wildlife Fund* explains this limit better. Through that lens, the regulation can be seen as defining the scope of discharges

103. There may not even be a pollutant. 33 U.S.C. § 1362(6) (2021) (defining pollutant as “agricultural waste discharged into water”). Leaving aside the question of “into water,” which is, hopefully, the same question as is presented with discharges, the term “agricultural waste” is relevant. For manure, and perhaps for other nutrient or pesticide applications, use in excess of agronomic purposes may be necessary for the discharged substance to constitute “waste.” See *Nat’l Cotton Council v. EPA*, 553 F.3d 927, 936 (6th Cir. 2009) (“we conclude that: so long as the chemical pesticide ‘is intentionally applied to the water [to perform a particular useful purpose] and leaves no excess portions after performing its intended purpose . . . it is not a “chemical waste,” . . . and does not require an NPDES permit.”); AM. BAR ASS’N, *supra* note 23, at 37–39; James D. Bradbury et al., *Agriculture and Environmental Law: Focusing on Defense Strategies*, 24 DRAKE J. AGRIC. L. 7 (2019) (discussing the implications of *Cow Palace*).

104. The regulation could also, perhaps, be understood as an effluent limitation on regulated indirect discharges, as is the case with precipitation-related discharges from production areas. See *supra* notes 70 and 94. But its invocation of agricultural stormwater and its placement in 40 C.F.R. § 122.23 preclude such a reading. Effluent limitations are only invoked once a CAFO discharges, and those limits are found in 40 C.F.R. §§ 122.42(e) and 412.4 (2021).

to include more than direct discharges. Its implicit logic is that the link between land application (a point source) and navigable waters may involve precipitation. In fact, its imposition of NMP requirements may be the sort of thing that the EPA's guidance memorandum suggests should be considered as part of the indirect-discharge analysis: Under the conditions presented in the NMP, a precipitation-related addition of pollutants is too attenuated to justify coverage.

In the end, the *Hawaii Wildlife Fund* indirect-discharge standard may overturn pieces of existing case law and necessitate a reconfiguration of the regulatory language on CAFO land-application discharges. The Court's analysis deals with the CWA-scoping problem that led to the misuse of the agricultural-stormwater-discharge exception. If *Hawaii Wildlife Fund* were employed in this context, point sources applying manure that travels to navigable waters in conjunction with precipitation would be discharging pollutants within the meaning of the CWA if such additions are the functional equivalent of a direct discharge. One of the factors attending the functional-equivalence test could be compliance with an NMP. Such compliance or the presence of other factors that make the discharge too indirect should rightly result in a no-discharge conclusion. The agricultural-stormwater-discharge provision can then be left to exclude those structures conveying agricultural stormwater.

C. Rethinking Nonpoint-Source Pollution

There is another piece of the precipitation puzzle that causes some problems for reaching land-application discharges. One of the most-common observations concerning nonpoint-source pollution is that nearly everything in agriculture is nonpoint-source pollution, except CAFOs.¹⁰⁵ Farm-field runoff is often deemed a nonpoint source.¹⁰⁶ The statutory basis for this observation is not altogether clear.

This observation could be a reference to the explicit variant of nonpoint sources (i.e., the ag-stormwater-discharge exception). To the extent that logic is employed, the analysis above disposes of the argument: agricultural-stormwater discharges are a discreet type of excluded point source, where what would

105. See, e.g., Jan G. Laitos & Heidi Ruckriegle, *The Clean Water Act and the Challenge of Agriculture Pollution*, 37 VT. L. REV. 1033, 1035 (2013) ("Since agriculture is exempt from most CWA controls, including permitting requirements under the National Pollutant Discharge Elimination System (NPDES), pollution-causing agricultural activities are classified as unregulated nonpoint sources."); Mandelker, *supra* note 35; Walker & Endres, *supra* note 35, at 2-3; Robisch, *supra* note 35.

106. 33 U.S.C. § 1314(f)(A) (2021). It is tempting to consult the notion of diffused surface waters, as well. This term is used to identify waters that are not subject to appropriation, and it is used for purposes of common-law drainage liability. Once diffused surface waters are collected, the rules usually change for these purposes. The CWA exception seems to clearly operate on collected water, as explained above, which means that the notion of diffused surface water is not up to the task of defining stormwater.

otherwise be a point source conveys stormwater runoff from agricultural land.

However, the observation could also be a reference to the implicit negative variant of nonpoint-source pollution. Such a reference often purports to describe those discharges that do not otherwise fulfill the statutory definition of a point source. But what, exactly, are those? *Hawaii Wildlife Fund* may help us understand this concept as a derivative of the term “discharge,” rather than as the negative connotation of “point source.”

Textually, this is difficult. As discussed above, the statutory reference to nonpoint sources provides some examples of what should be included in nonpoint-source planning processes. While those provisions are not definitional, they provide support for the idea that at least some precipitation-related discharges are more appropriately addressed by state-level planning and implementation. But this concept is not necessarily derived from the definition of “point source.” Taken literally, the nonpoint-source reference to “runoff from manure disposal areas” would mean that there is no point source involved with the large swath of CAFO pollutant releases involving land application. If CAFOs are to be regulated, that cannot be the case. The court in *Southview Farm* had no trouble settling on the “real question” of causation, without spending time on whether a nonpoint source was involved. And, as discussed, *Hawaii Wildlife Fund* provides a better understanding of how precipitation relates to CWA discharges.

Both *Southview Farm* and *Hawaii Wildlife Fund* make some reference to nonpoint-source pollution, but neither fully grapples with the relevance of the point source at issue.¹⁰⁷ That is, once they identify the point source, the inquiry focuses on the connection between the release of pollutants from it and the pollutants’ ultimate presence in navigable water. The focus is on the connection between origin and destination. Such an analysis is always necessary because nearly all pollutants are released into the environment by a point source.¹⁰⁸ But no one would seriously claim that every release of pollutants is a discharge. This isn’t because there is no point source involved. Rather it is because the connections between those sources and protected waters is too attenuated.

CAFO land-application cases and *Hawaii Wildlife Fund* reveal a better way of distinguishing nonpoint-source pollution from regulated pollution. The key is not to focus on the implicit negative variant of “point source.” Rather, the

107. While *Hawaii Wildlife Fund* does not cite *Southview Farm*, it cites Scalia’s plurality opinion in *Rapanos* which, in turn, cited *Southview Farm*. County of Maui v. Hawaii Wildlife Fund, 140 S. Ct. 1462, 1475 (2020) (citing *Rapanos v. United States*, 547 U.S. 715, 743 (2006)).

108. Davidson, *supra* note 46, at 32. And courts have supported broad interpretations of the term. The concept of a point source was designed to further this scheme by embracing the broadest possible definition of any identifiable conveyance from which pollutants might enter the waters of the United States. *United States v. Earth Scis., Inc.*, 599 F.2d 368, 373 (10th Cir. 1979). *Earth Sciences* remains the leading case on the subject. See *Simsbury-Avon Pres. Soc’y v. Metacon Gun Club, Inc.*, 575 F.3d 199, 219 (2d Cir. 2009) (grappling with the question and ultimately assuming that a firing line at a gun range was a point source but concluding that no sufficient connection between it and the presence of lead in navigable waters had been established); see also Williams, *supra* note 72.

nonpoint-source category can be better understood as a reference to those pollution releases that fail to qualify as a “discharge of pollutants.”

In fact, the nonpoint-source cases gave the *Hawaii Wildlife Fund* Court the doctrinal choices for groundwater-related discharges. The main characteristic of nonpoint-source pollution is often expressed in causal terms, much like *Southview Farm’s* resort to the “real cause.” For example, a commonly cited EPA statement on the matter states, “[nonpoint source pollution] is *caused by diffuse sources* that are not regulated as point sources In practical terms, nonpoint source pollution *does not result from* a discharge at a specific, single location (such as a single pipe) but generally *results from* land runoff, precipitation, atmospheric deposition, or percolation.”¹⁰⁹

Traceability quickly enters the mix as a frame for divining a direct enough relationship between the destination and the source of the pollutants. Traceability concepts were developed in nonpoint-source cases and used in indirect-discharge cases, which ultimately resulted in *Hawaii Wildlife Fund*. The lower court and the Supreme Court can therefore be understood as selecting the standard for indirect discharges from a family of approaches that were developed in the nonpoint-source branch of CWA doctrine as a scoping approach.¹¹⁰ All of these cases are driving at the same point: the inability to trace pollutants from navigable waters to specific sources is what puts some releases beyond the scope of the term “discharge of pollutants” and, thus, in the nonpoint-source category. In such cases, the CWA apparently concludes that the best we can do is identify the possible contributors and implement programs to reduce collective contributions that impair water quality.

Taken in that light, *Hawaii Wildlife Fund* can be understood as rejecting a blunt approach that regards all indirect discharges as nonpoint. That is, the reason why something is a nonpoint source is because its release of pollutants is separated from the protected destination by so much interference that we cannot call it a discharge. That interference could be underground percolation, temporal delays, rainfall, snowmelt, distance, dilution, etc. But once the link between the point of origin and the protected destination becomes too attenuated, the *point* of origin can no longer be considered the *source* of the pollutant. Perhaps a better term for the implicit negative variant of nonpoint source pollution would be non-discharge pollution.

109. *Simsbury-Avon Preservation Club, Inc.*, 575 F.3d at 220 (emphasis added) (quoting EPA OFFICE OF WATER, NONPOINT SOURCE GUIDANCE 3 (1987), *quoted in* *Tenn. Clean Water Network v. TVA*, 273 F. Supp. 3d 775, 828–29 (M.D. Tenn. 2017), *reversed* 905 F.3d 436 (6th Cir. 2018) (rejecting the district court’s “hydrologic connection theory” of discharge).

110. *See Hawaii Wildlife Fund v. County of Maui*, 886 F.3d 737, 749 n.3 (9th Cir. 2018) (citing *Trs. for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir. 1984) and *Ecological Rights Found. v. Pac. Gas & Elec. Co.*, 713 F.3d 502, 508 (9th Cir. 2013) from the nonpoint source line as support for the fairly-traceable test it uses to develop the functional equivalence test).

D. Other Agricultural Discharges

The emergence of a standard linking the origin and destination of pollutants is a welcome addition to the body of law defining the CWA's scope. In the CAFO context, courts and regulators have been using the concepts of agricultural stormwater and nonpoint sources too broadly. *Hawaii Wildlife Fund* could help clear up some of the misunderstanding associated with agricultural-stormwater discharges and clarify the causal inquiry attending CAFO discharges, while giving a more coherent meaning to the concept of nonpoint-source pollution.

If it does, *Hawaii Wildlife Fund* could have far-reaching impacts on agricultural pollution. Numerous pollutants are released on agricultural landscapes by planters, sprayers, fertilizer applicators, and non-CAFO manure spreaders. The application of *Hawaii Wildlife Fund* to CAFO discharges frees cases like *Alt* and *Southview Farm* (and the regulations) from their agricultural-stormwater overtones. If the involvement of precipitation in a discharge does not always remove a pollutant release from the CWA's point-source provisions, then there may be other unpermitted agricultural point sources that violate the CWA. As with CAFOs and the injection wells in *Hawaii Wildlife Fund*, there would be a need for a scoping approach that reflects the federal-state relationship, land-use and water authority, and practical administrability and evasion concerns. But the *Hawaii Wildlife Fund* standard provides such an approach.

Beyond the agricultural-stormwater-discharge exception and the concept of nonpoint-source pollution, there remains another provision that complicates CWA coverage of non-CAFO agricultural discharges on irrigated land. As with the agricultural-stormwater-discharge exception, the CWA excludes "return flows from irrigated agriculture" from the definition of "point source."¹¹¹ Unlike the agricultural-stormwater-discharge exception, this definitional exception does not refer to "discharges."¹¹² However, as with agricultural-stormwater discharges, there is no reason for the definitional exclusion of irrigation return flows unless they could be regarded as point sources, which only require a permit if and when they discharge. So there is very little reason to think that the irrigation-return-flow exception should operate differently than the agricultural-stormwater-discharge exception. As a result, the proper application of this exception operates much the same as the agricultural-stormwater-discharge exception: it excludes channelized conveyances of irrigation return flows from CWA coverage.

In addition to the definitional exception, § 402(l) excludes "discharges composed entirely of return flows from irrigated agriculture" from § 402's coverage.¹¹³ This additional exclusion bolsters the observation that the definitional exception is driven by "discharge" concerns, despite the absence of

111. 33 U.S.C. § 1362(14) (2021).

112. *Id.*

113. 33 U.S.C. § 1342(l) (2021).

the term “discharge” in the definitional exception. Moreover, the types of discharges excluded in § 402(l) are further modified by the “composed entirely of” language. This further limits the circumstances under which the CWA exempts discharges of irrigation return flows.¹¹⁴

Construed as such, *Hawaii Wildlife Fund*'s treatment of indirect discharges may mean that irrigation return flows can be the means by which pollutants reach navigable waters. In cases where coverage is sought, the regulated discharge is not the return flow. Rather, the regulated discharge is the addition of pollutants from whatever point released them onto the irrigated fields. Irrigation water (like groundwater and agricultural stormwater) does not necessarily eliminate CWA coverage.

Given these potential impacts, one predictable response to *Hawaii Wildlife Fund* will be to criticize it as an expansion of the CWA's coverage. Such an expansion should not be surprising. The CWA was written in broad terms. The standards associated with those terms may reasonably be applied in ways that accommodate change. So it makes sense that what may not have been a discharge in 1972 is a discharge in 2021, given our expanding knowledge of hydrologic systems.

Whether *Hawaii Wildlife Fund* will, in fact, expand the scope of permitting requirements for agricultural pollution is unclear. Given the tile-drainage structures or terrace-drainage structures through which polluted water is removed from agricultural land in many parts of the U.S., we may find a relatively clear path from origin to destination. The size of farming operations (e.g., one producer's equipment applying pollutants to hundreds or thousands of acres in a single watershed) and factors of time, distance, volume, and detectability may tend toward the discovery of more discharges as well. In relatively riparian areas involving porous soils or swift runoff, the conclusion may follow too.

Importantly, this does not mean that individual permits would become the norm for planters, sprayers, fertilizer applicators, and manure spreaders. We might see the development of regional permits that require the observance of best management practices to control the amount of pollutant ultimately reaching navigable waters. Or we may develop something like a nutrient management plan, compliance with which reduces the functional equivalence of a release and makes the addition too indirect to constitute a discharge. Under any of these options there would at least be some renewed attention to the problem of agricultural pollution.

If history is our guide, however, agricultural interests will resist this interpretation of the CWA. Even if these approaches come to fruition, those advocating for environmental improvement will need to monitor the ensuing

114. See *Pac. Coast Fed'n of Fishermen's Ass'ns v. Glaser*, 945 F.3d 1076 (9th Cir. 2019) (evaluating a suit against a drainage system and reversing summary judgment for the district because the purported discharge included pollutants that could not be attributed to irrigation return flows).

regulatory process. Capture is, after all, a pervasive phenomenon.¹¹⁵

IV. CONCLUSION

The constant search for limits on the CWA seems to be due at least in part to a belief long associated with it: it cannot go that far. But if we are serious about water quality, the CWA probably needs to go very far. Unfortunately, our institutional structures were not created with hydrologic systems in mind. And so, the search for limits persists.

There are, of course, textual reflections of these limits in the CWA. It creates a subset of contributors to regulate (i.e., point sources) and it identifies a subset of waters to be protected (i.e., navigable waters). But the limits derived from these terms don't answer the CWA's scope questions very well. As much can be seen in cases where precipitation serves to help carry pollutants from point sources to navigable waters. And those cases are primarily found in agriculture because it involves the famous CAFO outlier in the point-source definition and long-running disputes about agricultural stormwater and nonpoint-source pollution.

A close examination of CAFO coverage reveals the justification for including it within the point-source definition: CAFOs do, indeed, involve discrete conveyances to which effective limitations can be applied. And that examination also reveals significant questions about the path from point source to navigable waters. Often, the indirect-discharge reasoning from these cases is conflated with the agricultural-stormwater-discharge exception, but an accurate reading of that exception reveals that it textually and contextually refers to discharges of agricultural stormwater, not discharges through agricultural stormwater. Once properly construed, the task that remains is to provide a textual explanation for the CAFO cases that maintains the appropriate scope of the CWA's coverage. Such a limit emerges from the discharge definition, which requires the addition of pollutants to navigable waters from a point source.

Hawaii Wildlife Fund's attention to discharges opens a new chapter in debates about the proper scope of the CWA. If applied in agriculture, it will have to overcome the current understanding of the agricultural-stormwater-discharge exception and the concept of nonpoint-source pollution. It may. After all, they emerged in the absence of a limit like that found in *Hawaii Wildlife Fund*. And *Hawaii Wildlife Fund* provides a limit—functional equivalence—which may do a better job than a flawed interpretation of the agricultural-stormwater-discharge exemption and a muddled understanding of nonpoint-source pollution.

At the very least, this discussion demonstrates that the scope of the CWA

115. Michael Steeves, *The EPA's Proposed CAFO Regulations Fall Short of Ensuring the Integrity of Our Nation's Waters*, 22 J. LAND, RESOURCES, & ENVTL. L. 367 (2002); Chris Jones, *MMPs are CRAP*, IHR-HYDROSCIENCE & ENGINEERING (Oct. 3, 2019), <https://www.ihr.uiowa.edu/cjones/mmps-are-crap/> (on file with the *University of the Pacific Law Review*).

may not be settled, and its concepts can be interpreted in adaptive ways. Even though the standards for origins and destinations of pollutants under the CWA may be somewhat clear, the path pollutants must take to justify the CWA's prohibition and permitting provisions remains to be seen. For now, we have a test that may expand the scope of agriculture's coverage under the CWA, at least in relatively riparian areas with a high level of hydrologic connectivity and, perhaps, in drained areas beyond riparian zones. That test has the potential to accommodate advances in hydrologic understanding. As a consequence, it may move more sources of pollution from the area of nonpoint nonregulation to the CWA's discharge regime where water quality improvements are more likely.

One can expect agriculture to argue for narrow interpretations that maintain its ability to bring environmental solutions to policymakers on a voluntary and funded basis. It has plenty of legal ammunition to use. But the CWA may yet provide some regulatory teeth to the environmental movement in agriculture. And if a legislative response ensues, at least a new conversation may be had in today's political and technological setting. A few things have changed since 1972, 1977, and 1987.

Every winter in the Midwest, we see manure spreaders adding manure on top of frozen ground and snowpack. We all know that nearly all of it will be in the streams and rivers when it warms up. And throughout the year, new and larger pieces of equipment apply herbicides, pesticides, and fertilizers to an industrial landscape drained by a labyrinth of tile, rivers, and streams. While we struggle to fund water-treatment facilities, one wonders why the sources of that pollution are not regulated. One cannot help but think that these polluters are no different than those who dump directly into the river. Functionally equivalent, one might say.

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