

IMPACTS OF *COUNTY OF MAUI V. HAWAII WILDLIFE FUND* ON CLEAN WATER ACT GROUNDWATER REGULATION AND WHAT COMES NEXT

By: Riley Cooney*

I. INTRODUCTION

In April 2020, the United States Supreme Court issued a decision long anticipated by those impacted by Clean Water Act regulations in *County of Maui v. Hawaii Wildlife Fund*.¹ The Court held that the Clean Water Act (“CWA”) requires a permit for a discharge of pollutants from a point source² to navigable waters if the pollutants travel through groundwater in between, so long as there exists a “functional equivalent of a direct discharge from the point source into navigable waters.”³ The Court gave a non-exhaustive list of factors to help lower courts determine when groundwater discharges are “functional equivalents” to discharges directly into navigable waters.⁴ This decision comes after decades of confusion over whether the CWA covers discharges of pollutants to groundwaters that ultimately end up in surface waters. It establishes a single fact-based test rooted in hydrologic science to determine when the CWA triggers liability. However, there is likely to be much confusion for polluting parties, state agencies, and the U.S. Environmental Protection Agency (“EPA”) as to the application of the Court’s new standard.

Although the Court attempted to clarify uncertainty about when groundwater pollution requires a permit under the CWA, more guidance from the EPA would further reduce confusion. By giving clearer, more specific guidance, EPA could reduce confusion and the risk of a trail of patchwork judicial decisions. The CWA has been the center of similar conundrums in the past. For example, the infamous 2006 *Rapanos v. United States* decision, where the Court was tasked with determining the bounds of the CWA’s jurisdiction.⁵

* J.D. Candidate 2022, University of Kansas School of Law; B.S. (Biology) 2019, B.A. (Environmental Studies) 2019, University of Kansas. Many thanks to Professor Uma Outka for her invaluable guidance throughout the writing process as well as to the *Journal* staff and Board for their thoughtful feedback and help with editing.

¹ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1468 (2020).

² A point source is defined as “any discernible, confined and discrete conveyance.” 33 U.S.C.S. § 1362(14) (LexisNexis 2021).

³ *County of Maui*, 140 S. Ct. at 1468.

⁴ *Id.* at 1476–77.

⁵ See *Rapanos v. United States*, 547 U.S. 715 (2006) (plurality opinion) (considering whether the

The Court ultimately published five opinions that offered no clear standard to determine when wetlands fall under CWA jurisdiction.⁶ Lower courts and agencies were left with little guidance on the proper test for identifying “waters of the United States.”⁷ With something as important as water quality hanging in the balance, consistent application of the CWA is critical. To reduce confusion in lower courts, help landowners determine when CWA permits are necessary, and better protect the nation’s waters, EPA should release a new regulation or interpretive statement to give further instruction on how to determine when a discharge into groundwater is the functional equivalent of a direct discharge into navigable waters.

The goals of this paper are (1) to situate the issue of indirect discharges to navigable waters through groundwater within the context of the CWA’s National Pollutant Discharge Elimination System, (2) to summarize the Supreme Court’s findings in *County of Maui v. Hawaii Wildlife Fund* and discuss the possible implications for CWA permitting and water quality protection, and (3) to make a case for why EPA needs to draft more specific guidance that relies heavily on scientific research to determine when discharges to navigable waters through groundwater should require permits. Part II of the paper positions the issue as it existed before the Supreme Court’s April 2020 decision. It summarizes key provisions of the federal Clean Water Act, details how the Environmental Protection Agency has interpreted the statute as it applies to groundwater discharges and describes the split decisions in the circuits on the issue. Part III analyzes the Supreme Court’s decision in *County of Maui v. Hawaii Wildlife Fund* and discusses the prevalent opinions in the legal community for how the decision will change the way the CWA is enforced. Part IV discusses the ambiguity left behind by the Supreme Court’s opinion and discusses further the gaps in groundwater pollution regulation and policy. Part V proposes possible solutions and ways EPA can expand and clarify the functional equivalent test.

II. BACKGROUND: THE CLEAN WATER ACT AND GROUNDWATER DISCHARGES

To fully appreciate the impact of *County of Maui*, it is important to understand basic provisions of the Clean Water Act (“CWA”) and how courts have determined its applicability to discharges through groundwater. It is not

CWA has jurisdiction over wetlands adjacent to tributaries connected to traditional navigable waters).

⁶ Justice Scalia wrote for a plurality of four Justices and required there to be a “continuous surface connection.” *Id.* at 742; *but see id.* at 779 (Kennedy, J., concurring) (requiring a “significant nexus” between the wetlands in question and navigable waters).

⁷ *See, e.g.*, ROBIN KUNDIS CRAIG, ENVIRONMENTAL LAW IN CONTEXT: CASES AND MATERIALS 899–903 (4th ed. 2016); Kristen Clark, Note, *Navigating Through the Confusion Left in the Wake of Rapanos: Why a Rule Clarifying and Broadening Jurisdiction Under the Clean Water Act is Necessary*, 39 WM. & MARY ENV’T. L. & POL’Y REV. 295 (2014); Bill Currie, *Opening the Floodgates: The Roberts Court’s Decision in Rapanos v. United States Spells Trouble for the Future of the Waters of the United States*, 18 VILL. ENVTL. L.J. 209 (2007).

disputed that the CWA prohibits discharges from point sources to navigable waters⁸ and that groundwater is not included in the category of navigable waters.⁹ However, a circuit split, and a string of vague and inconsistent EPA regulations, showed it was not clear if the CWA extended liability for discharges that traveled through groundwater but ultimately ended up in navigable waters.

A. Key Provisions of the Clean Water Act

The Act's stated purpose is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹⁰ One main provision within the CWA designed to meet this purpose is the National Pollutant Discharge Elimination System ("NPDES"), which requires parties to obtain a permit to discharge pollutants from a point source to navigable waters.¹¹ Permits can be issued by EPA¹² or states can seek authority from the EPA Administrator to administer a permitting program.¹³ A permit is required for "any addition of any pollutant to navigable waters from any point source."¹⁴ Currently, forty-seven states have NPDES permitting authority.¹⁵ A "point source" is defined as "any discernable, confined and discrete conveyance" and includes any pipe, ditch, channel, tunnel, well, and concentrated animal feeding operation, among others.¹⁶ Nonpoint sources are all those that are not point sources, including agricultural runoff or stormwater discharges.¹⁷ Navigable waters are defined as "the waters of the United States."¹⁸ The exact limits of the scope of "waters of the United States" has long been difficult to define;¹⁹ however, this dispute was not at issue in *County of Maui*, nor did it directly impact when indirect discharges through groundwater trigger CWA jurisdiction. Violations of the NPDES permitting program can be significant: the penalty for unlawful discharges is

⁸ 33 U.S.C.S. § 1311(a) (LexisNexis 2021) (prohibiting "the discharge of any pollutant by any person"); § 1362(12)(A) (defining "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source"); § 1342(a) (allowing discharge of a pollutant with an NPDES permit).

⁹ The Navigable Waters Protection Rule: Definition of "Waters of the United States", 85 Fed. Reg. 22250, 22251 (Apr. 21, 2020) (expressly excluding groundwater from the definition of "waters of the United States").

¹⁰ § 1251.

¹¹ § 1311(a); § 1342(a)(1).

¹² § 1342(a).

¹³ § 1342(b).

¹⁴ § 1362(12)(A).

¹⁵ EPA issues NPDES permits in Massachusetts, New Hampshire, New Mexico, Washington D.C., U.S. territories, and on federal and tribal lands. See *NPDES Permits Around the Nation*, ENV'T'L PROT. AGENCY, <https://www.epa.gov/npdes-permits> [https://perma.cc/5JTU-HLE4].

¹⁶ § 1362(14).

¹⁷ *Id.*

¹⁸ § 1362(7).

¹⁹ *About Waters of the United States*, ENV'T'L PROT. AGENCY, <https://www.epa.gov/wotus/about-waters-united-states> [https://perma.cc/8MMX-8SEB]; see also *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1468 (2020).

\$55,800 per day.²⁰

Historically, the CWA has excluded discharges of pollutants into groundwater from its NPDES program.²¹ This is because the perceived Congressional intent was for provisions of the CWA to apply to groundwater only when the statute stated so explicitly.²² For example, in CWA § 102(a), the Administrator shall “. . . prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters and *groundwaters* and improving the sanitary condition of surface and *underground waters*.”²³ Therefore, because the definition of “discharge of pollutants” under § 502(12) states “any addition to any pollutant to navigable waters,” and not “to navigable waters *and groundwaters*,” it is presumed that Congress did not intend for the NPDES permitting program to apply to groundwater.²⁴ However, some courts have reasoned that even if Congress did not intend to comprehensively regulate groundwater under the CWA, Congress did not intend to exempt groundwater from all regulation.²⁵

Because states can petition for permitting power, the CWA serves as an example of cooperative federalism, in which there is some overlap between state and federal authority.²⁶ In the context of the CWA, the Supreme Court has described cooperative federalism as “a partnership between the States and the Federal Government, animated by a shared objective: ‘to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.’”²⁷ Congress gives states two choices: they may regulate activity according to federal standards, or they may regulate by state standards, which are subject to federal preemption.²⁸ This regulation model has been successful for implementation of the CWA and other environmental statutes, but it has been used to argue against attempts to expand CWA jurisdiction in effort to preserve state authority.²⁹

²⁰ See 40 C.F.R. § 19.4, Table 1 (2020).

²¹ *Idaho Rural Council v. Bosma*, 143 F. Supp. 2d 1169, 1179 (D. Idaho 2001).

²² *CRAIG*, *supra* note 7, at 914.

²³ *Id.* (emphasis added) (citing § 1252(a)).

²⁴ *Id.*; see §§ 1342, 1362(12).

²⁵ See, e.g., *Idaho Rural Council*, 143 F. Supp. at 1180 (stating “whether pollution is introduced by a visible, above-ground conduit or enters the surface water through the aquifer matters little to the fish, waterfowl, and recreational users which are affected by the degradation of our nation’s rivers and streams.”); see also *Washington Wilderness Coalition v. Hecla Mining Co.*, 870 F. Supp. 983, 989–90 (E.D. Wash. 1994) (holding that Congress intended to regulate discharges that result in pollutants entering surface waters, even through groundwater).

²⁶ Dave Owen, *Cooperative Subfederalism*, 9 U.C. IRVINE L. REV. 177, 178–79 (2018).

²⁷ *Arkansas v. Oklahoma*, 503 U.S. 91, 101 (1992) (describing the difference between state and federally issued permits and its significance) (quoting § 1251(a)).

²⁸ *New York v. United States*, 505 U.S. 144, 167 (1992).

²⁹ Damien Schiff, *Keeping the Clean Water Act Cooperatively Federal—Or, Why the Clean Water Act Does Not Directly Regulate Groundwater Pollution*, 42 WM. & MARY ENV’T. L. & POL’Y REV. 47, 452 (2018).

B. Circuit Split on Indirect Discharges through Groundwater

In 2018, when *County of Maui* was making its way through the appellate process, other circuit courts were addressing the same issue but not all reached the same conclusion on when the CWA required a point source permit. Most circuits to rule on this issue hold that the CWA requires permitting for indirect discharges through groundwater on some level, though they rely on different reasonings and tests to reach that conclusion.³⁰ The Sixth Circuit was the only circuit to hold that the CWA excludes pollutants that travel through any nonpoint intermediary en route to navigable waters are excluded by the CWA, regardless of whether the pollutants originated from a point source.³¹

When reviewing the district court decision in the *County of Maui* case, the Ninth Circuit adopted a “fairly traceable” standard to overturn the district court decision and hold that the CWA required the County wastewater treatment plant to have a permit to discharge in its underground wells.³² The Ninth Circuit’s decision relied on conclusions from a scientific tracer dye study that found a hydrologic connection between the wells and the Pacific Ocean.³³ The Ninth Circuit found the County liable because (1) the County discharged pollutants from a point source, (2) the pollutants are fairly traceable from the point source to navigable waters such that the discharge is the functional equivalent of a discharge into the navigable water, and (3) the pollutant levels reaching navigable water are more than *de minimus*.³⁴

The Court “[left] for another day the task of determining when, if ever, the connection between a point source and a navigable water is too tenuous to support liability,”³⁵ indicating the Ninth Circuit did not intend for the fairly traceable standard to include all indirect discharges through groundwater.

Similarly, in *Upstate Forever v. Kinder Morgan Energy Partners*, the Fourth Circuit held that seepage from a gasoline pipeline spill that moved through groundwater before release into a river qualified as a “discharge of a pollutant” and thus required a permit.³⁶ The Fourth Circuit held that if there is a “direct hydrological connection” between groundwater and navigable waters, it

³⁰ See e.g., *Haw. Wildlife Fund v. County of Maui*, 886 F.3d 737, 749 (9th Cir. 2018) (holding that discharges into groundwater require a permit when pollutants are “fairly traceable” from the point source to navigable waters); *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 651 (4th Cir. 2018) (holding CWA applies when there is a “direct hydrologic connection” between groundwater and navigable waters); *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486, 510–11 (2d Cir. 2005) (holding that it was improper to require both the cause of pollution and any intervening land to qualify as point sources to trigger CWA liability).

³¹ See *Tenn. Clean Water Network v. Tenn. Valley Auth.*, 905 F.3d 436 (6th Cir. 2018); see also *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925, 931, 938 (6th Cir. 2018) (both cases holding that surface water pollution via leakage from coal ash ponds into underground aquifers did not trigger CWA liability).

³² See *Haw. Wildlife Fund*, 886 F.3d at 749.

³³ *Id.* at 742–43.

³⁴ *Id.* at 749.

³⁵ *Id.*

³⁶ *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 641 (4th Cir. 2018).

is covered under CWA.³⁷ The Fourth Circuit noted that there was “no functional difference” between its direct hydrological connection standard and the Ninth Circuit’s fairly traceable standard, but the direct hydrological connection concept may be narrower.³⁸

In reaching these conclusions, both the Ninth and Fourth Circuits relied on language from Justice Scalia, who wrote for a plurality of four Justices in *Rapanos v. United States*.³⁹ *Rapanos* considered the kinds of connected waters that fall under CWA jurisdiction. In that opinion, Justice Scalia stated, “the Act does not forbid the ‘addition of any pollutant *directly* to navigable waters from any point source,’ but rather the ‘addition of any pollutant *to* navigable waters.”⁴⁰ The Fourth and Ninth Circuits reasoned, similarly, that because the CWA did not require a discharge directly to navigable waters, it also did not require a discharge directly from a point source.⁴¹ Under this reasoning, “from” merely indicates a starting point and implies no directness requirement, so it matters not that the pollution traveled through groundwater—so long as the pipeline was the origin and navigable waters were the destination.⁴² The legislature’s choice to write the CWA to say “discharge” and not “direct discharge” may be evidence of congressional intent that the CWA cover both direct and indirect discharges to navigable waters.⁴³

The Second Circuit also held that pollutants need not be released directly from a point source into navigable waters to trigger CWA jurisdiction.⁴⁴ In *Waterkeeper Alliance, Inc. v. EPA*, the Second Circuit reasoned that if it were required for both the cause of pollution and any intermediate, intervening land to qualify as point sources for the discharge to fall under NPDES jurisdiction, courts would be “impos[ing] a requirement not contemplated by the Act: that pollutants be channelized not once but twice before the EPA can regulate them.”⁴⁵

The Sixth Circuit, however, explicitly disagreed with both the Fourth and Ninth Circuits in two simultaneously released decisions, *Kentucky Waterways All. v. Kentucky Utilities Company*⁴⁶ and *Tennessee Clean Water Network v. Tennessee Valley Authority*.⁴⁷ Both cases involved seepage from coal ash ponds that traveled through groundwater before ending up in surface waters.⁴⁸ It was

³⁷ *Id.* at 651.

³⁸ *Id.* at 651 n.12.

³⁹ *Rapanos v. United States*, 547 U.S. 715, 719 (2006).

⁴⁰ *Id.* at 743 (emphasis in original) (citing 33 U.S.C.S. § 1362(12)(A) (LexisNexis 2021)).

⁴¹ See *Upstate Forever*, 887 F.3d at 650; *Haw. Wildlife Fund v. County of Maui*, 886 F.3d 737, 749 (9th Cir. 2018).

⁴² See *Upstate Forever*, 887 F.3d at 650–51.

⁴³ Allison R. White, *Bridge Over Troubled Waters? Ninth Circuit Makes Waves Refusing to Narrow Clean Water Act in Hawaii* *Wildlife Fund v. County of Maui*, 30 VILL. ENVTL. L.J. 351, 371 (2019).

⁴⁴ *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486, 510–11 (2d Cir. 2005).

⁴⁵ *Id.*

⁴⁶ *Ky. Waterways All. v. Ky. Utils. Co.*, 905 F.3d 925 (6th Cir. 2018).

⁴⁷ *Tenn. Clean Water Network v. Tenn. Valley Auth.*, 905 F.3d 436, 438 (6th Cir. 2018).

⁴⁸ *Id.* at 446; *Ky. Waterways All.*, 905 F.3d at 938.

undisputed that the coal ash ponds in each case were point sources and that navigable waters were the destination; still, the Sixth Circuit held neither case was a violation of the CWA.⁴⁹ The Sixth Circuit rejected the CWA's application to cases of hydrologically connected groundwater, stating that coal operations such as these fall under the jurisdiction of the Resource Conservation and Recovery Act.⁵⁰ The Circuit reasoned that arguments relying on the *Rapanos* plurality err because, in their view, Justice Scalia "sought to make clear that intermediary point sources do not break the chain of CWA liability; the opinion says nothing of point-source-to-nonpoint-source dumping. . . ."⁵¹ According to the Sixth Circuit, if pollutants go through an intermediary, such as groundwater, they are no longer coming "from" a point source, and the CWA does not apply.⁵²

Some scholars agreed with most circuits that the regulation of some groundwater discharges is supported by the scope of the language used in the CWA and is consistent with the purpose of the CWA.⁵³ Others were more in line with the Sixth Circuit, advocating against any kind of decision that could broaden the scope of the CWA's jurisdiction too much and create other problems.⁵⁴ However, with no clear test for determining if, or when, an indirect discharge through groundwater required permitting, all were hoping for either EPA or the Supreme Court to offer a more concrete rule.

C. EPA Rules Before County of Maui

EPA has published multiple interpretations to address the dispute between circuits. In April 2019, the agency released an interpretive statement concluding that the CWA excludes "all releases of pollutants from a point source to groundwater from NPDES program coverage, regardless of a hydrologic connection between the groundwater and jurisdictional surface water."⁵⁵ EPA also emphasized that the language of the statute indicates that state authorities should be responsible for regulating groundwater discharges and not federal regulations.⁵⁶ In reliance on the statute's text, structure, and legislative history,

⁴⁹ *Tenn. Clean Water Network*, 905 F.3d at 446; *Ky. Waterways All.*, 905 F.3d at 938.

⁵⁰ *Ky. Waterways All.*, 905 F.3d at 927–28.

⁵¹ *Id.* at 936.

⁵² *Id.* at 934.

⁵³ See, e.g., Kaela Shiigi, Note, *Underground Pathways to Pollution: The Need for Better Guidance on Groundwater Hydrologically Connected to Surface Water*, 46 *ECOLOGY L.Q.* 519, 546–47 (2019); see also Heather Foxx, *The Jurisdiction of the Clean Water Act Includes Some Discharges into Groundwater*, AM. BAR ASS'N (Aug. 27, 2019), https://www.americanbar.org/groups/environment_energy_resources/publications/wr/20180826-the-jurisdiction-of-the-clean-water-act/ (last visited Oct. 10, 2021).

⁵⁴ See Scott Yager & Mary-Thomas Hart, *The Tipping Point Source: Clean Water Act Regulation of Discharges to Surface Water Via Groundwater, and Specific Implications for Nonpoint Source Agriculture*, 23 *DRAKE J. AGRIC. L.* 439 (2018).

⁵⁵ Interpretive Statement on Application of the Clean Water Act National Pollutant Discharge Elimination System Program to Releases of Pollutants from a Point Source to Groundwater, 84 Fed. Reg. 16811 (proposed Apr. 23, 2019).

⁵⁶ *Id.*

EPA reasoned that “Congress purposely structured the CWA to give *states* the responsibility to regulate such releases under state authorities.”⁵⁷ EPA was adamant that Congress intended to grant the states, not the federal CWA, the power to regulate groundwater.⁵⁸ The agency opened comment for this proposed rule in February 2018—less than one month after the Ninth Circuit’s decision in *Hawai’i Wildlife*—seemingly to clarify the disagreement among the courts. In its explanation for the rule, EPA rejected the Fourth Circuit’s direct hydrological connection standard, the Ninth Circuit’s fairly traceable standard, and the standard set by the Sixth Circuit, which required pollution to be added directly to navigable waters.⁵⁹ Also worth noting is that EPA only cited one EPA publication from 1990 and did not give any scientific analysis to support its position.⁶⁰ This interpretation by EPA is not consistent with the Supreme Court’s decision in *County of Maui*, and EPA will be forced to either rescind or revise this rule to acknowledge that there are times when discharges through groundwater do require NPDES permits.

Before the 2019 statement, EPA applied the CWA to hydrologically connected groundwater. In a 2001 proposed rule concerning *NPDES Permit Regulation and Effluent Limitations Guidelines and Standards for CAFOs* (“CAFO rule”), EPA suggested polluters undergo a factual inquiry to determine whether there is a “direct hydrologic connection” between pollutants discharged to surface waters via groundwater.⁶¹ The direct hydrological connection language did not end up in the final rule,⁶² and EPA never established specific criteria for assessing the directness of a hydrologic connection,⁶³ but this was not the first, nor the last, time EPA used that language.⁶⁴ In fact, EPA sided with

⁵⁷ *Id.* (emphasis added).

⁵⁸ *Id.* at 16814.

⁵⁹ *Id.* at 16813.

⁶⁰ *Id.* at 16812; see also Brief for Aquatic Scientists and Scientific Societies as Amici Curiae Supporting Respondents at 31, *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462 (2020) (No. 18-260) [hereinafter Brief for Aquatic Scientists].

⁶¹ National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, 66 Fed. Reg. 2960 (proposed Jan. 12, 2001) (codified at 40 C.F.R. pts. 122, 412).

⁶² National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7175, 7216 (proposed Feb. 12, 2003) (codified at 40 C.F.R. pts. 122–23, 412).

⁶³ James W. Hayman, *Regulating Point-Source Discharges to Groundwater Hydrologically Connected to Navigable Waters: An Unresolved Question of Environmental Protection Agency Authority Under the Clean Water Act*, 5 BARRY L. REV. 95, 99 (2005) (citing 66 Fed. Reg. 2960, 3016 (Jan. 12, 2001)).

⁶⁴ See National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47990, 47997 (proposed Nov. 16, 1990) (codified at 40 C.F.R. pts. 122–24) (first regulation to state that groundwater with a “hydrological connection” to surface water is not exempt from the NPDES program); also see Amendments to the Water Quality Standards Regulation That Pertain to Standards on Indian Reservations, 56 Fed. Reg. 64876, 64892 (proposed Dec. 12, 1991) (codified at 40 C.F.R. pt. 131) (stating that CWA “requires NPDES permits for discharges to groundwater where there is a direct hydrological connection between groundwaters and surface waters”).

the environmental groups in *Hawai'i Wildlife*, arguing there was a direct hydrological connection between the injection wells and the Pacific Ocean.⁶⁵ Though the Ninth Circuit rejected the direct hydrological connection standard and opted for the more broad fairly traceable test,⁶⁶ the Fourth Circuit used this standard.⁶⁷

Some groups were concerned that the *County of Maui* decision would expand the definition of navigable waters, thus altering previous definition statements issued by EPA over what is included in the term “navigable waters.” Much litigation and debate has surrounded the intended scope of the CWA’s “navigable waters,” which is only ambiguously defined by the statute as “waters of the United States.”⁶⁸ Two days before the Court handed down *County of Maui*, EPA published a final rule in the federal register that revised the definition of “waters of the United States.”⁶⁹ The rule defined four categories of waters included within the revised definition: (1) territorial seas and traditional navigable waters; (2) perennial and intermittent tributaries that contribute surface water to those waters; (3) lakes, ponds, impoundments; and (4) wetlands adjacent to jurisdictional waters.⁷⁰ The rule also listed some specific waters excluded from this definition, including groundwater.⁷¹ However, this rule was vacated in August 2021 by the District Court of Arizona.⁷² EPA announced its plan to revise this rule on June 9, 2021, though the rulemaking process is still in its early stages.⁷³ Until EPA releases a new rule, the pre-2015 regulatory regime controls.⁷⁴

However, the Court’s *County of Maui* decision did nothing to help define the scope of the navigable waters definition; it only addressed the question of which groundwater discharges that travel through groundwater to navigable waters require NPDES permits.⁷⁵ Even the Ninth Circuit, whose fairly traceable

⁶⁵ See Brief for the United States as Amicus Curiae in Support of Plaintiffs-Appellees at 13–20, *Haw. Wildlife Fund v. County of Maui*, 886 F.3d 737 (9th Cir. 2018) (No. 15-17447).

⁶⁶ *Haw. Wildlife Fund v. County of Maui*, 886 F.3d 737, 749 (9th Cir. 2018), *vacated*, 140 S. Ct. 1462 (2020).

⁶⁷ *Upstate Forever v. Kinder Morgan Energy Partners, L.P.*, 887 F.3d 637, 651 (4th Cir. 2018), *vacated*, 140 S. Ct. 2736 (2020).

⁶⁸ 33 U.S.C.S. § 1362(7) (LexisNexis 2021).

⁶⁹ The Navigable Waters Protection Rule: Definition of “Waters of the United States”, 85 Fed. Reg. 22250 (proposed Apr. 21, 2020) (codified at 33 C.F.R. pt. 328).

⁷⁰ *Id.* at 22251.

⁷¹ *Id.* at 22251–52.

⁷² *Pascua Yaqui Tribe v. United States EPA*, No. CV-20-00266-TUC-RM, 2021 U.S. Dist. LEXIS 163291, at *18 (D. Ariz. Aug. 30, 2021).

⁷³ Notice of Public Meetings Regarding “Waters of the United States”; Establishment of a Public Docket; Request for Recommendations, 86 Fed. Reg. 41911 (Aug. 4, 2021).

⁷⁴ Current Implementation of Waters of the United States, ENVTL PROT. AGENCY, <https://www.epa.gov/wotus/current-implementation-waters-united-states> [<https://perma.cc/6RHW-V9S8>].

⁷⁵ Christina Sartorio Ku & Agnes Antonian, *Navigating the Scope of ‘Navigable Waters’ after ‘Maui’*, N.J. L. J. (Oct. 15, 2020, 12:00 PM), <https://www.law.com/njlawjournal/2020/10/15/navigating-the-scope-of-navigable-waters-after-maui/?slreturn=20210903192430>

standard was the broadest of all interpretations, was explicit in refusing to expand the definition of “waters of the United States” to include groundwater.⁷⁶

III. THE COUNTY OF MAUI v. HAWAII WILDLIFE FUND DECISION

The conflict in *County of Maui* arose from a wastewater treatment plant operated by the County of Maui on Maui Island, Hawaii.⁷⁷ Each day, the facility partially treated four million gallons of water and then pumped it into underground wells.⁷⁸ The water then traveled about a half-mile underground before it is dumped into the Pacific Ocean.⁷⁹ The polluted water contributed to the destruction of a nearby coral reef.⁸⁰ In 2012, several environmental groups brought suit against the county, claiming the county was unlawfully discharging pollutants into navigable waters without a permit.⁸¹ The District Court held in favor of the environmental groups, stating that the “path to the ocean is clearly ascertainable” and therefore the discharge was “functionally one into navigable water.”⁸² The Ninth Circuit affirmed, stating that a permit is required when “the pollutants are fairly traceable from the point source to a navigable water such that the discharge is the functional equivalent of a discharge into the navigable water.”⁸³ The county filed a writ of certiorari in 2018 and the United States Supreme Court granted certiorari in 2019.⁸⁴

A. The Supreme Court Decision: Establishing the Functional Equivalent Standard

In a six-to-three decision, the Court held that the CWA requires a permit if “the addition of the pollutants through groundwater is the functional equivalent of a direct discharge from the point source into navigable waters.”⁸⁵ Justice Breyer delivered the majority’s opinion, which was joined by Chief Justice Roberts and Justices Ginsburg, Sotomayor, Kagan, and Kavanaugh.⁸⁶

This holding falls right in the middle of the circuit court split. The Court

[<https://perma.cc/228P-5JMV>].

⁷⁶ Haw. Wildlife Fund v. County of Maui, 886 F.3d 737, 746 n.2 (9th Cir. 2018) (stating the court’s decision does not suggest the CWA regulates all groundwater), *vacated*, 140 S. Ct. 1462 (2020).

⁷⁷ County of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462, 1469 (2020).

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *The Clean Water Case of the Century*, EARTHJUSTICE (Apr. 23, 2020), <https://earthjustice.org/features/supreme-court-maui-clean-water-case> [<https://perma.cc/Y3NX-U4UF>].

⁸¹ *Id.*

⁸² Haw. Wildlife Fund v. County of Maui, 24 F. Supp. 3d 980, 998 (D. Haw. 2014), *aff’d*, 886 F.3d 737 (9th Cir. 2018), *vacated*, 140 S. Ct. 1462 (2020).

⁸³ Haw. Wildlife Fund v. County of Maui, 886 F.3d 737, 749 (9th Cir. 2018), *vacated*, 140 S. Ct. 1462 (2020).

⁸⁴ County of Maui, Hawaii v. Hawaii Wildlife Fund, SCOTUSBlog (Aug. 26, 2020), <https://www.scotusblog.com/case-files/cases/county-of-maui-hawaii-v-hawaii-wildlife-fund/> [<https://perma.cc/MPF5-H4EV>].

⁸⁵ County of Maui v. Haw. Wildlife Fund, 140 S. Ct. 1462, 1468 (2020).

⁸⁶ *Id.*

acknowledged the need to find the right balance between over-regulation and under-regulation.⁸⁷ Specifically, the Court attempted to find the balance between the too-broad interpretation by the Ninth Circuit and avoiding a narrow interpretation where virtually all groundwater discharges are excluded from CWA regulation.⁸⁸ The Court held that the Ninth Circuit’s “fairly traceable” standard was too broad because it would require a permit for the dumping of pollutants that might take 100 years to reach navigable waters.⁸⁹ On the other hand, the Court rejected the rule from the 2019 EPA interpretation—and, in effect, the conclusions drawn by the Sixth Circuit—that all groundwater dumping is excluded, stating that such a rule created an unintended loophole to CWA requirements.⁹⁰ Under this reasoning, polluting sources could avoid obtaining permits by simply moving their pipes a few yards to ensure pollutants must travel through groundwater before reaching surface waters.⁹¹ Ultimately, the Court held that “the statute requires a permit when there is a direct discharge from a point source into navigable waters or when there is the *functional equivalent of a direct discharge*.”⁹² Justice Kavanaugh joined the majority but wrote a separate concurrence to emphasize the importance of Justice Scalia’s textualist reasoning in the *Rapanos* plurality.⁹³

The Court stated that certain factors will determine if a discharge is functionally equivalent to a direct discharge, including, but not limited to:

1. The time it takes the pollutant to reach navigable waters;
2. The distance the pollutant must travel through groundwater;
3. The nature of the material through which the pollutant travels;
4. The extent the pollutant is changed chemically or diluted in transit;
5. The amount of pollutant that enters the navigable waters;
6. The manner the pollutant enters the navigable waters; and
7. The degree to which the pollutant “has maintained its specific identity.”⁹⁴

The Court went on to suggest that factors such as time and distance likely are the most important factors to determine when a discharge through groundwater is functionally equivalent to a direct discharge.⁹⁵

⁸⁷ *Id.* at 1471–73.

⁸⁸ *Id.* at 1470–71.

⁸⁹ *Id.* at 1470.

⁹⁰ *Id.* at 1473.

⁹¹ *Id.*

⁹² *Id.* at 1476 (emphasis added).

⁹³ *Id.* at 1478 (Kavanaugh, J., concurring).

⁹⁴ *Id.* at 1476–77.

⁹⁵ *Id.*

B. A Win for Environmentalists?

The team fighting Maui County felt the decision was a big win because it could lead to solutions to the problem of degrading coral reefs around the islands.⁹⁶ Hannah Bernard of the Hawaii Wildlife Fund stated that the decision “provides us a pathway forward to stop this practice of illegally injecting wastewater into the ground.”⁹⁷ The area was once home to pineapple and sugar cane fields, and the wastewater was used to irrigate the crops.⁹⁸ When those fields went fallow, the county sought other means of disposing of the water.⁹⁹ A suggested solution is to use the wastewater to water golf courses, resorts, and agricultural fields.¹⁰⁰ In filing suit against Maui County, the goal was never to make the county pay—rather, to find a solution that avoided dumping wastewater that is harmful to coral reefs into the ocean.¹⁰¹

However, the holding might not provide the sweeping protections outside of Maui that environmental groups were hoping for. Initial reactions were split on how much impact this case will have on pollution discharges through groundwater. Earthjustice, a nonprofit environmental law organization that aided the Hawaii Wildlife Fund in litigating the case before the Supreme Court, called it the “Clean Water Case of the Century.”¹⁰² David Henkin, the Earthjustice attorney who argued the case before the Court, called the decision a “huge victory for clean water.”¹⁰³ Others see the decision as having little influence, calling it “The Blockbuster Clean Water Case That Wasn’t.”¹⁰⁴ Abigail Jones, vice president of Legal and Policy at PennFuture, a Pennsylvania-based environmental nonprofit organization, was among those less confident about the magnitude of the case’s impact.¹⁰⁵ Jones stated that though the *County of Maui* decision appears to be positive for the environmental community, it does “little overall to change how courts—and EPA historically—view the CWA’s permitting authority over indirect discharges generally and for indirect

⁹⁶ Lila Fujimoto, *Supreme Court Decides Against County*, MAUI NEWS (Apr. 24, 2020), <https://www.mauinews.com/news/local-news/2020/04/supreme-court-decides-against-county/> [https://perma.cc/T6VW-JJJR].

⁹⁷ *Id.*

⁹⁸ Lee Imada, *Injection Wells Ruling Opens County Up to Civil Penalties*, MAUI NEWS (Jan. 27, 2015), https://savewestmaui.com/news_mauinews_150127.htm [https://perma.cc/QW5F-GHQN].

⁹⁹ *Id.*

¹⁰⁰ Fujimoto, *supra* note 96.

¹⁰¹ Imada, *supra* note 98 (David Henkin is quoted saying the environmental groups were willing to settle in order to find an alternate to the injection wells).

¹⁰² *The Clean Water Case of the Century*, EARTHJUSTICE (Apr. 23, 2020), <https://earthjustice.org/features/supreme-court-maui-clean-water-case> [https://perma.cc/Y3NX-U4UF].

¹⁰³ *Id.*

¹⁰⁴ Abigail Jones, *The Blockbuster Clean Water Act Case That Wasn’t*, AM. BAR ASS’N (Oct. 5, 2020), https://www.americanbar.org/groups/environment_energy_resources/publications/natural_resources_environment/2020-21/fall/the-blockbuster-clean-water-act-case-wasnt/ (last visited Oct. 10, 2021).

¹⁰⁵ *Id.*

discharges to groundwater specifically.”¹⁰⁶ The environmental community can celebrate that the CWA survived another attempt to drastically narrow its protections.¹⁰⁷

At the same time, the regulated community can celebrate that the scope of the CWA was not expanded such that nearly every discharge would require an NPDES permit. Both sides can claim a bit of victory, but neither side got entirely what it wanted. The Supreme Court did not widen the CWA to include regulation of all indirect discharges through groundwater, like the environmental advocacy community may have wished, but the regulated community may still have concern that even this much smaller step toward full groundwater regulation is too much.

Before the *County of Maui* decision, many stakeholders advocated against policy that would widen the scope of the CWA to regulate groundwater pollution. Individual liberty advocates generally opposed to regulation were worried that an expansion would undermine the rights of property owners if their land-use choices affected groundwater.¹⁰⁸ A main point of contention brought up in oral argument¹⁰⁹ and by observers in their initial responses was that residential septic tank systems would now be subject to the permitting program.¹¹⁰ This point was also raised in amicus briefs, arguing that this would expand the NPDES program’s reach to unmanageable proportions.¹¹¹ However, the Court addressed this argument by stating EPA has already been regulating some discharges through groundwater for over thirty years and has yet to see such an expansion, and even if it did happen, permitting authorities have tools such as general permits to handle recurring situations.¹¹²

Additionally, advocates against expanding the CWA to include groundwater regulation were worried that it would undermine the states’ authority to regulate nonpoint sources, thus “unavoidably upset[ing] the statute’s cooperative framework.”¹¹³ While the Supreme Court did not expand the CWA to include regulation of all groundwater pollution—only groundwater pollution that is functionally the same as polluting surface water—there is still concern that even this much smaller step toward groundwater regulation is too much.¹¹⁴

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ Schiff, *supra* note 29, at 452.

¹⁰⁹ Transcript of Oral Argument at 40, *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462 (2020) (No. 18-260).

¹¹⁰ Erik C. Baptist, *The Potentially Enormous Impacts of the Supreme Court’s County of Maui v. Hawaii Wildlife Fund Decision*, WILEY (May 7, 2020), <https://www.wiley.law/alert-The-Potentially-Enormous-Impacts-of-the-Supreme-Courts-County-of-Maui-v-Hawaii-Wildlife-Fund-Decision> [<https://perma.cc/5LNT-NNCQ>].

¹¹¹ Brief for State of West Virginia et al. as Amici Curiae Supporting Petitioner, *County of Maui v. Haw. Wildlife Fund*, 139 S. Ct. 1164 (2020) (No. 18-260) [hereinafter West Virginia et al.].

¹¹² *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1477 (2020), *citing* 40 C.F.R. § 122.44(k).

¹¹³ Schiff, *supra* note 29, at 452.

¹¹⁴ Ellen M. Gilmer & Amana H. Saiyid, *SCOTUS Clean Water Act Test ‘Devastating’ for Industry*

Another concern raised since the decision came down is a fear the factor test will lead to longer and more costly litigation over questions of whether a discharge is covered by the NPDES program.¹¹⁵ Instead, advocates against expanding the CWA would have preferred a bright-line rule.¹¹⁶

Regardless of initial reactions, courts have begun to apply the functional equivalent standard. Following the Supreme Court Decision, the U.S. District Court for the District of Hawaii applied the functional equivalent standard in an order on July 26, 2021.¹¹⁷ The Court granted a summary judgment motion filed by the Plaintiffs—Hawaii Wildlife Fund, Sierra Club, Surfrider Foundation, and West Maui Preservation Association—stating that the county is required to obtain a permit under the Clean Water Act.¹¹⁸ Following this result, the county will have an option to appeal the District Court decision, but if it does not appeal, a settlement agreement from 2015 will take effect.¹¹⁹ This agreement will require the county to spend \$2.5 million on infrastructure so the wastewater can be used for irrigation purposes in Maui.¹²⁰

The Supreme Court's decision also vacated the judgment in *Kinder Morgan* and remanded it to the Fourth Circuit for consideration in light of *County of Maui*.¹²¹ However, the case settled in October 2020, with Kinder Morgan choosing not to further appeal the case and agreeing to pay \$1.5 million to the county where the gas pipeline spill occurred.¹²²

IV. THE AMBIGUITY LEFT BEHIND: WHY EPA NEEDS A MORE SPECIFIC RULE

Though former EPA Administrator Andrew Wheeler was initially uncertain about whether issuing a new guidance or interpretive rule was necessary,¹²³ EPA did release a new guidance just before the Trump Administration left office.¹²⁴

(3), BLOOMBERG LAW (Apr. 23, 2020), <https://news.bloomberglaw.com/environment-and-energy/supreme-courts-clean-water-act-test-devastating-for-industry> [<https://perma.cc/6LT7-CB4K>].

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Haw. Wildlife Fund v. County of Maui, No. CV 12-00198 SOM/KJM, 2021 WL 3160428, at *12 (D. Haw. July 26, 2021).

¹¹⁸ *Id.* at *1.

¹¹⁹ Nick Grube, *Maui County Loses Again in Federal Court Over Pollution Discharges*, HONOLULU CIV. BEAT (July 16, 2021), <https://www.civilbeat.org/2021/07/maui-county-loses-again-in-federal-court-over-pollution-discharges> [<https://perma.cc/D44F-22GB>].

¹²⁰ *Id.*

¹²¹ *Kinder Morgan Energy Partners, L.P. v. Upstate Forever*, 140 S. Ct. 2736 (2020).

¹²² *Clean Water Fun Set Up After South Carolina Gas Spill Suit*, AP NEWS (Oct. 24, 2020), <https://apnews.com/article/water-quality-lawsuits-greenville-us-supreme-court-south-carolina-ad09f087608c63002ae93733ad3f51d0> [<https://perma.cc/R8VY-LLFY>].

¹²³ Ellen M. Gilmer, *EPA Hopes to Respond Soon to SCOTUS Maui Decision, Wheeler Says*, BLOOMBERG LAW (July 29, 2020), <https://news.bloomberglaw.com/environment-and-energy/epa-hopes-to-respond-soon-to-scotus-maui-decision-wheeler-says> [<https://perma.cc/HKE3-RBVR>].

¹²⁴ 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, 86 Fed.

In January 2021, EPA issued guidance on how to apply the *County of Maui* decision.¹²⁵ However, this guidance included an eighth factor to be considered in the functional equivalent analysis that was not included by the Supreme Court in its decision: “the design and performance of the system or facility from which the pollutant is released.”¹²⁶ Though the Court was explicit that the seven factors listed in its decision are not all-inclusive,¹²⁷ there was immediate concern that this eighth factor was not consistent with the Court’s intent.¹²⁸ Pursuant to a President Biden Executive Order requiring EPA to review, and if necessary revise, all regulations and policies undertaken by the previous administration that do not protect public health and the environment¹²⁹ EPA rescinded the January 2021 guidance in September 2021.¹³⁰ First, EPA reasoned that the guidance was inconsistent with the *County of Maui* decision because it added the eighth factor addressing the system’s design and performance.¹³¹ The agency stated this factor was different than those identified by the Supreme Court because it introduced an element of intent on the part of the regulated parties.¹³² Second, EPA stated the guidance was issued without proper deliberation within EPA and with its federal partners.¹³³

It is not clear whether EPA intends to release another guidance that is more consistent with the Court’s test, and the exact implications of this decision are still unfolding. However, it is apparent that the “functional equivalent” standard is still ambiguous. The *County of Maui* majority even acknowledged this weakness in its decision.¹³⁴ One of the biggest concerns of the dissenting justices was that the majority’s new standard would be difficult to apply consistently.¹³⁵ As stated by Justice Alito, “If the Court is going to devise its own legal rules, instead of interpreting those enacted by Congress, it might at least adopt rules

Reg. 6321 (Jan. 21, 2021).

¹²⁵ *Id.*

¹²⁶ RADHIKA FOX, RESCISSION OF THE JANUARY 2021 GUIDANCE DOCUMENT, 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 1 (2021).

¹²⁷ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1476–77 (2020).

¹²⁸ Several states and environmental groups criticized the guidance when it was still a draft. See *Twelve AGs Filed Comments Criticizing EPA Guidance on Implementation of Supreme Court’s Maui Clean Water Act Decision*, STATE ENERGY & ENV’T IMPACT CTR., N.Y.U. SCH. OF LAW (Jan. 11, 2021), <https://stateimpactcenter.org/ag-actions/twelve-ags-filed-comments-criticizing-epa-guidance-implementation> [<https://perma.cc/K2UX9N4K>].

¹²⁹ Exec. Order No. 13990, 86 Fed. Reg. 7037 (Jan. 20, 2021).

¹³⁰ *EPA Rescinds Previous Administration’s Guidance on Clean Water Act Permit Requirements*, ENV’T’L PROT. AGENCY (Sept. 16, 2021), <https://www.epa.gov/newsreleases/epa-rescinds-previous-administrations-guidance-clean-water-act-permit-requirements> [<https://perma.cc/7RTE-87CS>].

¹³¹ FOX, *supra* note 126, at 1.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1476 (2020).

¹³⁵ *Id.* at 1482 (Thomas, J., dissenting).

that can be applied with a modicum of consistency.”¹³⁶ The Court gave some general guidance for how to interpret it, but it really only gave two ends of the spectrum and left instances that fall in the middle for the lower courts, state agencies, and EPA to clarify.¹³⁷

A. Other Statutes Leave Gaps in Groundwater Regulation

Other federal statutes provide some protections against groundwater pollution, but as was the case in *County of Maui*, these statutes do not adequately prevent contamination of surface waters through groundwater. The Safe Drinking Water Act (“SDWA”) was enacted to “assure that the water supply systems serving the public meet minimum national standards to protect consumers from harmful contaminants.”¹³⁸ The SDWA protects groundwater by setting maximum contaminant levels for drinking water.¹³⁹ Groundwater pollution has significant implications for drinking water: an estimated 145 million Americans get their tap water from a groundwater source.¹⁴⁰ The SDWA provides the main authority to regulate pollutants in groundwater that may impact human health.¹⁴¹ However, the SDWA only protects groundwater that is supplying a public water system,¹⁴² but more than forty-three million people get their water from private groundwater wells.¹⁴³ SDWA compliance does not automatically mean CWA compliance either.¹⁴⁴ The CWA “intends to improve the biological integrity of aquatic environments,” while the SDWA “intends to improve human health and aesthetic quality of drinking water.”¹⁴⁵ These distinct goals address different environmental issues.¹⁴⁶

The Resource Conservation and Recovery Act (“RCRA”) also provides

¹³⁶ *Id.* (Alito, J., dissenting).

¹³⁷ Duncan M. Greene, Rachael L. Lipinski & Sophia E. Amberson, *U.S. Supreme Court Holds Clean Water Act Covers Groundwater in Limited Circumstances*, 10 NAT. L. REV. 115 (2020), <https://www.natlawreview.com/article/us-supreme-court-holds-clean-water-act-covers-groundwater-limited-circumstances> [<https://perma.cc/3FRU-9E4E>].

¹³⁸ H.R. REP. NO. 104-632, at 7 (1996).

¹³⁹ 7 U.S.C.S. § 300g-1(a) (LexisNexis 2021).

¹⁴⁰ *Groundwater Awareness Week*, CTRS. FOR DISEASE CONTROL & PREVENTION (2021), <https://www.cdc.gov/healthywater/drinking/groundwater-awareness-week.html> [<https://perma.cc/TV93-UJ4S>].

¹⁴¹ Jonathan R. Eaton, Note, *The Sieve of Groundwater Pollution Protection: A Public Health Law Analysis*, 6 J. HEALTH & BIOMED. L. 109, 128 (2010).

¹⁴² 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, 339 (2016).

¹⁴³ *Groundwater Awareness Week*, *supra* note 140.

¹⁴⁴ Michael J. Van Zandt & Sean G. Herman, *Practitioner Insights: Maui Groundwater Case Shows Government Retreat is Bad for Everyone*, BLOOMBERG LAW (May 16, 2018), https://www.bloomberglaw.com/document/XA8UFVQK000000?bna_news_filter=environment-and-energy&jcsearch=BNA%2520000001634c4edd89a3737edfa1b30000#jcite [<https://perma.cc/P3FB-PUXA>].

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

some protections for groundwater. This statute regulates the generation, transport and treatment, storage, and disposal of hazardous waste by requiring all generators and transporters of hazardous wastes to have a permit from EPA or an authorized state agency.¹⁴⁷ Permits help ensure facilities meet specific design standards, operating requirements, closure requirements, and groundwater monitoring requirements to reduce risk and contain hazardous materials.¹⁴⁸ However, because RCRA focuses only on protecting groundwater from hazardous waste, it does not prevent groundwater pollution from other sources.¹⁴⁹

B. State Regulation Is Not Enough on Its Own

The *County of Maui* Court highlighted that the structure of the CWA indicates, “Congress intended to leave substantial responsibility to the States,” regarding groundwater pollution and nonpoint pollution.¹⁵⁰ Advocates against all groundwater discharge regulations at the federal level point to the states to fill in the gaps left behind.¹⁵¹ This framework, while successful, rests on having a strong federal component. Additionally, leaving groundwater pollution regulation completely up to the states has not been entirely effective. Though the intent of Congress was for the states to have a critical role in implementing the CWA’s permitting programs,¹⁵² it is doubtful that the waters not protected by the federal CWA were intended to be left wholly unprotected.

A recent survey comparing state groundwater policies showed that only half of states have laws that recognize a connection between surface water and groundwater.¹⁵³ The survey also revealed that not all states have laws explicitly addressing groundwater quality.¹⁵⁴ The piecemeal regulation that results from different state strategies makes federal regulation extremely difficult. Differences in state regulation could result in polluting industries choosing to operate or litigate in states with less restrictive regulation,¹⁵⁵ which can lead to many problems. Groundwater is not confined by state boundaries, and neither is water pollution, so what happens in one state can affect another.¹⁵⁶ A lack of federal-level regulation of groundwater pollution thereby allows entities to pollute without experiencing the consequences.¹⁵⁷ This result goes against the

¹⁴⁷ 42 U.S.C.S. §§ 6922–25 (LexisNexis 2021).

¹⁴⁸ Blumm & Thiel, *supra* note 142 at 340, *citing generally* 40 C.F.R. § 264.

¹⁴⁹ *Id.*

¹⁵⁰ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1471 (2020).

¹⁵¹ Yager & Hart, *supra* note 54, at 466.

¹⁵² CRAIG, *supra* note 7 at 852–53.

¹⁵³ Sharon B. Megdal, Andrea K. Gerlak, Robert G. Varady & Ling-Yee Huang, *Groundwater Governance in the United States: Common Priorities and Challenges*, 53 GROUNDWATER 677, 681–82 (2014).

¹⁵⁴ *Id.*

¹⁵⁵ Anna Makowski, *Beneath the Surface of the Clean Water Act: Exploring the Depth of the Act’s Jurisdictional Scope of Groundwater Pollution*, 91 OR. L. REV. 495, 526 (2012).

¹⁵⁶ Blumm & Thiel, *supra* note 142 at 341–42.

¹⁵⁷ Foxx, *supra* note 53.

purpose of the CWA to preserve and protect the biological integrity of water bodies.¹⁵⁸

Proponents against federal-level regulation argue the CWA's purpose is to foster cooperative federalism by leaving room for the states to create regulations over pollution sources outside the scope of the CWA.¹⁵⁹ However, many states have taken steps to prevent the formation of regulations to protect waters left unprotected by the scope of the CWA.¹⁶⁰ A 2013 survey of state water regulations showed that many states have laws that restrict state agency ability to regulate pollution to waters not covered under federal laws.¹⁶¹ The study found that thirty-six states have laws restricting state agency authority to regulate and protect waters left unprotected by the CWA.¹⁶² Thirteen states have laws that prohibit the regulation of waters more strictly than federal requirements, and twenty-three more have laws that make it more difficult to set stricter regulations.¹⁶³ If the federal statute is meant to be the floor that states can build from, and many states are choosing to put a ceiling an inch above that floor, it does not appear that states are filling the gaps left open by the CWA.¹⁶⁴ States can still make changes to protect waters that are not protected by CWA, but these changes must be made at the legislative level first, and then at the agency level, making the process longer and more difficult.

Furthermore, states do not have the resources needed to pick up the slack. The aforementioned state groundwater survey revealed that only half of state agencies have sufficient capacity to carry out enforcement responsibilities.¹⁶⁵ For example, in the 2021 Kansas state budget, Governor Laura Kelly allotted \$74.8 million to the Kansas Department of Health and Environment's environmental division.¹⁶⁶ This number is down from 2008, when the budget for the environmental division was \$82.4 million¹⁶⁷ and because the Kansas Department of Health and the Environment is responsible for more than just water pollution prevention,¹⁶⁸ only a part of this budget will go toward clean

¹⁵⁸ *Id.*

¹⁵⁹ Schiff, *supra* note 29 at 452; *see also* Ky. Waterways All. v. Ky. Utils. Co., 905 F.3d 925, 937 (6th Cir. 2018) (arguing that efforts to meet CWA's purpose to protect and maintain biological integrity of nation's waters must also meet CWA's purpose of "fostering cooperative federalism.").

¹⁶⁰ ENV'T L. INST., STATE CONSTRAINTS: STATE-IMPOSED LIMITATIONS ON THE AUTHORITY OF AGENCIES TO REGULATE WATERS BEYOND THE SCOPE OF THE FEDERAL CLEAN WATER ACT 36 (2013).

¹⁶¹ *Id.* at 1.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 2.

¹⁶⁵ Megdal et al., *supra* note 153 at 681–82.

¹⁶⁶ KAN. DIV. OF BUDGET, FY 2021 GOVERNOR'S BUDGET REPORT VOL. 2 281–83 (2020).

¹⁶⁷ Sarah Spicer, *Environmental Agencies May Not Have the Funding to Keep Our Water Clean, Report Says*, WICHITA EAGLE (Oct. 19, 2020), <https://www.kansas.com/news/politics-government/article246400820.html> (dollar amount adjusted for inflation) [<https://perma.cc/NE5U-FXKL>].

¹⁶⁸ *About KDHE*, KAN. DEP'T OF HEALTH & ENV'T, <https://www.kdheks.gov/mission.html> [<https://perma.cc/2R7S-4S6X>].

water enforcement. A decreasing budget could mean less enforcement resources and ultimately higher cases of noncompliance.

This problem will be amplified if agencies must devote more resources than average to apply the *County of Maui* functional equivalent test to determine if tributary groundwater discharges require a permit. This was a concern expressed in an amicus brief authored by nineteen states and two governors.¹⁶⁹ Because so many states have assumed NPDES permitting authority, the state agencies would be the ones who would have to bear the burdens of an expanded permitting program.¹⁷⁰ This would take away valuable resources from other regulatory programs under the state agency authority.¹⁷¹ This concern is valid in light of the shrinking budgets of many state environmental agencies.¹⁷² However, as previously discussed, the *County of Maui* decision did not expand the NPDES permitting program as much as it could have. By refusing to adopt the Ninth Circuit’s broad fairly traceable standard and being careful to avoid any circumstance where all discharges would require a permit, the Court vastly narrowed the scope of indirect discharges that require permits.¹⁷³ Still, further guidance issued by EPA would help alleviate the burden on state agencies.

C. The Importance of Science in Functional Equivalence Determinations

It is impossible to “restore and maintain the chemical, physical, and biological integrity of the Nations waters” without considering “the scientific reality of connections between point sources and surface waters through groundwater.”¹⁷⁴ Since the CWA was enacted, our understanding of underground water sources has greatly improved.¹⁷⁵ Technology and tools for testing such as tracer dye studies—like the one used in *County of Maui*—permit officials to better understand how much pollutants are ending up in navigable waters even after traveling through groundwater.¹⁷⁶ It is now much more evident how connections between groundwater and surface water function, which presumably should make regulation easier. Some scholars are arguing that a new EPA rule should place a great emphasis on scientific guidance.¹⁷⁷ For example, an agency with scientific expertise could provide guidance to determine when a sufficient hydrological connection is present between groundwater and surface water.¹⁷⁸ Incorporating the improved understanding, knowledge, and technology developed since 1972 into “revised legislative authority may create the certainty

¹⁶⁹ West Virginia et al., *supra* note 111.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² ENV’T INTEGRITY PROJECT, THIN GREEN LINE 25 (2019).

¹⁷³ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1470 (2020).

¹⁷⁴ Brief for Aquatic Scientists, *supra* note 60 at 5.

¹⁷⁵ Philip M. Quatrochi, *Groundwater Jurisdiction Under the Clean Water Act: The Tributary Groundwater Dilemma*, 23 B.C. ENVTL. AFF. L. REV. 603, 603–04 (1996).

¹⁷⁶ Shiigi, *supra* note 53 at 547–48 (2019).

¹⁷⁷ *Id.* at 553.

¹⁷⁸ *Id.*

that the regulated community demands and deserves.”¹⁷⁹

Generally, there has been some push in the legal community to rely on interdisciplinary methods to better incorporate biological and ecological research with policymaking.¹⁸⁰ Professor Robert Adler, a law professor specializing in water law and environmental law, has written several articles about this topic.¹⁸¹ Adler argues that an “ongoing interaction between science and regulation is healthy because additional scientific understanding can reduce the risk of poorly targeted regulation.”¹⁸² The interaction of regulation and science can help avoid unnecessary regulation of harms that are found to be less threatening than initially thought.¹⁸³

Specifically, the Supreme Court took a step toward this interdisciplinary approach in the *County of Maui* decision. One of the amicus briefs cited by Justice Breyer in the majority opinion was submitted by hydrologists that thoroughly explained the scientific phenomena connecting groundwater to surface water.¹⁸⁴ The factors listed in the functional equivalent test reflect many of the hydrologic processes described in the brief.¹⁸⁵ In reflecting on the Court’s decision, some of the authors of the brief argued that the functional equivalent test might be more applicable than Justice Alito feared in his dissenting opinion.¹⁸⁶ They reiterate that there are scientific tools available that can aid determinations for when groundwater pathways are discernable and confined conveyances so as to be the functional equivalents to direct discharges.¹⁸⁷ Future EPA guidance could expand on the factors listed by the majority and identify scientific tools available to help state agencies and lower courts apply the functional equivalent standard.

V. RECOMMENDATIONS FOR FURTHER EPA GUIDANCE

In many ways, the Supreme Court got it right. In the specific case of the wastewater treatment plant in Maui County, the wastewater will no longer be dumped into the Pacific Ocean and pollute the coral reefs unless the County gets

¹⁷⁹ Van Zandt & Herman, *supra* note 144.

¹⁸⁰ See Robert W. Adler, *Transactional Ecology and Environmental Law*, 50 ENVTL. L. 703, 704–05 (2020).

¹⁸¹ See e.g., *id.*; Robert W. Adler, *Coevolution of Law and Science: A Clean Water Act Case Study*, 44 COLUM. J. ENVTL. L. 1 (2019); Robert W. Adler, *The Supreme Court and Ecosystems: Environmental Science in Environmental Law*, 27 VT. L. REV. 249 (2003).

¹⁸² Robert W. Adler, *Coevolution of Law and Science: A Clean Water Act Case Study*, 44 COLUM. J. ENVTL. L. 1, 4–5 (2019).

¹⁸³ *Id.*

¹⁸⁴ Brief for Aquatic Scientists, *supra* note 60.

¹⁸⁵ *Id.*

¹⁸⁶ Thomas Harter, Steph Tai & Karrigan Bork, *Supreme Court Ruling Finds Old, New Middle Ground on Clean Water Act’s Application to Groundwater*, CAL. WATERBLOG (Apr. 26, 2020), <https://californiawaterblog.com/2020/04/26/supreme-court-ruling-finds-old-new-middle-ground-on-clean-water-acts-application-to-groundwater/> [https://perma.cc/GD7V-GPXC].

¹⁸⁷ *Id.*

an NPDES permit.¹⁸⁸ As Justice Sotomayor noted during oral argument, there was a failure somewhere in the application of the CWA: “If [the county] followed all the laws, and they still are polluting, they’re getting away with it. So, something failed. The preventative measures of this law were not followed and something failed.”¹⁸⁹ The Court’s functional equivalent test corrected this failure by providing an avenue for determining when indirect discharges through groundwater require permits.

Additionally, the nature of the factors in the test, such as time and distance, imply a fact-based, case-by-case analysis for determining what indirect discharges are functionally equivalent to direct discharges.¹⁹⁰ Fact-based analysis is likely the correct approach to assess functional equivalence, as bright-line rules might put too much emphasis on any one factor¹⁹¹ or create a lack of redress in situations that do not quite fit the rule.¹⁹² Additionally, topography, geology, and climate create great variation in the hydrologic characteristics of certain groundwater connections, including frequency, magnitudes, timing, duration, and rate.¹⁹³ It does not make sense to regulate something that can be so diverse with one uniform, bright-line rule. Thus, the goal of any EPA guidance on this issue should not be to draw lines, but rather to help parties in their fact-specific determinations. The January 2021 guidance attempted to give more clarity in applying the functional equivalent standard on a case-by-case basis, but it did so in a way that strayed too far from the Supreme Court’s reasoning.¹⁹⁴ However, EPA could still release a new guidance that gives clarity on the standard that is still consistent with the Court’s decision.

EPA should release more specific criteria rooted in hydrological science for each of the factors. For example, issuing guidance on tracer dye studies—like the one used in *Maui*¹⁹⁵—could be very helpful for finding ways to measure time and distance, the two most important factors identified by the Court.¹⁹⁶ Another possibility is for EPA to issue guidance about different types of materials that pollutants are likely to travel through if discharged into groundwater. The third factor identified by the Court is “the nature of the

¹⁸⁸ Provided that, on remand, the Ninth Circuit holds that the injection wells are a functional equivalent to a direct discharge.

¹⁸⁹ Transcript of Oral Argument at 71, *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462 (2020) (No. 18-260).

¹⁹⁰ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1476–77 (2020).

¹⁹¹ Allison L. Kvien, Note, *Is Groundwater that is Hydrologically Connected to Navigable Waters Covered Under the CWA? Three Theories of Coverage & Alternative Remedies for Groundwater Pollution*, 16 MINN. J. L. SCI. & TECH. 957, 990 (2015).

¹⁹² Shiigi, *supra* note 53 at 547, n.214.

¹⁹³ Brief for Aquatic Scientists, *supra* note 60 at 6.

¹⁹⁴ Fox, *supra* note 126.

¹⁹⁵ *Haw. Wildlife Fund v. County of Maui*, 886 F.3d 737, 742–43 (9th Cir. 2018), *vacated*, 140 S. Ct. 1462 (2020) (describing the tracer dye study used to show a hydrologic connection between the injection wells and the ocean).

¹⁹⁶ *County of Maui v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1477 (2020).

material through which the pollutant travels.”¹⁹⁷ One important characteristic that varies from material to material is porosity.¹⁹⁸ The porosity of the rocks and soil in aquifers can affect the aquifer storage capacity, the rate at which water moves through the aquifer, and the type and rate of interactions between surface water and groundwater.¹⁹⁹ These characteristics can impact several of the Court’s factors, including time, dilution, and amount of pollutant that enters navigable waters.²⁰⁰ If EPA can give guidance on the type of rock and soil materials that lead to greater dilution, slower flow rates, and more pollutant absorption, polluters may have a better idea of the likelihood their discharge is a functional equivalent to a direct discharge.

In giving more concrete guidance, EPA can alleviate the uncertainty that state agencies, lower courts, and polluters are bound to face when interpreting the functional equivalent test. Before the Court’s *County of Maui* decision, there was a call for more clarity; without it, polluters were faced with a difficult decision between risking a CWA citizen suit or applying for an expensive and possibly unnecessary CWA permit.²⁰¹ This is essentially what happened to Maui County, which chose to risk a lawsuit by failing to secure, or apply for, a permit.²⁰² The ambiguity of the CWA’s application to the County’s situation was evident, as it brought them all the way to the Supreme Court. The Court solved some of this ambiguity, but with so many fact-specific factors,²⁰³ there are likely to be more disputes in the future.

EPA could elaborate on the factors identified by the Court and give guidance on how to measure, identify, and apply them. Further clarity could avoid a situation like what took place after the Court’s *Rapanos* decision: a cluster of lower court decisions attempting to apply the plurality’s confusing significant nexus test on a case-by-case basis.²⁰⁴ Issuing guidance on the different types of aquifers, their relationship to surface waters, and their relative locations could also greatly help polluters and permitting authorities apply the functional equivalent test. Again, guidance from EPA should not implicate bright line rules but give instructions for how to assess each factor so all factors can be considered together as accurately as possible for each case.

VI. CONCLUSION

Whether the CWA applies to scenarios of pollutant discharges into

¹⁹⁷ *Id.* at 1476.

¹⁹⁸ Brief for Aquatic Scientists, *supra* note 60 at 8.

¹⁹⁹ *Id.*

²⁰⁰ *County of Maui*, 140 S. Ct. at 1476–77.

²⁰¹ Van Zandt & Herman, *supra* note 144.

²⁰² *Id.*

²⁰³ *County of Maui*, 140 S. Ct. at 1476–77.

²⁰⁴ Eric Wolff, *The SCOTUS Water Muddle*, POLITICO (Apr. 24, 2020), <https://www.politico.com/newsletters/morning-energy/2020/04/24/the-scotus-water-muddle-787099> [<https://perma.cc/CCR8-ZXZ7>] (quoting a former Justice Department attorney that the *Maui* decision “repeated the error of *Rapanos*”).

groundwater that impact surface water has a long history of confusion and uncertainty. With its decision in *County of Maui*, the Court laid out a new standard for determining when groundwater discharges trigger CWA liability.²⁰⁵ The functional equivalent test has many strengths as a fact-based approach consistent with the goals of the CWA, but EPA should issue further guidance on the Court's factors to reduce potential negative consequences. Further clarity that avoids bright line rules will limit confusion in the lower courts, avoid a surge in citizen suits, and will help state agencies and individual parties determine when an NPDES permit is necessary.

²⁰⁵ *County of Maui*, 140 S. Ct. at 1476.