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April Collaku*

^{*}Fordham University School of Law

THE CLEAN WATER RULE: A CLARIFICATION OF THE DEFINITION OF "WATERS OF THE UNITED STATES" OR AGENCY OVERREACH

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I. INTRODUCTION – THE CLEAN WATER ACT

In the United States, water and water resources are regulated through a mixture of local, state and federal law, regulations and policies. The Clean Water Act (the "CWA" or the "Act") is the primary statute that regulates water at the federal level. Congress passed the CWA in 1972 as an outgrowth and overhaul of the 1948 Federal Water Pollution Act. By enacting the CWA, Congress aimed to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To achieve this purpose, the CWA generally prohibits the discharge of pollutants into waters that fall within the scope of the statute's jurisdiction.

^{*} Fordham University School of Law, J.D., Editor-in-Chief, Fordham Environmental Law Review Vol. XXVI.

^{1.} See Env. L. Institute, America's Vulnerable Waters: Assessing the Nation's Portfolio of Vulnerable Aqutic Resources Since Rapanos v. United States, at i (Aug. 2011), available at https://www.eli.org/sites/default/files/eli-pubs/d21-06.pdf [https://perma.cc/BP27-2PWY].

^{2. 33} U.S.C. §1362(7) (2102).

^{3.} See Kristen L. Holm-Hansen, "A Stream Would Rise from the Earth, and Water the Whole Face of the Ground": The Ethical Necessity for Wetlands Protection Post-Rapanos, 26 Notre Dame J.L. Ethics & Pub. Pol'y 621, 631 (2012); see also Laws & Regulations: Summary of the Clean Water Act, EPA, http://www2.epa.gov/laws-regulations/summary-clean-water-act [https://perma.cc/5WVG-QN7R].

^{4. 33} U.S.C. § 1251.

^{5. 33} U.S.C. § 1251.

The CWA creates two programs that provide the regulatory framework for federal oversight over water pollution. First, Section 402 of the CWA creates the National Pollutant Discharge Elimination System ("NPDES") permit program, which prohibits the discharge of pollutants from a point source into water unless a NPDES permit is obtained. Second, Section 404 regulates the discharge of "dredged or fill material" into regulated waters. Through Section 402 and 404, the CWA provides the Environmental Protection Agency (the "EPA") and the Army Corps of Engineers (the "Corps") the regulatory authority to oversee water pollution.

While the CWA regulates water pollution by prohibiting point source and dredge material discharge, it does not regulate such behavior across all water sources. Instead, the EPA's and the Corps' oversight extends only to "navigable waters." Accordingly, the requirements and prohibitions of the CWA apply only to "navigable waters." However, the definition of "navigable waters" has been debated over the decades. The CWA defines navigable waters as "waters of the Unites States, including the territorial seas." The Act, however, does not further define "waters of the United States" nor does it indicate what types of waters might be included in the definition. Instead, the Corps, the EPA and the courts have attempted to understand the scope and bounds of the meaning of "waters of the United States."11 Historically, the courts have found waters under the CWA to include more than traditional navigable waters, or those waters which are "used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water."12 Instead, the courts have extended the definition of

^{6. 33} U.S.C. § 1342.

^{7. 33} U.S.C. § 1344.

^{8. 33} U.S.C. § 1251.

^{9.} See Bren Mollerup, Rapanos v. United States: "Waters of the United States" Under the Clean Water Act, 12 Drake J. Agric. L. 521, 521 (2007) (citing Robert L. Glicksman, From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy, 41 Wake Forest L. Rev. 719 (2006)).

^{10. 33} U.S.C. §1362(7).

^{11.} Id.

^{12.} See James Murphy, Muddying the Waters of the Clean Water Act: Rapanos v. United States and the Future of America's Water Resources, 31 VT. L. REV. 355, 357 (2007).

"navigable waters" to include certain wetlands, tributaries, and other bodies of water. 13

Although the definition of navigable waters in the CWA is broader than the lay definition of navigable waters, the courts have placed certain bounds of the scope of the term. For example, the Supreme Court held that the CWA does not apply to wetlands that are isolated or lack a significant nexus to a traditional navigable water. More recently, the Supreme Court muddled the definition and scope of "navigable waters" through its decision in *Rapanos*. The Court was unable to come to one consolidated opinion regarding the scope of navigable waters and found itself split between Justice Scalia's plurality opinion that waters must be "relatively permanent, standing or continuously flowing bodies of water" in order to fall within the scope of the CWA, and Justice Kennedy's concurring opinion that a significant nexus test should determine whether a body of water falls under the definition of navigable water and becomes subject to the CWA.

The lack of a unified decision following *Rapanos* left lower courts and interested parties uncertain as to the true scope of the CWA. ¹⁷ As a response to this uncertainty, the EPA, in conjunction with the Corps enacted the Clean Water Rule: Definition of "Waters of the United States" (the "Clean Water Rule" or the "Rule"), effective August 28, 2015. ¹⁸ Through the authority granted to them by the CWA, the EPA proposed rulemaking and later enacted a final rule that clarified the scope of the "waters of the United States" covered by the CWA. The Rule created eight categories of waters that fall under the definition of "waters of the United States." ¹⁹ Of these eight types of waters, traditional navigable waters, interstate waters, territorial seas, impoundments of jurisdictional waters, tributaries and adjacent waters are categorically considered jurisdictional waters under the

17. See Christopher D. Thomas, Defining "Waters of the United States": A Mean-Spirited Guide, SUMMER 2015 NAT. RESOURCES & ENV'T 32, 32.

^{13.} United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 149 (1985).

^{14.} Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers, 531 U.S. 159, 171-72 (2000) [hereinafter SWANNC].

^{15.} Rapanos v. United States, 547 U.S. 715, 739 (2006).

^{16.} *Id.* at 767.

^{18. 33} C.F.R. §328 (2015).

^{19.} Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. 37057 (June 29, 2015).

CWA. The final two types of jurisdictional waters may only fall within the scope of "waters of the United States" if, after a case-specific analysis, they are found to have a "significant nexus" to "traditional navigable waters, interstate waters, or the territorial seas, either alone or in combination with similarly situated waters in the region."²⁰

While the Clean Water Rule provides additional clarity on the scope of the term "waters of the United States," many states argue that the Rule violates the CWA and overextends the EPA's jurisdictions to waters that should not be covered by the CWA. As of March 21, 2016, thirty-one states have sued to stop the Clean Water Rule in federal court, ²¹ and on October 9, 2015, the Sixth Circuit issued a nationwide stay against the enforcement of the Clean Water Rule. ²² The case is presently pending with the Sixth Circuit, which will rule on the merits of the case and determine whether the Clean Water Rule violates or conforms to the CWA. ²³

This paper will analyze the Clean Water Rule to determine if its clarification of the definition of "waters of the United States" violates the CWA. In particular, this paper compares the Court's historical interpretation of the term "waters of the United States" with the Clean Water Rule's clarification of such term. First, this paper will provide a summary of the holdings in *Riverside Bayview*, *SWANNC*, and *Rapanos*, the relevant Supreme Court cases that discuss the scope of the CWA's jurisdiction and the meaning of "waters of the United States." Next, this paper will outline the specific components of the Clean Water Rule. Finally, this paper will compare the terms of the Clean Water Rule with the relevant cases to understand if the Rule violates or conforms to the CWA.

^{20. 80} Fed. Reg. 37059.

^{21.} State of Ohio, et al., Brief for Petitioner at 1, In Re EPA, 803 F.3d 804 (6th Cir. 2015) (Nos. 15-3799, 15-3822, 15-3853, 15-3887).

^{22.} In re E.P.A., 803 F.3d 804, 809 (6th Cir. 2015).

^{23.} In re U.S. Dep't of Def., U.S. E.P.A. Final Rule: Clean Water Rule: Definition of Waters of U.S., No. 15- 3839, 2016 WL 723241 (6th Cir. Feb. 22, 2016).

II. THE CWA'S JURISDICTION EXTENDS TO NAVIGABLE WATERS

A. EXPANDING THE DEFINITION OF NAVIGABLE WATERS

As mentioned above, the CWA applies only to navigable waters.²⁴ Through the statutory definition and the legislative history, it is clear that navigable waters means more than the traditional understanding of navigable waters such as rivers or lakes used by vessels or ships for commerce.²⁵ Historically, the Corps and the EPA have interpreted the CWA to broadly extend their jurisdiction across various types of surface waters. ²⁶ In 1985, the Supreme Court affirmed a broad definition of navigable waters through its decision in *Riverside Bayview*.²⁷

In *Riverside Bayview*, the Court found that wetlands adjacent to waters were within the purview of the CWA. The EPA sued respondent, Riverside Bayview Homes, Inc., for attempting to fill 80 acres of its wetlands without first obtaining a NPEDS permit as mandated by the CWA.²⁸ The respondent, in turn, argued that his property was not a navigable water, as defined by the CWA and, therefore, he did not need to comply with the NPEDS permit program.²⁹ The court considered both the legislative history, and the ecological importance of wetlands to ultimately confirm that navigable waters included "wetlands adjacent to but not regularly flooded by rivers, streams, and other hydrographic features more conventionally identifiable as "waters."³⁰

^{24. 33} U.S.C. § 1362(7).

^{25.} See William Sapp et al., From the Fields of Runnymede to the Waters of the United States: A Historical Review of the Clean Water Act and the Term "Navigable Waters", 36 ENVTL. L. REP. (ENVTL. L. INST.) 10190, 10202-03 (2006).

^{26.} See id. at 10204-07 (describing the history of Corps' and EPA's regulations); see also Lance Wood, Don't Be Misled: CWA Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands, 34 ENVTL. L. REP. (ENVTL. L. INST.) 10187, 10205-13 (2004) (describing the history of the Corps' regulations from 1974 to 1977).

^{27.} See Bayview Riverside, 474 U.S. at 124.

^{28.} Id.

^{29.} Id. at 125.

^{30.} Id. at 131.

The Court found that the legislative history of the CWA supported a broad mandate to improve and restore the integrity of U.S. waters.³¹ Notably, the Court focused on ecological considerations and agreed with the EPA that wetlands furthered the congressional intent of the CWA, because wetlands "function as integral parts of the aquatic environment."³² The Court also noted the ability of wetlands to "filter and purify water draining into adjacent bodies of water" and to "serve significant natural biological functions, including food chain production, general habitat, and nesting, spawning, rearing, and resting sites for aquatic... species."³³ Through a combination of legislative intent, statutory interpretation, and environmental impact, the Court ultimately found that wetlands adjacent to traditional navigable waters were indeed navigable waters within the jurisdiction of the CWA.³⁴

B. REIGNING IN THE SCOPE OF NAVIGABLE WATERS

After *Riverside Bayview*, the Court took a step back and began to restrict the scope of the waters covered under the CWA through its decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* ("SWANCC"). In interpreting the scope of the CWA's jurisdiction, the Court held that the statutory term "navigable" does carry "independent significance" and, therefore, there must be some "significant nexus between wetlands and 'navigable waters." Through this reasoning, the Court found that the isolated ponds and wetlands in Cook County, Illinois were not "waters of the United States" under the CWA even though, like in *Riverside Bayview*, they had a positive ecological impact by providing a habitat for "121 species of migratory birds." The court held that the particular wetlands were too isolated to form a significant nexus to navigable waters to fall within the scope of the

^{31.} Id. at 132-133.

^{32.} Id. at 134.

^{33.} Id. at 135.

^{34.} Id. at 139.

^{35.} See Murphy, Muddying the Waters of the Clean Water Act, supra note 12, at 358.

^{36.} SWANNC, 531 U.S. at 168.

^{37.} *Id*.

CWA.³⁸ Through *SWANNC*, the Court began to restrict the definition of navigable waters and introduced the concept of a significant nexus test to determine which waters fall within the CWA's jurisdiction.

C. THE *RAPANOS* DECISION PROVIDES TWO TESTS TO DETERMINE THE SCOPE OF NAVIGABLE WATERS.

Following *SWANNC*, the Court once again considered the scope of the CWA by interpreting the definition of navigable waters in *Rapanos v. United States*. Unfortunately, the court did not publish a majority opinion and ultimately published both plurality and concurring opinions regarding the scope of navigable waters that left many uncertain as to the true scope of jurisdictional waters covered the CWA.³⁹

The issue in *Rapanos* centered on whether the wetlands in question fell under the jurisdiction of the CWA as "waters of the United States." In particular, the petitioners (the Rapanos and Carabells) sought to fill wetlands on their property without a permit, which would otherwise be required by the CWA, by arguing that their wetlands were not navigable waters and thus not subject to the permitting requirements of the CWA. The first of the Rapanos' wetlands were "connected to a man-made drain, which drain[ed] into Hoppler Creek, which flows into the Kawkawlin River." 40 The second wetland was connected to Rose Drain, "which has a surface connection to the Tittabawasee River."41 The final contested wetland had "a surface connection to the Pine River, which flows into Lake Huron." 42 The Carabells' wetland was located about one mile away from Lake St. Clair. These wetlands only indirectly connected to traditional navigable waters through intermediary sources such as manmade drains, and the petitioners argued that their wetlands were too far removed from traditional waters to be considered waters adjacent to navigable waters. 43

^{38.} *Id.* at 171-72.

^{39.} See Assessing Jurisdiction Under the New Clean Water Act Guidance, 41 ENVIL. L. REP. NEWS & ANALYSIS 10773, 10774 (2011).

^{40.} Rapanos, 547 U.S. at 730.

^{41.} *Id*.

^{42.} Id.

^{43.} Id.

1. The plurality's opinion

Justice Scalia, speaking for the plurality, introduced a two-part test to determine whether a body of water qualified as a "water of the United States." First, the court held that the term "waters of the United States" extended only to "those relatively permanent, standing or continuously flowing bodies of water forming geographic features that are described in ordinary parlance as streams, oceans, rivers, and lakes."44 Accordingly, in this particular case, it was necessary to determine if the ditches or drains near each wetland constituted "waters' in the ordinary sense of containing a relatively permanent flow."45 Second, a wetland will only be considered a "water of the United States" if it adjacent to another jurisdictional water - one that meets part one of the test described above. Further, in order for a wetland to be considered "adjacent" to another jurisdictional water, it must maintain a "continuous surface connection to bodies that are waters of the United States in their own right, so that there is no clear demarcation between waters and wetlands.",46

2. Justice Kennedy's concurrence

Justice Kennedy disagreed with the plurality's view that the CWA applied only to waters that were continuously flowing. He also disagreed that a wetland necessarily needs a continuous surface connection to a traditional navigable water in order to fall within the purview of the CWA. Instead, Justice Kennedy held that a water needs to have a "significant nexus" to traditional navigable waters in order to fall under the CWA's jurisdiction.

In applying the significant nexus test, Justice Kennedy focused on the ecological impact of wetlands on downstream waters. A wetland will meet the significant nexus test if the wetland "either alone or in combination with similarly situated lands in the region, significantly affect[s] the chemical, physical, and biological integrity of other waters more readily understood a 'navigable.'"⁴⁸ The concurrence held that wetlands may be jurisdictional waters of the United States if they further the ecological goals of the CWA to improve the health

^{44.} Rapanos, 547 U.S. at 741.

^{45.} Id. at 757.

^{46.} *Id.* at 742.

^{47.} Id. at 773-74.

^{48.} Id. at 780.

and integrity of downstream waters. Namely, certain wetlands that impact the integrity of downstream waters through "pollutant trapping, flood control, and runoff storage" will be considered "water of the United States" under the CWA. However, wetlands that only impact water quality to speculative or insubstantial degree fall outside the scope of the CWA.

While Justice Kennedy stated the significant nexus test involved a case-by-case inquiry, he also held that the Corps and EPA may assert categorical jurisdiction over certain wetlands without making a site specific "significant nexus" inquiry. Justice Kennedy held that CWA of ecologic iurisdiction rests on "a reasonable inference interconnection" between a wetland and a traditional navigable body of water. Such an inference, for example, could be determined by the proximity of a wetland to other waters categorized as "navigable waters." However, Justice Kennedy cautioned that a wetland's proximity to other "navigable waters" may not necessarily be dispositive of an inference of ecologic interconnection in all instances. For instance, Justice Kennedy found that the EPA's definition of tributaries, at the time of the Rapanos lawsuit, was expansive enough to include isolated ditches or drains. Accordingly, it would not be reasonable to automatically categorize a wetland as a water of the United States based solely on its adjacency to a ditch or drain. In such an instance, a case specific inquiry would be required to determine if the wetland did indeed impact the integrity of downstream waters that are navigable-in-fact.⁵¹

3. Controlling opinion

Because the Court was unable to provide a majority opinion, it is unclear whether Justice Scalia's plurality opinion or Justice Kennedy's concurrence provides the precedent for determining whether tributaries and wetlands fall within the CWA's jurisdiction. The lower courts are presently split on the issue and have sporadically applied both the plurality and concurrence. ⁵² For example, the U.S. Court of Appeals for the Eleventh Circuit has

^{49.} Id.

^{50.} *Id*.

^{51.} Id. at 781.

^{52.} See Assessing Jurisdiction, supra note 38, at 10774 (2011).

followed the concurrence's significant nexus test.⁵³ The U.S. Courts of Appeals for the First, Third, and Eighth Circuits have applied either the plurality or the concurrence tests on a case-by-case basis.⁵⁴ The Fifth and Sixth Circuits have required plaintiffs to prove both tests,⁵⁵ and the Seventh and the Ninth Circuit have preferentially employed the concurrence test, but if that is not met will look to the plurality's test.⁵⁶ Since the Circuit courts remain split on the controlling opinion in Rapanos, this paper will consider whether the Clean Water Rule complies with both the Justice Scalia plurality and the Justice Kennedy concurrence.

III. THE CLEAN WATER RULE

The EPA and the Corps attempted to resolve the uncertainty over the scope of the CWA's jurisdiction over certain waters by enacting the Clean Water Rule: Defining Waters of the United States, which provided specificity to the definition of "waters of the United States." Assistant Secretary for the Army (Civil Works) Jo-Ellen Darcy stated that the "rule responds to the public's demand for greater clarity, consistency, and predictability when making jurisdictional determinations. The result will be better public service nationwide." EPA administrator, Gina McCarthy also stressed the importance of the Rule in furthering the goals of the CWA, namely that "[p]rotecting our water sources is a critical component of

^{53.} United States v. Robinson, 505 F.3d 1208, 1219-21 (11th Cir. 2011).

^{54.} United States v. Bailey, 571 F.3d 791, 799 (8th Cir. 2009); United States v. Donovan, 661 F.3d 174, 176 (3d Cir. 2011); United States v. Johnson, 467 F.3d 56, 66 (1st Cir. 2006).

^{55.} United States v. Cundiff, 535 F.3d 200, 210 (6th Cir. 2009); United States v. Lucas, 516 F.3d 316, 24 (5th Cir. 2008).

^{56.} Northern Cal. River Watch v. City of Healdsburg, 496 F.3d 993, 1000 (9th Cir. 2007); United States v. Gerke Excavating, Inc., 464 F.3d 723, 725 (7th Cir. 2006).

^{57. 80} Fed. Reg. 37054.

^{58.} Clean Water Rule Protects Stream and Wetlands Critical to Public Health, Communities and Economy, EPA.Gov (May 27, 2015), http://yosemite.epa.gov/opa/admpress.nsf/0/62295CDDD6C6B45685257. E52004FAC97# ga=1.263721868.141048838.1443713557.

adapting to climate change impacts like drought, sea level rise, stronger storms, and warmer temperatures." ⁵⁹

The Rule creates eight categories of waters that fall within the purview of the CWA, which includes traditional navigable waters, "tributaries," "adjacent waters," and other waters, which bear a significant nexus to navigable waters. The Rule also clarifies the meaning of tributaries, and provides additional clarity to the meaning of the term "adjacent." Further, the Clean Water Rule details the steps the EPA and the Corps would undertake to determine if a water meets the "significant nexus test" articulated by Justice Kennedy in *Rapanos*. Ultimately, the Clean Water Rule creates three categories of waters – waters that are jurisdictional in all instances, waters that are excluded from jurisdiction in all instances, and a narrow category of waters subject to case-specific analysis to determine whether they are jurisdictional.

While the Clean Water Rule arguably succeeded in providing additional clarity to the term "waters of the United States," many states have since sued to stop the enforcement of the Clean Water Rule. State petitioners argued that the EPA unlawfully expanded its jurisdiction over waters outside the scope of the CWA and asserted that the Rule infringed on local and state rights. The petitioners also argued that the Clean Water Rule violated the Administrative Procedure Act's ("APA") notice and comment requirement, which requires an agency's final rule to be a "logical outgrowth" of its proposed rule. This note will not focus on the alleged APA

60. 80 Fed Reg. 37057-58.

^{59.} Id.

^{61.} See Hartman et al., KL GATES, EPA and Army Corps Issue Final Clean Water Rule But does this New "Line in the Water" Clarify, Expand or Narrow Clean Water Act Jurisdiction (June 19, 2015), http://www.klgates.com/epa-and-the-army-corps-issue-final-clean-water-rule-but-does-this-new-line-in-the-water-clarify-expand-or-narrow-clean-water-act-jurisdiction-06-19-2015/ [https://perma.cc/KK3Q-363T].

^{62. 80} Fed. Reg. 37057.

^{63.} See generally Brief for Petitioner, supra note 21.

^{64.} See Karen Bennett & John Henson, Redefining "Waters of the United States": Is EPA Undermining Cooperative Federalism?, 16 ENGAGE: J. FEDERALIST SOC'Y PRAC. Groups 22, 22-23 (2015) (outlining state opposition to the proposed Clean Water Rule).

^{65.} See Brief for Petitioner, supra note 21, at 7; see also Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 174 (2007).

violations and will, instead, focus on whether or not the Clean Water Rule violates the CWA and Supreme Court precedent on the scope and coverage of the CWA.

A. TRADITIONAL NAVIGABLE WATERS

The Clean Water Rule classifies traditional navigable waters as jurisdictional in all instances. These waters include those used in commerce, interstate waters, territorial seas and impoundments of jurisdictional waters. ⁶⁶ Unlike the remainder of the Rule, there is no controversy among the states that these waters are indeed covered by the CWA, because they are waters that are navigable in fact and meet the lay definition of navigable.

B. Tributaries

The Clean Water Rule classifies tributaries, as defined by the Rule, as "jurisdictional by rule in all cases." It is important to note that the Rule does not categorize all tributaries as jurisdictional "waters of the United States." Instead, the Clean Water Rule requires a water to meet two tests in order to be considered a jurisdictional tributary. First, "a water must flow directly or through another water or waters to a traditional navigable water, interstate water, or the territorial seas." Second, a body of water must have a "bed and banks and an indicator of ordinary high water mark" in order provide "physical indicators of flow."

Through these two requirements, the EPA restricts the scope of jurisdictional tributaries to only those tributaries that significantly impact downstream waters⁷⁰ in order to further Congress' intent of preserving and improving the quality of the nation's waters. Based on their scientific and technical expertise, the agencies determined that waters which meet the Rule's definition of tributary have a significant nexus to downstream waters, because "they significantly

^{66. 80} Fed. Reg. 37058.

^{67.} Id. at 37075.

^{68.} Id. at 37076.

^{69.} Id.

^{70.} Id. at 37075.

affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas."⁷¹

The scientific research asserts that tributaries, as defined by the Rule, significantly impact the physical integrity of traditional navigable waters in several ways. For example, such tributaries influence the timing and volume of water that reaches a river network after a storm event through dispersion. Tributaries also reduce the amount of water that reaches downstream rivers to minimize downstream flooding. Turther, tributaries transport essential sediments to downstream waters, which, in turn, support downstream biological communities and influences river hydrodynamics. Finally, tributaries can impact water temperatures that play a critical role in the distribution and growth of aquatic life.

The relevant literature also indicates that tributaries significantly impact the chemical integrity of downstream waters. Tributaries transform and export "significant amounts of nutrients and carbon to downstream waters. These nutrients serve important source functions that greatly influence the chemical integrity of downstream waters." For instance, downstream organisms consume organic carbon that

72. See U.S. ENVT'L PROTECTION AGENCY, CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS: A REVIEW AND SYNTHESIS OF SCIENTIFIC EVIDENCE 3-10 (Jan. 2015) [hereinafter Science Report] (citing Praveen Kumar and Patricia M. Saco, Kinematic Dispersion in Stream Networks 1. Coupling Hydraulic and Network Geometry, 38 WATER RES. RESEARCH 10-01 (Nov. 2002)).

^{71.} Id. at 37068.

^{73.} See SCIENCE REPORT, supra note 71, at 3-11 (citing Stephen K. Hamilton et. al., Persistence of Aquatic Refugia Between Flow Pulses in a Dryland River System (Cooper Creek, Australia), 50 LIMNOLOGY AND OCEANOGRAPHY 743 (2005)).

^{74.} See Science Report, supra note 71, at 3-13 (citing Michael Church, Bed Material Transport and the Morphology of Alluvial River Channels, 34 Annual Review of Earth and Planetary Sciences 325 (2006)).

^{75.} See Science Report, supra note 71, at 3-19 (citing J. David Allan, Stream ecology – Structure and Function of Running Waters (Chapman & Hall 2005)).

^{76.} U.S. ENVT'L PROTECTION AGENCY AND U.S. DEP'T. OF THE ARMY, TECHNICAL SUPPORT DOCUMENT FOR THE CLEAN WATER RULE: DEFINITION OF WATERS OF THE UNITED STATES 249 (May 27, 2015), available at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/news/tech_spt_doc_for_CWR.pdf [https://perma.cc/XQH9-5QJZ] [hereinafter Technical Support Document].

^{77.} Id. at 245.

flows from tributaries.⁷⁸ Tributaries can also serve as a temporary or permanent sink for contaminants that adversely affect organisms by reducing the amount of pollutants that reach downstream traditional navigable waters.⁷⁹

Finally, tributaries, as defined by the Rule, impact the biological integrity of the nation's waters. ⁸⁰ Tributaries are biologically linked to downstream waters through the movement of living organisms between the two bodies of water. Headwater tributaries increase the amount and the quality of habitat available to aquatic organisms. Further, small tributaries can provide safe refuge for organisms in certain adverse conditions. Once adverse conditions subside, the organisms can travel through the tributaries to recolonize downstream waters. ⁸¹ Moreover, tributaries do not need to flow perennially to have a significant nexus to downstream waters. Even tributaries that have intermittent or ephemeral flow "perform the same important ecological and hydrological functions documented in the scientific literature as perennial streams, through their movement of water, nutrients, and sediment to downstream waters."

On its face, the inclusion of such tributaries as "waters of the United States" seems to comply with the Court's holdings in *Rapanos*. The Clean Water Rule conforms to the plurality's test by requiring jurisdictional tributaries to maintain a physical flow with traditional navigable waters. ⁸³ As discussed above, the peer-reviewed science also supports Justice Kennedy's opinion that waters which significantly impact downstream traditional navigable waters should be covered by the CWA. ⁸⁴

It is important to note that Justice Kennedy's significant nexus test focused on the coverage of the CWA on adjacent wetlands and gave little insight as to which tributaries fall within the CWA's

^{78.} See, e.g., SCIENCE REPORT, supra note 71, at 3-30.

^{79.} See, e.g., Science Report, supra note 71, at 3-34 (citing Wang, et. al., Water Quality Changes as a Result of Coalbed Methane Development in a Rocky Mountain Watershed, 43 J. of the Am. Water Res. Ass'n 1383 (2007)).

^{80.} Id. at 254.

^{81.} See Science Report, supra note 71, at 3-38.

^{82.} See TECHNICAL SUPPORT DOCUMENT, supra note 75, at 259 (addressing the hydrological and ecological significance of ephemeral and intermittent streams in the arid and semi-arid Southwestern United States and their connections to downstream waters).

^{83. 80} Fed. Reg. 37076.

^{84.} Id. at 37059.

jurisdiction. S5 Justice Kennedy did, however, comment on the Corps' ability to categorically qualify tributaries as jurisdictional navigable waters. While he held that the Corps may be able to properly categorize tributaries as jurisdictional waters simply through proof of a water's "volume and flow," he warned that using an ordinary high watermark as a benchmark of volume and flow was problematic. He held that a standard focusing exclusively on the existence of such a watermark was overly inclusive, and may leave room to improperly extend jurisdiction to regulate "drains, ditches, and streams" too remote from traditional navigable waters to be covered by the CWA.

The Corps and the EPA addressed Justice Kennedy's concern that the mere existence of an ordinary high watermark may be an overly inclusive benchmark by adding the bed and banks requirement. The current Rule restricts the definition of jurisdictional tributaries to those waters that exhibit an indication of volume and flow with traditional navigable waters through the existence of both an ordinary high watermark and a bed or banks. The EPA asserts that these two characteristics indicate a sufficient flow for upstream waters to connect to downstream waters in a way where "there can be a significant effect on the downstream water from the pollution or destruction of the upstream water." Indeed, this scientific evidence would support Justice Kennedy's concurrence that waters, or in this case tributaries, which have a significant impact on traditional navigable waters appropriately fall within the scope of the CWA.

However, opponents of the Clean Water Rule argue that the Rule's definition of tributaries violates both the plurality opinion and Justice Kennedy's concurrence. Particularly, the state petitioners argue that the Rule sweeps in channels, which may only "contribute even the

^{85.} Jeffrey G. Miller, *Plain Meaning, Precedent, and Metaphysics: Interpreting the "Navigable Waters" Element of the Clean Water Act Offense*, 45 ENVTL. L. REP. NEWS & ANALYSIS 10548, 10569 (2015) (arguing that courts misperceive the Kennedy concurrence's significant nexus test... when they apply it to determine whether a tributary is a water of the United States").

^{86.} EPA's "Waters of the United States" Rule: Substance and Significance, 45 ENVTL. L. REP. NEWS & ANALYSIS, 10995, 10999 (2015).

^{87.} Rapanos, 547 U.S. at 2248.

^{88.} Id. at 2248-49.

^{89. 80} Fed. Reg. 37076.

^{90.} EPA's "Waters of the United States" Rule: Substance and Significance, supra note 85, at 11000-01.

smallest trickle into a navigable water, either directly or indirectly" as long as they possess the physical characteristic of a bed and ordinary high watermark. Indeed, the EPA does concede that these physical characteristics can be created by perennial, intermittent, and ephemeral flows. If these physical indicators can be created simply by intermittent flow between a tributary and a traditional navigable water, then the plurality's requirement that "waters of the United States." must be "relatively permanent, standing or continuously flowing" cannot be met. It does seem that the Clean Water Rule would, in certain instances, improperly include certain tributaries as "waters of the United States."

Further, Justice Kennedy explained that while waters do not necessarily have to maintain continuously flow, the CWA couldn't cover all "continuously flowing stream[s]" or waters sending only the "merest trickle[s]" into navigable waters. ⁹⁴ While the science does indicate that the current definition of tributaries would include waters that have only intermittent flow, the EPA maintains that the existence of a bed or banks and a high watermark indicates that there is significant flow from tributaries to impact downstream waters. ⁹⁵ Because of both the extensive scientific research and the EPA and the Corps' extensive field experience, the courts may defer to the EPA's determination that the physical features of a bed and high watermark are enough to determine that a tributary does significantly impact the integrity of downstream waters, and thus meets the significant nexus test. ⁹⁶

However, it is still not clear that Justice Kennedy's significant nexus test is the appropriate standard, particularly since his opinion primarily focused on wetlands. ⁹⁷ Accordingly, the courts may find Justice Scalia's opinion to be controlling in defining tributaries. In

^{91.} Brief for Petitioner, *supra* note 21, at 12.

^{92. 80} Fed. Reg. 37057.

^{93.} Rapanos, 547 U.S. at 738.

^{94.} Rapanos, 547 U.S. at 781; Brief for Petitioner, *supra* note 21, at 13.

^{95.} EPA's "Waters of the United States" Rule: Substance and Significance, supra note 85, at 11000.

^{96.} Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 865 (1984) (holding that courts must give administrative agency's deference to interpret and promulgate rules within their delegated statutory authority).

^{97.} Jeffrey G. Miller, *Plain: Interpreting the "Navigable Waters" Element of the Clean Water Act Offense*, supra note 84, at 10569 (2015).

such an instance, it is likely that the Clean Water Rule's definition of tributary violates the plurality's holding by extending CWA jurisdiction to intermittent waters that are not continuously flowing.

C. ADJACENT WATERS

The Clean Water Rule also classifies adjacent waters and wetlands as "waters of the United States" in all instances. In support of such a classification, the EPA cited peer-reviewed scientific research and practical experience, which demonstrated that upstream waters, including wetlands "significantly affect the chemical, physical, and biological integrity of downstream waters by playing a crucial role in controlling sediment, filtering pollutants, reducing flooding, providing habitat for fish and other aquatic wildlife, and many other vital chemical, physical, and biological processes" The Clean Water Rule specifically defines the term adjacent to mean "bordering, contiguous, or neighboring." The Clean Water Rule further defines the term neighboring to mean one of the following:

- (1) Waters located in whole or in part within 100 feet of the ordinary high water mark of a traditional navigable water, interstate water, the territorial seas, an impoundment of jurisdictional water, or a tributary, as defined in the rule.
- (2) Waters located in whole or in part in the 100-year floodplain and that are within 1,500 feet of the ordinary high water mark of a traditional navigable water, interstate water, the territorial seas, an impoundment, or a tributary, as defined in the rule ("floodplain waters").
- (3) Waters located in whole or in part within 1,500 feet of the high tide line of a traditional navigable water or the territorial seas and waters located within 1,500 feet of the ordinary high water mark of the Great Lakes. ¹⁰¹

^{98. 80} Fed. Reg. 37058.

^{99.} U.S. Army Corps of Engineers, et al., Brief for Respondent at 4, In Re EPA, 803 F.3d 804 (6th Cir. 2015) (Nos. 15-3799, 15-3822, 15-3853, 15-3887).

^{100.} Id. at 37058.

^{101.} Id.

Because of its scientific findings, the EPA concluded that adjacent waters, which meet the above geographical definition, would sufficiently impact the integrity of traditional navigable waters in all instances, and could, therefore, be categorically defined as jurisdictional waters subject to the CWA. 102

The close proximity between adjacent waters and traditional navigable waters allows the two bodies to comingle with each other and impact each other's physical and chemical characteristics. This commingling of waters allows adjacent waters to export chemically transformed water flow downstream and allows the adjacent waters the ability to absorb excess stream flow. In particular, adjacent wetlands are often in a position that allows them to improve the physical integrity of traditional navigable waters. These wetlands, as defined by the Rule, improve downstream water quality by acting as sinks that retain floodwaters, sediments, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters. Further, adjacent wetlands, trap or filter pollutants and reduce the likelihood that those pollutants will reach and pollute tributaries and downstream navigable waters. 105

Adjacent waters also support the biological integrity of downstream jurisdictional waters. The close proximity of adjacent waters to jurisdictional waters allows for the direct exchange of biological materials, including organic matter that serves as part of the food web of downstream waters. Further, these waters provide an important habitat for aquatic-associated species to forage, breed, and rest. 108

Although the Clean Water Rule's inclusion of adjacent waters as "waters of the United States" may be permissible per *Rapanos*, the definition of neighboring waters as categorically jurisdictional under the CWA is problematic. The plurality in *Rapanos* held that waters adjacent to traditional waters could be "waters of the United States" as long as they maintained a continuous connection with navigable

^{102.} *Id*.

^{103.} See TECHNICAL SUPPORT DOCUMENT, supra note 75, at 277.

^{104.} See id.

^{105.} Id. at 311.

^{106.} Id. at 315.

^{107.} Id. at 278.

^{108.} Id. at 296.

waters. 109 The Clean Water Rule's inclusion of neighboring waters that may be as far as 1,500 feet away from the high tide of a traditional navigable water conflicts with the plurality's continuous surface water connection requirement. While it is true that these waters may and will have a continuous surface connection with traditional navigable waters, the provision is wide enough to apply to waters that just infrequently maintain a surface connection with traditional navigable waters. 110

Further, the Rule allows waters that are adjacent to tributaries to fall under the CWA's jurisdiction. As discussed above, the Rule's broad definition of tributaries may violate the plurality's holding. If these waters or wetlands were adjacent to tributaries, which the plurality would otherwise consider outside the scope of the CWA, then the adjacent waters would not be adjacent to a "water of the United States" and could not fall within the CWA's jurisdiction. In both these instances, the Clean Water Rule would violate the plurality's holding in *Rapanos*.

However, Justice Kennedy thought the plurality improperly applied the Court's prior holdings in *Riverside Bayview* and *SWANNC* by mandating that adjacent waters must maintain a continuous connection to navigable waters. Further, Justice Kennedy held that the Corps could categorically define adjacent wetlands as "waters of the United States" if the science supported such a categorization. Namely, if geographic proximity is a scientific indication that adjacent waters would substantially impact the integrity of navigable-in-fact waters, then such adjacent waters could be categorically considered "waters of the United States." ¹¹¹

Opponents of the Rule highlight Justice Kennedy's concern that the CWA could not apply to wetlands adjacent to tributaries such as "drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it." However, the EPA argues that the Clean Water Rule specifically excludes wetlands that were a concern to Justice Kennedy by reducing the number of tributaries covered by the CWA. Since the Rule classifies tributaries as only waters that carry *significant* flow to traditional navigable

^{109.} Rapanos, 547 U.S. at 717.

^{110.} Brief for Petitioner, supra note 21, at 9.

^{111.} Rapanos, 547 U.S. at 781.

^{112.} Rapanos, 547 U.S. at 782; see also Brief for Petitioner, supra note 21, at 13

waters, the EPA and the Corps argue that the Clean Water Rule resolves Justice Kennedy's concern over the inclusion of wetlands adjacent to tributaries that only carried *minor* water volumes. ¹¹³ Because the EPA's scientific research finds wetlands, as defined by the Rule, to significantly impact downstream waters, it is likely that the Rule's inclusion of "adjacent waters" as categorically jurisdictional properly conforms to the significant nexus test outlined in Justice Kennedy's concurrence.

D. CASE-SPECIFIC ANALYSIS OF OTHER WATERS

Finally, the Clean Water Rule recognizes that certain individual waters that do not "neighbor" jurisdictional waters may still fall under the CWA's jurisdiction. While these waters are not jurisdictional per se, the Rule maintains that these waters may be considered "waters of the United States" after a case-specific significant nexus analysis. 114 The Rule specifies that a water has a significant nexus when "any single function or combination of functions performed by the water, alone or together with similarly situated waters in the region, contributes significantly to the chemical, physical, or biological integrity" of downstream jurisdictional waters. 115 The following nine functions are relevant to the significant nexus analysis: 1) sediment trapping, 2) nutrient recycling, 3) pollutant trapping, transformation, filtering, and transportation, 4) retention and attenuation of flood waters, 5) runoff storage, 6) contribution of flow, 7) export of organic matter, 8) export of food resources and 9) provision of life cycle dependent aquatic habitat. 116

Opponents of the Rule argue that the Rule is overly inclusive by allowing the Corps to assert jurisdiction over waters that conduct just one of the above nine functions. While the Rule states just one of the above nine functions may be enough to significantly impact the integrity of downstream waters, it does not hold that one aquatic function is necessarily enough to meet the significant nexus test. Instead, many factors, working together, may be necessary to achieve

^{113.} Brief for Petitioner, *supra* note 21, at 16-17.

^{114. 80} Fed Reg. 37058.

^{115. 33} CFR 328.3(c)(5) (2015).

^{116.} Id

^{117.} Brief for Petitioner, *supra* note 21, at 14.

a connection that is substantial enough to satisfy the test. In this way, the Clean Water Rule complies with Justice Kennedy's holding that a robust scientific analysis is required in order to find certain adjacent waters jurisdictional. ¹¹⁸

Opponents of the Rule also argue that when Justice Kennedy discussed the CWA's objectives to restore and maintain the "chemical, physical, and biological integrity" of traditional navigable waters, he asserted that each of these objectives must be met in order for a water to meet the significant nexus test. 119 Indeed Justice Kennedy does reference all three statutory objectives while the Clean Water Rule states that a significant nexus test can be met if a water is found to significantly impact just one of those factors. 120 The EPA asserts that each of the nine functions specified by the Clean Water Rule "generally serve all three objectives." For instance, one of the nine aquatic functions that the Corps considers is contribution of flow. This function can affect the integrity of downstream waters physically, "by helping to sustain the volume of water in larger waters; chemically, by changing the dissolved-oxygen composition of dissolved-oxygen composition of the water column; biologically, by supplying downstream waters with organic matter that sustains the food web." ¹²² Even though the EPA provided an example of how one of the nine enumerated aquatic functions can impact all three statutory objectives, it has not stated with precise certainty that all nine of the aquatic functions would impact the CWA's objectives.

Although the EPA contends that Justice Kennedy did not necessarily hold that each of the three statutory objectives needed to be satisfied, the plain of language of CWA employs the "and" connector, suggesting that all three statutory objectives must indeed be satisfied for a water to fall within the CWA's jurisdiction. Furthermore, the legislative history consistently spoke of the importance of the physical, chemical, and biological integrity of the

^{118.} Rapanos, 547 U.S. at 780-784.

^{119.} Brief for Petitioner, *supra* note 21, at 14.

^{120. 80} Fed. Reg. 37108.

^{121.} Brief for Respondent, supra note 98, at 18.

^{122.} Id.

nation's waters.¹²³ Accordingly, the Clean Water Rule's use of the "or" connector instead of "and" may be problematic. The Rule's jurisdictional categorization of waters that significantly impact the "physical, chemical, or biological" integrity of traditional navigable waters may violate both the CWA and the court's holding in *Rapanos*.

IV. CONCLUSION

It is clear that the Clean Water Rule takes thoughtful consideration of the Court's holding in Rapanos in order to comply with both the language and the congressional intent of the Clean Water Act. However, the Clean Water Rule's determination that tributaries are "waters of the United States" seems to violate the plurality's opinion that only waters with a relatively continuous flow may be considered jurisdictional waters subject to the CWA. On the other hand, the inclusion of tributaries likely complies with Justice Kennedy's concurrence, because the Rule restricts the scope of covered tributaries to just those waters, which sufficiently contribute flow in order to impact downstream waters. The Rule's definition of adjacent waters, like tributaries, is likely too broad to comply with the Rapanos plurality. However, the scientific research provided by the EPA and the Corps suggests that the Rule's definition of "adjacent waters" would comply with Justice Kennedy's significant nexus test. Finally, the Clean Water Rule asserts that a body of water can meet the significant nexus test if it significantly impacts the "chemical, physical, or biological" integrity of downstream waters. This interpretation seems at odds with both the statutory requirements of the CWA as well as the Rapanos plurality and concurrence that a water must impact the chemical, physical, and biological integrity of jurisdictional waters in order to be considered a water of the United States.

As of March 21, 2016, the Sixth Circuit is considering the validity of the Clean Water Rule.¹²⁴ While the Clean Water Rule does seem to comply with many components of Justice Kennedy's concurrence

^{123.} H.R. Rep. No. 92-911, at 71 (1972); see also Cory Ruth Brader, Toward A Constitutional Chevron: Lessons from Rapanos, 160 U. PA. L. REV. 1479, 1492-93 (2012).

^{124.} In re E.P.A., 803 F.3d at 809.

in *Rapanos*, it is not clear whether the court will determine if his opinion or if the plurality opinion controls, as the Circuit's are presently split on the issue. ¹²⁵ As detailed above, the Clean Water Rule conflicts with the *Rapanos* plurality over which waters that fall within the scope of the CWA. Even if the court chooses to exclusively apply Justice Kennedy's concurrence, the court may find that certain provisions of the Clean Water Rule, including the Rule's application of the significant nexus test, violate the Clean Water Act.

125. Assessing Jurisdiction, supra note 38, at 10774 (2011).