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April 15, 2019

Via www.regulations.gov

The Honorable Andrew Wheeler
Administrator
U.S. Environmental Protection Agency
Office of the Administrator
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

The Honorable R.D. James
Assistant Secretary of the Army
Department of the Army
108 Army Pentagon
Washington, DC 20310

Re: Revised Definition of Waters of the United States
Docket No. EPA-HQ-OW-2018-0149¹

Dear Administrator Wheeler and Assistant Secretary James:

Together, our 80 organizations write to ask you to protect the streams, rivers, and wetlands that are essential to our country's natural environment, cultural history, and economy. We and our millions of members recognize that clear, predictable protections for streams and wetlands are essential to safeguarding the waters where Americans swim, fish, boat, paddle, hunt, and get their drinking water. This rulemaking would eliminate these protections without justification. We respectfully request that the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers withdraw the proposed rule.

¹ Aside from the documents cited from the rulemaking record, documents designated as exhibits A-E, case law, and federal and state statutes and regulations, the documents cited herein were submitted to the docket center by hand-delivery on April 15, 2019. (A stamped copy of the transmittal cover letter and document list is attached as Appendix 1.)

The Southern Environmental Law Center submits these comments on behalf of:

Alabama Rivers Alliance	Mobile Baykeeper
Altamaha Riverkeeper	MountainTrue
American Rivers	Natural Heritage Institute
Appalachian Voices	North Carolina Coastal Federation
Audubon Naturalist Society	North Carolina Wildlife Federation
Audubon South Carolina	Obed Watershed Community Association
Black Warrior Riverkeeper	Ogeechee Riverkeeper
Blue Ridge Land Conservancy	One Hundred Miles
Cahaba River Society	Passaic River Coalition
Cahaba Riverkeeper	Piedmont Environmental Council
Cape Fear River Watch	Potomac Riverkeeper Network
Capital Region Land Conservancy	Protect Our Aquifer
Carolina Wetlands Association	Rivanna Conservation Alliance
Catawba Riverkeeper	Roanoke River Basin Association
Center for a Sustainable Coast	Rockbridge Area Conservation Council
Charleston Waterkeeper	Satilla Riverkeeper
Chattahoochee Riverkeeper	Savannah Riverkeeper
Clean Water Action	Save EPA
Coalition for Smarter Growth	Save Our Saluda
Coastal Conservation League	Sierra Club
Congaree Riverkeeper	Sound Rivers
Coosa River Basin Initiative	South Wings
Coosa Riverkeeper	St. Mary's Earthkeepers
Defenders of Wildlife	Statewide Organizing for Community
Dogwood Alliance	eMpowerment
Endangered Habitat League	Surfrider Foundation Georgia Chapter
Environment Georgia	Tennessee Citizens for Wilderness
Flint Riverkeeper	Planning
Friends of Accotink Creek	Tennessee Clean Action Network
Friends of the Rappahannock	Tennessee Conservation Voters
Harpeth Conservancy	Tennessee Environmental Council
Haw Riverkeeper	Tennessee Scenic Rivers Association
Healthy Gulf	Upstate Forever
Hip Hop Caucus	Virginia Aquarium and Marine Science
Illinois Council of Trout Unlimited	Center
James River Association	Virginia Conservation Network
Lake James Environmental Association	Virginia League of Conservation Voters
Land Trust of Virginia	Waccamaw Riverkeeper
Loudoun Wildlife Conservancy	Wetlands Watch
Lumber Riverkeeper	Winyah Rivers Alliance
Lynnhaven River NOW	Yadkin Riverkeeper

I. SUMMARY OF COMMENTS

In what would be the biggest rollback in clean water protections in the 47 years since the Clean Water Act became law, this administration's proposal to redefine "waters of the United States" would drastically restrict Clean Water Act jurisdiction, particularly over streams and wetlands. The statutory term at issue—"waters of the United States"—is the jurisdictional "linchpin" for virtually every one of the Act's critical safeguards, including the Act's core prohibition established by section 402 against the discharge of pollutants without a "National Pollutant Discharge Elimination System" permit, the requirements regarding dredge and fill material in section 404 of the Act, the obligation that states develop water quality standards, and several other key statutory provisions.² Removing these protections would allow more pollution into our rivers, lakes, and drinking water sources, which are only as clean as the source waters that feed them. It would deal a devastating blow to people's health, clean water, and our economy—resulting in lost benefits of more than \$2.4 billion each year from wetland loss alone. That damage would only be exacerbated if the administration adopts the even more extreme restrictions of federal clean water protections proposed in its solicitation of comments.

At the outset, it must be emphasized that based on EPA's own assessment, we are far from reaching the objective of the Clean Water Act: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." More than half of streams evaluated by EPA are impaired. Our coastal waters that those streams and rivers flow into are much worse—nearly 80 percent of bays and estuaries are impaired, as are 91 percent of ocean and near-coastal waters and 100 percent of the Great Lakes open waters. By all accounts, more protection for clean water is necessary if we are to achieve the Clean Water Act's objective.

Yet the proposal acknowledges that it would make an already bad situation worse and, nonetheless, proceeds based on faulty rationale. Two legal fictions control this rulemaking. First is the agencies' dependence on the plurality opinion in *Rapanos*³ as controlling—even though the opinion was rejected by the majority of the Supreme Court. Dozens of federal courts have rejected the plurality opinion as controlling, yet the agencies treat it as binding. This proposal jettisons Justice Kennedy's opinion in *Rapanos* as that of "a single justice."⁴ But Justice Kennedy's opinion, and its significant nexus test, is controlling, and it sets forth the science-backed analysis that previous Supreme Court case law requires. The approach outlined in the proposal reverses decades of law and agency practice, but lacks any meaningful, valid explanation for the agencies' departure.

The second foundational fallacy is the agencies' assertion that Congress intended for section 101(b) to put the success of the statute exclusively in the states' hands when passing the 1972 Clean Water Act. That is not so. Congress did the opposite. Faced with two competing proposals to define the role of federal and state governments in implementing the Act, Congress rejected an approach like the one proposed here—the abandonment of federal jurisdiction to give

² See 33 U.S.C. § 1342; see also 43 Op. Att'y Gen. 197, at 200-201 (Sept. 5, 1979) ("The term navigable waters . . . is a linchpin of the Act . . . Its definition is not specific to § 404, but is included among the Act's general provisions.").

³ *Rapanos v. United States*, 547 U.S. 715 (2006).

⁴ Revised Definition of "Waters of the United States," 84 Fed. Reg. 4,154, 4,196 (Feb. 14, 2019).

states sole rein when it comes to protections for smaller streams and wetlands. Instead, Congress carefully defined the role of states by giving states the authority to implement sections 402 and 404 of the Act if their state programs meet federal minimum requirements. As our Supreme Court has long recognized, when Congress speaks so clearly, “that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.”⁵

Though the agencies have proposed a reversal of decades of law and policy, the proposal lacks any meaningful assessment of the damage that the proposal would do to our Nation’s waters. In these comments, we attempt to provide part of that analysis. The attached analysis by Moffat and Nichol shows that, in some watersheds in North Carolina, the proposal could eliminate protection for more than 90 percent of the stream network. In other watersheds in Virginia, North Carolina, South Carolina, and Georgia, the proposal could strip away protection for more than 40 percent of streams. Wetlands are similarly vulnerable—as much as 78 percent of headwater wetlands in coastal North Carolina could lose protection in addition to most basin, bog, bottomland hardwood forest, Carolina bay, floodplain pool, hardwood flat, headwater forest, non-riverine swamp forest, pine savanna, pocosin, and seep wetland types found in the state. Similar impacts are likely to occur throughout the Southeast.

The partial analysis provided in these comments does not, however, negate the agencies’ obligation to conduct a complete one. In short, the agencies must fully assess and disclose the proposal’s likely impact on the overriding objective of the Clean Water Act: to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. The first step in that analysis should be based on the permitting data included in the docket. Based on our assessment of that permitting data, the effect of this proposal would be devastating—thousands of acres of wetlands and hundreds miles of streams would be destroyed each year by development and other industrial activities without a section 404 permit. Nationwide, thousands of NPDES permittees that discharge into small streams could see their pollution control limits substantially reduced or eliminated altogether—allowing more pollution into our waterways. These are only the beginning of the potential impacts.

The agencies’ Economic Analysis, while incomplete and deeply flawed, foreshadows the breadth of the damage the proposal would cause. For example, it admits that the proposal would reduce ecosystem values provided by streams and wetlands, increase downstream flooding damages, require more expensive restoration efforts, increase costs for drinking water providers, and increase oil spill response costs. Yet the Economic Analysis concludes that the avoided costs of permitting outweigh the benefits lost. The flaw in the analysis is plain—despite quantifying the full suite of permitting costs avoided, the agencies omit the full costs incurred to the nation from a loss of protection by focusing narrowly on impacts to wetland mitigation. Even that analysis is arbitrarily narrow. As demonstrated in the attached reports from Dr. John Whitehead and Dr. Jeff Mullen, the benefits of wetland mitigation far exceed the costs when fairly calculated. If the other economic damages of this rule were included, the lost benefits would far exceed the cost savings identified. The cost savings to relatively few permittees do not outweigh the greater harm to the public.

⁵ *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984).

This proposal is a study in contrasts. Congress established and intended robust federal clean water protections; the proposal would hollow out those safeguards. Federal courts have unanimously rejected the *Rapanos* plurality as the controlling opinion in that case; the proposal is built on it. EPA data shows that more must be done to meet the Clean Water Act's objective; the proposal does less. Science compiled by the agencies tells us that protections for small streams and wetlands are essential to keeping downstream waters clean; the proposal leaves the fate of those waters to under-funded state agencies and the whims of heavy-polluting industries. History shows us that polluted water exacts a significant economic toll; the proposal concludes that eliminating protections for clean water is a net benefit. These contrasts not only make this proposal bad policy, they render it illegal. This administration's assault on clean water must stop. Withdraw this rule.

II. THE SOUTH HAS TREMENDOUS RESOURCES AT STAKE IN THIS RULEMAKING.

Southern streams, rivers, lakes, estuaries, and oceans are central to our region's history, culture, and economy. Compared to other regions, the South has more miles of streams and more acres of wetlands. Those resources, combined with the South's underfunded state water-quality programs, makes the region especially vulnerable to the loss of federal clean water protections. North Carolina, South Carolina, and Georgia alone have approximately 18 million acres of wetlands, many of which are pocosins, Carolina bays, cypress domes, or other unique wetland types that are only found in the South. These regional gems were rightly granted clearer protection by the Clean Water Rule, and are now at risk of destruction under the agencies' short-sighted proposal. Because of our tremendous natural resources, the agencies' proposal would have a significant effect on our region.

The southeastern United States is a hotspot for vital species of plants and animals, containing some of the most species-rich amphibian, reptilian, and freshwater fish communities in North America.⁶ Freshwater biodiversity in this region is the highest in the nation. Alabama alone supports 38 percent of native freshwater fish species and 60 percent of native mussel species.⁷ Our fisheries and recreation industry benefit when small streams and wetlands, which are integral for fish and wildlife habitat, are protected. In 2011, in the six states where SELC works—Virginia, North Carolina, South Carolina, Georgia, Alabama, and Tennessee—the U.S. Fish and Wildlife Service reported that a total of \$19 billion was spent on wildlife recreation, including \$5.7 billion on fishing; more than 15.9 million people participated in these recreational activities throughout the six-state region.⁸ The Ecological Economics Journal estimates the Clean Water Act has been responsible for adding as much as \$15.8 billion in economic benefits for the

⁶ Clinton N. Jenkins et al., U.S. Protected Lands Mismatch Biodiversity Priorities, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, 5081 (2015); Guinessey et al., A Literature Review: The Chemical, Physical and Biological Significance of Geographically Isolated Wetlands and Non-Perennial Streams in the Southeast 11, 12, 28 (Apr. 12, 2019) ("Literature Review"), attached as exhibit A.

⁷ Charles Lydeard & Richard L. Mayden, A Diverse and Endangered Aquatic Ecosystem of the Southeast United States, CONSERVATION BIOLOGY 802 (Aug. 1995); Ex. A, Literature Review at 28.

⁸ See U.S. DEPARTMENT OF THE INTERIOR, U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF COMMERCE, AND U.S. CENSUS BUREAU, 2011 NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION, 95-97 (Feb. 2014); see also Ex. A, Literature Review at 22.

Commonwealth of Virginia, alone.⁹ And a host of Virginia industries rely on access to clean water—including tourism, which employs 350,000 Virginians and generates \$18 billion for the economy.¹⁰

Each year, visitors from across the country vacation on southern beaches. In 2016 alone, tourism around our beaches generated nearly \$8 billion in gross domestic product and over 190,000 jobs.¹¹ Recreational fishermen catch trout in our mountain streams, bass in our piedmont lakes and streams, and any number of saltwater fish in our extensive estuaries and beaches.¹² Commercial fishermen fish our estuaries and ocean waters, landing more than \$300 million worth of catch in 2017.¹³ Our populations are growing as people move to our expanding cities and our developing retirement communities. Each of these parts of the southern economy depends on clean water.

In addition to the impacts on tourism and industry, the agencies' proposal threatens drinking water sources for seven out of ten southerners, over 32 million people.¹⁴ Southern states simply do not have the resources to protect the waters at risk under the agencies' proposal. Our states have some of the largest budget shortfalls in the country.¹⁵ Even where Southern states are able to take action, they cannot address water quality issues on their own. Virginia regulators, for example, have worked hard to clean up the Chesapeake Bay. But without a strong, consistent level of nationwide protections for clean water, that effort stands to be undone. A patchwork of state laws would not maintain water quality in the many tributaries feeding the Chesapeake Bay from multiple states, and weaker protections imposed by other states would both unfairly add to Virginia's burden and prevent progress in the Bay.

Coming on the heels of hurricanes Florence and Michael, we have never depended more on our wetlands for flood control and storm surge protection. With abundant coastlines, lakes, marshes, and rivers, our Southern communities and states stand to lose the most if big polluters are allowed to dodge the basic protections that keep our water clean and safe from pollution. We depend on consistent minimum federal standards to safeguard clean water and protect our communities, families and everyday life.

⁹ Jim Epstein, *Clean Water Is Vital for Success of Virginia Business*, The Daily Progress, https://www.dailyprogress.com/opinion/opinion-column-clean-water-is-vital-for-success-of-virginia/article_54a3fad0-71c6-11e4-ab71-23593a302e82.html (last visited Apr. 8, 2019).

¹⁰ *Id.*

¹¹ National Ocean Economics Program, *Ocean Economy Data* (GA, NC, SC, VA) (2016).

¹² See Pete Flood, *Top 10 Fishing Spots in the Southeast*, Folding Boat Co. Blog, <https://www.foldingboatco.com/blog/2017/4/11/top-10-fishing-spots-in-the-southeast> (last visited Mar. 18, 2019).

¹³ See NATIONAL MARINE FISHERIES SERVICE, ANNUAL COMMERCIAL LANDINGS STATISTICS (AL, GA, NC, SC, VA) (2017), https://www.st.nmfs.noaa.gov/st1/commercial/landings/annual_landings.html.

¹⁴ SELC GIS, *Population Served by Drinking Water in the Southeast – Methodology* and SELC GIS, *Drinking Water Analysis Data* (collectively, “SELC GIS Analysis”).

¹⁵ Truth in Accounting, *Financial State of the States* (September 2018).

III. THE CLEAN WATER ACT WAS PASSED WITH BIPARTISAN SUPPORT TO RESTORE AND MAINTAIN THE INTEGRITY OF THE NATION’S WATERS.

By the late 1960s, the Nation’s rivers, lakes, wetlands, and streams suffered mightily as the result of industrial pollution, municipal waste, and indiscriminate filling.¹⁶ Rivers and streams were “little more than open sewers.”¹⁷ The Cuyahoga River was so polluted with industrial waste it caught fire.¹⁸ Massive algae blooms choked the Great Lakes, killing millions of fish and tainting the water supplies of millions.¹⁹ Biologically, Lake Erie was “dead.”²⁰ Wetlands were disappearing at an alarming rate, depriving coastal areas and river valleys of critically important flood control protection and ecological benefits.²¹ Of the estimated 221 million acres of wetlands that were originally present in the coterminous states, more than half had been lost to dredging, filling, draining, and flooding.²²

The proverbial race to the bottom was underway, and the public was losing. Many of the states tasked with addressing water pollution had shirked their responsibility. To remedy the national crisis, Congress passed the Federal Water Pollution Control Act Amendments of 1972, commonly known as the Clean Water Act. The Act marked a major turning point.

Congress replaced the prior system—“a patchwork of ineffective state laws, and the Federal Water Pollution Control Act that dated to 1948,”²³—with comprehensive legislation “to restore and maintain the . . . integrity of the Nation’s waters.”²⁴ “[T]o achieve this objective,”²⁵ Congress listed seven broad goals, including “protection and propagation of fish, shellfish, and wildlife,” “recreation in and on the water,” elimination of “the discharge of toxic pollutants in toxic amounts,” and “the control of nonpoint sources of pollution.”²⁶ Congress also required the states or federal government to adopt water quality standards for all waters covered by the Act “taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.”²⁷

Support for the Clean Water Act has been “bipartisan and far reaching.”²⁸ Large majorities of both parties in the Senate and House of Representatives voted for the major

¹⁶ See, e.g., H.R. Rep. No. 92-911, at 1 (1972); S. Rep. No. 92-414, at 7 (1971).

¹⁷ S. Rep. No. 111-361, at 1 (2010).

¹⁸ *Id.*

¹⁹ *Id.* (citing 138 CONG. REC. D612 (daily ed. Sept. 22, 1992) (Prepared Statement of LaJuana S. Wilcher, Assistant Administrator for Water, at EPA, Hearing Before the Committee on Environment and Public Works, United States Senate)).

²⁰ S. Rep. No. 111-361, at 1 (2010).

²¹ *Id.*

²² U.S. FISH & WILDLIFE SERVICE, WETLANDS: STATUS AND TRENDS OF WETLANDS IN THE COTERMINOUS UNITED STATES, MID-1970S TO THE MID-1980S (1991).

²³ S. Rep. No. 111-361, at 1 (2010).

²⁴ Pub. L. No. 92-500, § 101(a), 86 Stat. 816 (1972) (codified at 33 U.S.C. § 1251(a)).

²⁵ 33 U.S.C. § 1251(a).

²⁶ *Id.* § 1251(a)(1)-(6).

²⁷ *Id.* § 1313(c).

²⁸ S. Rep. No. 111-361, at 1 (2010).

enactments in 1972 and 1977.²⁹ Supportive of the bill’s environmental aims, President Richard Nixon vetoed the 1972 bill for cost reasons, but the reaction to the veto was swift and decisive.³⁰ Congress overrode the veto just one day after it was issued, with overwhelming bipartisan margins in both houses of Congress.³¹

In setting the Act’s objective and goals, Congress could not have established a more encompassing approach to protecting the Nation’s waters, one aimed at addressing every aspect of the country’s water quality crisis.

IV. THE CURRENT STATE OF THE NATION’S WATERS DEMANDS STRONGER CLEAN WATER PROTECTIONS, NOT ROLLBACKS.

Despite Congress’s “broad, systemic view of the goal of maintaining and improving water quality,”³² data show that we still have significant work to do to achieve the integrity of the Nation’s waters—work that would not be done if Clean Water Act protections are slashed.

More than 50 percent of the rivers and streams assessed by EPA are impaired.³³ Nearly 80 percent of the bays and estuaries assessed are impaired, as are 91 percent of ocean and near-coastal waters and 100 percent of the Great Lakes’ open waters.³⁴ These areas do not yet meet the Act’s goal of making waters fishable and swimmable.³⁵ They suffer from harmful bacteria, nutrient pollution, and sediment overload that suffocate fish and other aquatic wildlife.³⁶

In the Southeast, the health of our rivers and streams is especially dire. Toxic contaminants being dumped into our waterways by industry, development, and agriculture are seeping into our drinking water sources, and into our homes.³⁷ As of 2014, only *two miles* out of nearly 40,000 assessed miles of North Carolina’s rivers and streams were in “good” condition (*see* Figure 1) so that they can be used for recreation, drinking water, and habitat.³⁸

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*; *see also* 118 Cong. Rec. 36,879 (Senate vote of 52 to 12); *id.* 37060-61 (House vote of 247 to 23).

³² *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 132-33 (1985).

³³ *See* EPA, NATIONAL SUMMARY OF STATE INFORMATION: WATER QUALITY ASSESSMENT AND TMDL INFORMATION, http://ofmpub.epa.gov/waters10/attains_nation_cy.control (last visited Apr. 8, 2019); EPA, NATIONAL WATER QUALITY INVENTORY: 4 REPORT TO CONGRESS (Aug. 2017).

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ Editorial: *We Need More State Help with Water Quality*, FAYETTEVILLE OBSERVER (Apr. 7, 2019).

³⁸ EPA, NATIONAL SUMMARY OF STATE INFORMATION - NORTH CAROLINA RIVERS AND STREAMS 2014, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=NC (last visited Mar. 14, 2019).

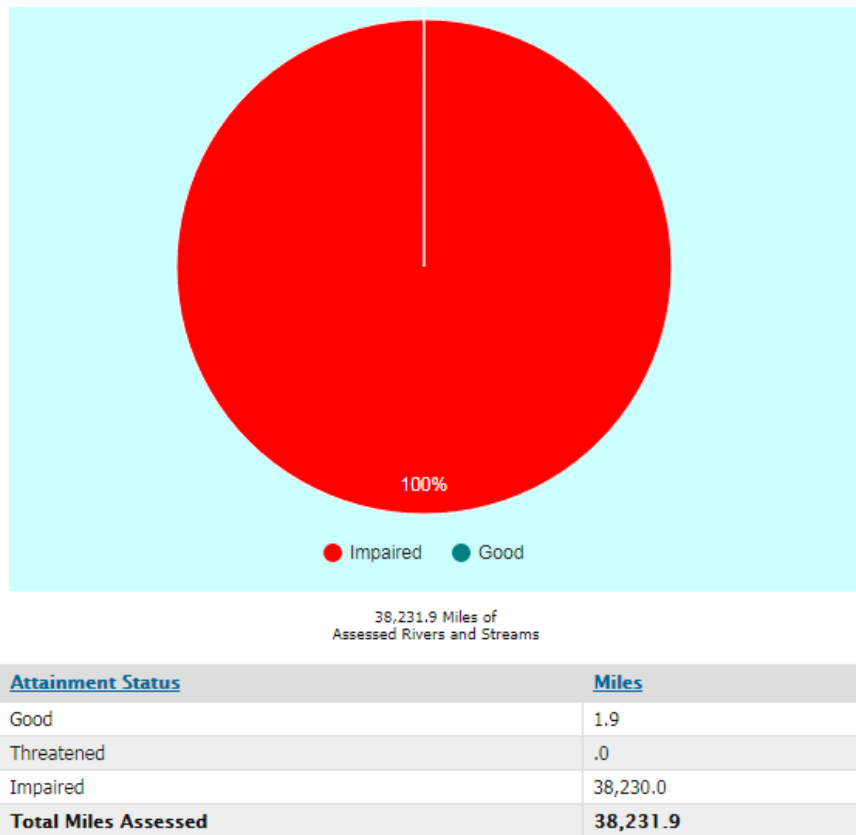


Figure 1: Condition of North Carolina Rivers and Streams 2014³⁹

Similarly, more than 65 percent of the rivers and streams studied in Virginia were impaired,⁴⁰ and in Georgia, more than 59 percent of the rivers and streams studied were impaired.⁴¹ Unsurprisingly, given the problems facing streams and rivers, more than 70 percent of the Nation's lakes, reservoirs, and ponds studied by the EPA are impaired.⁴² Widely contaminated by mercury and other metals, excess nutrients, and polychlorinated biphenyls (PCBs), they are neither suitable for habitat nor safe for fishing, swimming, and boating.⁴³ Indeed, *100 percent* of North Carolina's lakes, reservoirs, and ponds assessed are impaired (Figure 2)⁴⁴; in Virginia, over 80 percent.⁴⁵

³⁹ *Id.*

⁴⁰ EPA, NATIONAL SUMMARY OF STATE INFORMATION - VIRGINIA RIVERS AND STREAMS 2008, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=VA (last visited Mar. 14, 2019).

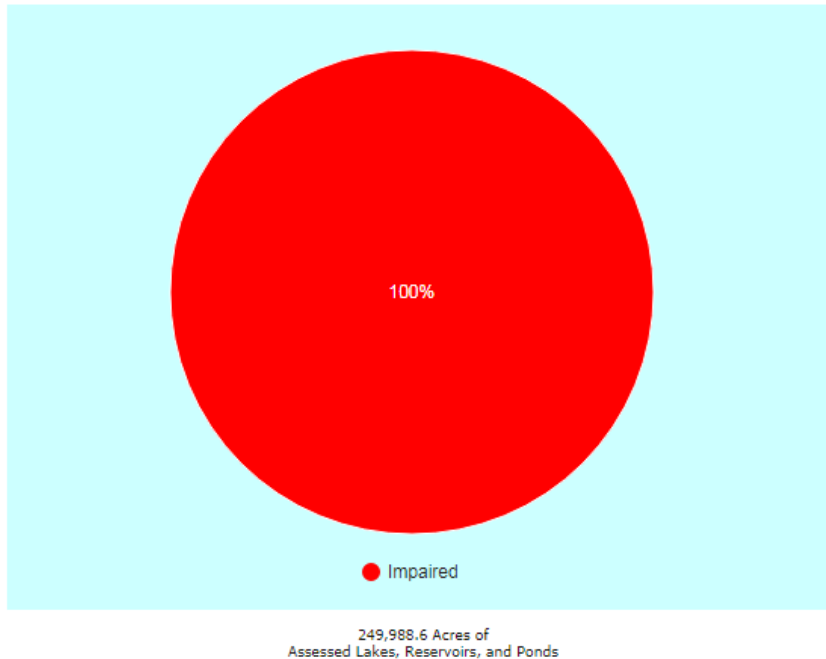
⁴¹ EPA, NATIONAL SUMMARY OF STATE INFORMATION - GEORGIA RIVERS AND STREAMS 2014, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=GA (last visited Mar. 14, 2019).

⁴² EPA, NATIONAL SUMMARY OF STATE INFORMATION - WATER QUALITY ATTAINMENT IN ASSESSED LAKES, RESERVOIRS, AND PONDS, https://ofmpub.epa.gov/waters10/attains_nation_cy.control#LAKE/RESERVOIR/POND (last visited Mar. 14, 2019).

⁴³ *Id.*

⁴⁴ EPA, NATIONAL SUMMARY OF STATE INFORMATION - NORTH CAROLINA LAKES, RESERVOIRS, AND PONDS 2014, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=NC (last visited Mar. 14, 2019).

⁴⁵ EPA, NATIONAL SUMMARY OF STATE INFORMATION - VIRGINIA LAKES, RESERVOIRS, AND PONDS 2008, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=VA (last visited Mar. 14, 2019).



Attainment Status	Acres
Good	.0
Threatened	.0
Impaired	249,988.6
Total Acres Assessed	249,988.6

*Figure 2: Condition of North Carolina Lakes Reservoirs, and Ponds 2014*⁴⁶

The Nation's wetlands are in no better shape, largely due to development, silviculture, and agriculture.⁴⁷ Between 2004 and 2009, the country lost 630,000 acres of forested wetlands, primarily in the Southeast.⁴⁸ Previously teeming with mammals, birds, fish, and invertebrates, over half of the remaining wetlands are now unsuitable for habitat, threatened by severe oxygen depletion and heavy metal pollution.⁴⁹

As a Nation, we are far from achieving the Clean Water Act's objective. Now is not the time for the agencies to abdicate their responsibility to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."⁵⁰ Should the agencies proceed with their current proposal, they do so despite the known risks to our economy, our infrastructure, and the health and well-being of our communities.

⁴⁶ EPA, NATIONAL SUMMARY OF STATE INFORMATION - NORTH CAROLINA LAKES, RESERVOIRS, AND PONDS 2014, https://ofmpub.epa.gov/waters10/attains_state.control?p_state=NC (last visited Mar. 14, 2019).

⁴⁷ See U.S. Fish and Wildlife Service, Status and Trends of Wetlands in the Conterminous United States 2004-2009 31 (2013).

⁴⁸ U.S. DEP'T OF INTERIOR, NEWS RELEASE: FIVE-YEAR SURVEY SHOWS WETLANDS LOSSES ARE SLOWING, MARKING CONSERVATION GAINS AND NEED FOR CONTINUED INVESTMENT IN HABITAT (Oct. 6, 2011), <https://www.fws.gov/mountain-prairie/pressrel/11-doi-10-06-2011.html> (last visited Mar. 14, 2019).

⁴⁹ EPA, NATIONAL SUMMARY OF STATE INFORMATION - WATER QUALITY ATTAINMENT IN ASSESSED WETLANDS, https://ofmpub.epa.gov/waters10/attains_nation_cy.control#WETLAND (last visited Mar. 14, 2019).

⁵⁰ 33 U.S.C. § 1251(a).

V. THE FOUNDATION OF THE RULEMAKING IS INVALID.

The agencies' proposal is built on three themes, none of which withstand scrutiny. First, the agencies distort the role of states, interpreting section 101(b) to directly conflict with Congress's intent. Second, the agencies adopt the reasoning in Justice Scalia's plurality opinion in *Rapanos* even though it was rejected by the majority of the Court. Finally, the rule prioritizes "regulatory certainty" as an end in and of itself, above the Act's singular objective to restore the Nation's waters, yet the proposal generates confusion rather than clarity.

A. Congress Did Not Intend to Elevate States' Rights Above the Integrity of the Nation's Waters.

The foundational premise of the agencies' proposal is that the first sentence of section 101(b) reflects congressional intent to limit federal jurisdiction in deference to states. That premise could not be more incorrect.

The statutory and legislative history of the Clean Water Act creates an undeniable preeminent role for the federal government in protecting the nation's water quality, one that cannot be discarded based on a misinterpretation of section 101(b). In the proposed rule's preamble, the agencies erroneously supplant the Clean Water Act's explicit objective of protecting the integrity of the Nation's waters, as outlined in section 101(a), with a newly posited elevation of states' roles that they allege is required by that first sentence in section 101(b). The agencies' inordinate reliance on that single, dated sentence to define the scope of the entire statute is improper.

The language in section 101(b) dates back to 1948 and the country's earliest, feckless efforts to address water pollution through state action.⁵¹ In that introductory sentence, Congress provided that "[i]t is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of the States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources."⁵² At the time, states did retain primacy over water pollution control, with the federal government providing funding and acting solely in an advisory role. In the absence of minimum federal standards, states found themselves in a race to the bottom to attract industry, sacrificing water quality.

Congress recognized that the states failed to protect water quality—indeed they made it worse. "By 1972, when Congress was moved to act again, one-half of the states had no water quality standards, fewer still had set numerical limits in them, and fewer still had permit systems applying them to polluters."⁵³ Congress decided to drastically change the law to give the federal

⁵¹ Oliver Houck, *Cooperative Federalism, Nutrients, and the Clean Water Act: Three Cases Revisited*, ENVIRONMENTAL LAW REPORTER, 44 ELR 10,426, 104, 27 (2014), https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwi46Ivc9NHhAhXJrFkKHe5jBKYQFjABegQIBhAC&url=http%3A%2F%2Fudel.edu%2F~inamdar%2Fnps2007%2FHouck2014.pdf&usq=AOvVaw1tAf6gLse2StebbO4VgkU_ (last visited Apr. 14, 2019).

⁵² Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (1972).

⁵³ Houck, *supra* note 51, at 10,427

government primary authority over the health and safety of our waters.⁵⁴ The Senate Committee on Public Works, which went on to draft the Clean Water Act of 1972, summed up the situation as follows: “[T]he national effort to abate and control water pollution has been inadequate in every vital aspect.”⁵⁵

With the Clean Water Act of 1972, Congress replaced the state-led nuisance/abatement regulatory scheme that only addressed pollution if it caused “unreasonable harm” with a framework based on regulating pollution before it was discharged.⁵⁶ At the time, Congress knew the states could not be relied on to “develop sufficiently tough regulatory controls on water pollution to make real progress on cleaning up the nation’s rivers and lakes.”⁵⁷ Because the Clean Water Act of 1972 was intended as a “total restructuring,”⁵⁸ to put the federal government in the primary role for implementing the new water pollution control system, Congress added section 101(a). “Section [101](b) was trumped by new § [101](a), announcing a national goal to ‘restore and maintain’ the nations waters.”⁵⁹

Still, questions arose regarding the states’ role under the new Act—the same questions that are raised by the agencies here. Notably, section 101(b) of the 1972 Act provided little detail describing what it meant for states to maintain “the primary responsibilities” to “prevent, reduce, and eliminate pollution.”⁶⁰ It lacked the second sentence of the current statute—“It is the policy of Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title.”⁶¹ This uncertainty was laid to rest in the 1977 Clean Water Act amendments, which set forth the parameters for state involvement.

Leading up to the 1977 amendments, the House of Representatives and Senate took different approaches to resolving concerns about the role of states under the Clean Water Act. The House bill dramatically limited federal jurisdiction, leaving states complete discretion; the Senate described the states’ role within the statute with more specificity.

The House bill mirrors, in many ways, the agencies’ proposal. Much like the agencies, the House Committee on Public Works and Transportation argued that “[t]he activities addressed

⁵⁴ Houck, *supra* note 51, at 10,428.

⁵⁵ Robert L. Glicksman & Matthew R. Batzel, Science, Politics, *Law and the Arc of the Clean Water Act: The Role of Assumptions in the Adoption of a Pollution Control Landmark*, 32 WASH. U.J.L. & POL’Y 99, 103 (2010) (quoting S. Rep. No. 92-414 at 7 (1972)).

⁵⁶ N. William Hines, History of the 1972 Clean Water Act: *The Story Behind the 1972 Act Became the Capstone on a Decade of Extraordinary Environmental Reform*, JOURNAL OF ENERGY & ENVIRONMENTAL LAW 80 (Summer 2013).

⁵⁷ *Id.* at 82.

⁵⁸ See *City of Milwaukee v. Illinois*, 451 U.S. 304, 317 (1981) (explaining that explained that the CWA was “not merely another law ‘touching interstate waters’” but was “viewed by Congress as a ‘total restructuring’ and ‘complete rewriting of the existing water pollution legislation.’”); see also *id.* at 318 (“Congress’ intent in enacting the [CWA] was clearly to establish an all-encompassing program of water pollution regulation.”); see also *Middlesex Cnty. Sewerage Auth. v. Nat’l Sea Clammers Ass’n*, 453 U.S. 1, 22 (1981) (existing statutory scheme “was completely revised” by the enactment of the Clean Water Act).

⁵⁹ Houck, *supra* note 51, at 10,428.

⁶⁰ Pub. L. No. 92-500, 86 Stat. 816 (1972).

⁶¹ 33 U.S.C. § 1251(b); see Pub. L. No. 92-500, 86 Stat. 816 (1972).

by section 404, to the extent they occur in waters other than navigable waters . . . are more appropriately and more effectively subject to regulation [by] the States.”⁶² The Committee raised concerns that “under the existing section 404 program given its broadest reach, all matters of small agricultural and forestry activities could be subject to Federal permit regulation.”⁶³ To address these concerns, the House bill defined navigable waters to dramatically reduce federal jurisdiction.

The Senate took an approach that preserved minimum federal standards—adding the ability for states to assume permitting responsibilities under section 404 as long as they met certain requirements and including exemptions for certain industries, like agriculture. The underlying premise of the Senate’s approach was that “the discharge of waste directly into the Nation’s waters and oceans is permitted . . . only where ecological balance can be assured.”⁶⁴ The Senate recognized that “[t]here is no question that the systematic destruction of the Nation’s wetlands is causing serious, permanent ecological damage.”⁶⁵ The chamber found it “both necessary and appropriate to make a distinction as to the kinds of activities that are to be regulated by the Federal Government and the kinds of activities which are to be subject to some measure of local control.”⁶⁶

The Senate bill did three things. First, it made clear that “[t]o limit the jurisdiction of the [act] with reference to discharges of the pollutants of dredged or fill material would cripple efforts to achieve the act’s objectives.”⁶⁷ Second, it added the extensive exclusions included in section 404(f).⁶⁸ Third, it adopted an amendment to implement the “stated policy of Public Law 92-500 of ‘preserving and protecting the primary responsibilities and rights of States [to] prevent, reduce, and eliminate pollution.’”⁶⁹ That amendment did so by providing “for assumption of the permit authority by States with approved programs for control of discharges for dredged and fill material in accord with the criteria and with guidelines comparable to those contained in 402(b) and 404(b)(1).”⁷⁰

The Senate bill prevailed, was agreed to by the House, and represents Congress’s unmistakable intent. As the conference report notes, Congress clarified its intent regarding states’ roles by amending section 101(b) to authorize them to “manage the construction grant program and implement the 402 and 404 permit programs.”⁷¹ In doing so, Congress created “a State program . . . which is established under State law and which functions in lieu of the Federal program” as long as the program complied with minimum federal standards.⁷² This was Congress’s plain intent for implementing section 101(b).

⁶² H.R. 95-139 at 22 (1977).

⁶³ *Id.* at 23.

⁶⁴ S. Rep. 95-370 at 4 (1977).

⁶⁵ *Id.* at 10.

⁶⁶ *Id.*

⁶⁷ *Id.* at 75.

⁶⁸ *Id.* at 76.

⁶⁹ *Id.* at 77.

⁷⁰ *Id.*

⁷¹ H.R. Conf. Rep. 95-830 at 66 (Dec. 5, 1977).

⁷² *Id.* at 104.

The EPA accurately summarized Congress’s intent in the summer of 1978 in “A Guide to the Clean Water Act Amendments.”⁷³ Recognizing that the 1972 law “had defined the Federal interest to be both broad and, in some areas, pre-eminent[,] . . . [t]he 1977 amendments respond to this problem by more explicitly defining the roles of the different levels of government.”⁷⁴ EPA recognized that “[a] major thrust of the 1977 amendments is to shift toward the exercise of more authority by the states.”⁷⁵ The changes “amended the Act to assure that it would not interfere with state water rights and water allocation systems.”⁷⁶

In signing the 1977 amendments, President Carter emphasized that “[t]he Nation’s wetlands will continue to be protected under a framework which is workable and which shares responsibilities with the States.”⁷⁷ Carter noted that framework included not only the ability for states to assume the dredge and fill program, it added exclusions for farming and forestry activities left to state and local control.⁷⁸

In *Riverside Bayview*, the Supreme Court unanimously recognized Congress’s choice. There, the Court instructed that Congress “dealt with the perceived problem of overregulation by the Corps by exempting certain activities (primarily agricultural) from the permit requirement and by providing for assumption of some of the Corps’ regulatory duties by federally approved state programs.”⁷⁹

The legislative history clearly explains Congress’s intent with section 101(b). The first sentence announces that states are to have a primary role in controlling water pollution. The second sentence says how: by giving states the ability to assume the lead role in issuing permits and carrying out the Act’s requirements. Rather than signal a division of waters—one subject to federal protection, but a vast network of upstream tributaries and wetlands immune from it—the provision read as a whole divides the federal and state functions in protecting national waters. This common sense reading of section 101(b) fits with the legislative history and forecloses the agencies’ interpretation.⁸⁰

Section 101(b)’s plain language “is the end of the matter.”⁸¹ It does not, and cannot, support the EPA and the Corps abdicating their statutory mandate to enforce the Act in a manner that serves the objective of restoring and maintaining the integrity of our waters. That intent of Congress controls; the agencies have no authority to make a different choice. “If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give

⁷³ See generally, EPA, A GUIDE TO THE CLEAN WATER ACT AMENDMENTS (Nov. 1978).

⁷⁴ *Id.* at 2.

⁷⁵ *Id.* at 13.

⁷⁶ *Id.* at 14.

⁷⁷ Pres. J. Carter, Clean Water Act of 1977: Statement on signing HR 3199 into law (Dec. 28, 1977).

⁷⁸ *Id.* at 2.

⁷⁹ 474 U.S. 121 at 136 (1985).

⁸⁰ *Id.* at 14.

⁸¹ *Chevron*, 467 U.S. at 842-43; see also *Pennsylvania v. Trump*, 281 F.Supp.3d 553, 578 (E.D. PA 2017) (“When Congress provides exceptions in a statute . . . [t]he proper inference . . . is that Congress considered the issue of exceptions and, in the end, limited the statute to the ones set forth”) (quoting *U.S. v. Johnson*, 529 U.S. 53, 58 (2000)).

effect to the unambiguously expressed intent of Congress.”⁸² Accordingly, the foundation of this rulemaking crumbles. Congress has expressly rejected your interpretation of section 101(b).

B. The Administration Erroneously Relies on Justice Scalia’s Plurality Opinion in *Rapanos*.

In addition to ignoring congressional intent, the agencies misinterpret Supreme Court precedent. Rather than follow Justice Kennedy’s controlling opinion, they adhere solely to Justice Scalia’s, an opinion rejected by the majority of the Court and described by Justice Kennedy as “unprecedented.”⁸³ Apparently recognizing the error in this approach, the proposal quotes from Kennedy’s opinion and attempts to interpret it as consistent with Justice Scalia’s. The incompatibility of the two is made clear by the agencies’ decision to discard the significant nexus test at the core of Kennedy’s opinion.

Justice Scalia’s opinion upends decades of established law and agency interpretation of the Clean Water Act.⁸⁴ The approach would remove protections from ephemeral and intermittent streams, as well as from a majority of wetlands. It is an interpretation that “is inconsistent with the Act’s text, structure, and purpose.”⁸⁵ As Kennedy concluded, Scalia’s approach “makes little practical sense in a statute concerned with downstream water quality.”⁸⁶

Still, the agencies use Scalia’s plurality opinion to restrict the scope of Clean Water Act jurisdiction to “relatively permanent flowing and standing waterbodies that are traditional navigable waters in their own right or that have a specific connection to traditional navigable waters, as well as wetlands abutting or having a direct hydrologic surface connection to those waters.”⁸⁷ The agencies have overtly rejected the Court’s significant nexus test in defining the reach of jurisdiction under the proposal.⁸⁸

Perhaps aware of the peril in rejecting the significant nexus test at the heart of Justice Kennedy’s opinion, the agencies falsely claim their current approach is consistent with both that opinion and the plurality.⁸⁹ But in attempting to square that circle, the agencies have stretched Justice Kennedy’s decision beyond its breaking point.

⁸² *Chevron*, 467 U.S. at 842-43.

⁸³ *Rapanos*, 547 U.S. at 769.

⁸⁴ We criticize the agencies for relying solely on Justice Scalia’s opinion with respect to the arbitrary limits he placed on federal jurisdiction over the nation’s waters. On that issue, he was wrong. But on the well-established principle that the Clean Water Act “holds liable those who discharge a pollutant from a defined point source to [a navigable water],” Justice Scalia was correct. *Hawaii Wildlife Fund v. Cty. of Maui*, 886 F.3d 737, 748-49 (9th Cir. 2018), *cert. granted*, 87 U.S.L.W. 3319 (U.S. Feb. 19, 2019) (No. 18-260). No Justice disagreed with him on this principle, nor do we. *Id.*

⁸⁵ *Rapanos*, 547 U.S. at 778.

⁸⁶ *Id.* at 769.

⁸⁷ 84 Fed. Reg. at 4,170.

⁸⁸ *Id.*

⁸⁹ *See, e.g.*, 84 Fed. Reg. at 4,167 (“[A]lthough the standards that the plurality and Justice Kennedy established are not identical, and each standard excludes some waters that the other standard does not, the standards contain substantial similarities.”); *id.* at 4,168 (“[W]hile the plurality and Justice Kennedy viewed the question of federal CWA jurisdiction differently, there are sufficient commonalities between these opinions to help instruct the agencies on where to draw the line between Federal and State waters.”).

First, the agencies distort Justice Kennedy’s opinion to say that they can discard the “significant nexus” test because they have proposed “more specific regulations.”⁹⁰ When read in context, Justice Kennedy’s intent is clear: the agencies have authority to designate by regulation categories of waters that *meet* the significant nexus test—not promulgate regulations that ignore it.⁹¹

Second, the agencies ignore differences between the Kennedy and Scalia tests that cannot be squared by a wave of the rhetorical wand. Not only did Justice Kennedy define “wetlands” using the science-based, regulatory definition (whereas Justice Scalia, essentially described them as “moist patches of earth”⁹²), Justice Kennedy faulted the Justice Scalia for ignoring the significant nexus test from *SWANCC*.⁹³ Kennedy’s opinion also rejects two restrictions that Scalia would have placed on waters of the United States—(1) that they must be relatively permanent, and (2) that they must have a continuous surface connection to a relatively permanent water—as being unsupportable under a pragmatic, functional, or legal approach to the statute.⁹⁴ “In sum,” wrote Justice Kennedy, the “plurality’s opinion is inconsistent with the Act’s text, structure, and purpose.”⁹⁵

The Courts of Appeals that have decided post-*Rapanos* cases have rejected the plurality opinion as the controlling test. None of these Courts have suggested that the Kennedy and Scalia tests are similar, and they have overwhelmingly held that where the Scalia test would find no jurisdiction, but Justice Kennedy’s significant nexus would, the latter controls.⁹⁶ The agencies are not now free to disregard Justice Kennedy’s opinion.⁹⁷

As the Supreme Court has instructed: “[o]nce we have determined a statute’s clear meaning, we adhere to that determination under the doctrine of *stare decisis*, and we judge an agency’s later interpretation of the statute against our prior determination of the statute’s meaning.”⁹⁸ The Supreme Court has held that the clear purpose of the Clean Water Act is to “to establish a comprehensive long-range policy for the elimination of water pollution”⁹⁹ and “to

⁹⁰ 84 Fed. Reg. at 4,175, 4,186 (alteration in original).

⁹¹ *Rapanos*, 547 U.S. at 782 (Kennedy, J. concurring) (emphasis added).

⁹² *Id.* at 761.

⁹³ *Id.* at 767 (citing *Solid Waste Agency of N. Cook County v. Corps of Eng’rs*, 531 U.S. 159, 165 (2001) (“*SWANCC*”)).

⁹⁴ *Id.* at 768-769, 778 (“the plurality reads nonexistent requirements into the Act.”).

⁹⁵ *Id.* at 776.

⁹⁶ See, e.g., *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724–25 (7th Cir. 2006); *United States v. Robison*, 505 F.3d 1208, 1222 (11th Cir. 2007); *United States v. Moses*, 496 F.3d 984, 989–91 (9th Cir. 2007); *N. California River Watch v. City of Healdsburg*, 496 F.3d 993, 999–1000 (9th Cir. 2007); *United States v. Bailey*, 571 F.3d 791, 798–800 (8th Cir. 2009); *United States v. Cundiff*, 555 F.3d 200, 210–13 (6th Cir. 2009); *United States v. Lucas*, 516 F.3d 316, 325–27 (5th Cir. 2008); *United States v. Donovan*, 661 F.3d 174, 183–84 (3d Cir. 2011); *Precon Dev. Corp. v. U.S. Army Corps of Engineers*, 633 F.3d 278, 289 (4th Cir. 2011); and *Deerfield Plantation Phase II-B Prop. Owners Ass’n, Inc. v. U.S. Army Corps of Engineers, Charleston Dist.*, 501 F. Appx. 268, 275 (4th Cir. 2012).

⁹⁷ The administration itself acknowledged last month that “[e]very court of appeals to have considered the question has determined that the government may establish Clean Water Act jurisdiction under the standard set forth in Justice Kennedy’s concurrence in *Rapanos*”; thus, there is “no sound reason” for the U.S. Supreme Court to revisit the question. Br. for U.S. in Opp’n to Pet. for Writ of Cert. at 10, *Robertson v. United States*, No. 18-609 (Mar. 2019).

⁹⁸ *Maislin Indus., U.S., Inc. v. Primary Steel, Inc.*, 497 U.S. 116, 131 (1990).

⁹⁹ *Milwaukee*, 451 U.S. at 318 (emphasis added). See *Rapanos*, 547 U.S. at 804 (Stevens, J., dissenting).

restore and maintain the chemical, physical, and biological integrity of the Nation's waters.”¹⁰⁰ That goal is paramount, and the agencies do “not have the power to adopt a [conflicting] policy,” as they have proposed here.¹⁰¹

C. The Administration Promised Clarity, but Delivers Confusion.

One of the administration's primary talking points is that its proposal promotes “regulatory certainty”¹⁰² while “providing fair and predictable notice of the limits”¹⁰³ to the Clean Water Act's reach. The agencies' approach fails for two reasons. First, regulatory certainty is not a proper stand-alone goal of rulemaking. Regulatory certainty acts in service of a statute's objective. Here, the agencies have not offered any argument that whatever certainty is provided by the proposal, if any, would serve the Clean Water Act's objective, as discussed in more detail in section VI(A)(3) below. Second, the agencies' proposal is anything but clear.¹⁰⁴

Despite the administration's claims, people will not be able to determine whether a stream or wetland is jurisdictional by standing on their property. Rather, a property owner would need to determine the source of flow (illogically, under the proposal, groundwater or snowpack can support jurisdiction, while rain and snowfall cannot¹⁰⁵), whether the stream flows into a navigable water off-property, whether wetlands abut a jurisdictional water, and whether a downstream segment lacks sufficient flow or otherwise breaks jurisdiction. Many of these inquiries would require the decision maker to trespass onto properties of others. As the agencies concede, making these determinations “can be challenging.”¹⁰⁶

The limits and identification of jurisdictional tributaries and wetlands must be determined by a convoluted “typical year” test and other criteria. “Typical year” is defined in the proposed rule to mean “within the normal range of precipitation over a rolling thirty-year period for a particular geographic area.” But, to demonstrate that a year is “typical” requires that “the observed rainfall from the previous three months fall[] within the 30th and 70th percentiles established by a 30-year rainfall average generated at NOAA weather stations.” This is not a simple test; it requires expert analysis to determine what is “typical” in light of drought, and floods, and leaves much to interpretation.

¹⁰⁰ *Rapanos*, 547 U.S. at 759 (Kennedy, J., concurring).

¹⁰¹ *Maislin*, 497 U.S. at 134-35; *see also* *U.S. v. Am. Trucking Ass'ns*, 310 U.S. 534, 542-43 (1940) (“There is, of course, no more persuasive evidence of the purpose of a statute than the words by which the legislature undertook to give expression to its wishes.”); *Maryland v. Exxon Mobil Corp.*, 352 F. Supp. 3d 435, 464 (D. Md. 2018) (“When the words of the statute are ‘sufficient in and of themselves to determine the purpose of the legislation’ and do not produce unreasonable results ‘plainly at variance with the policy of the legislation as a whole,’ courts must follow their plain meaning.”).

¹⁰² 84 Fed. Reg. at 4,169.

¹⁰³ *Id.*

¹⁰⁴ Additional issues with your agencies' rule are outlined in Moffat & Nichol, Proposed Changes to the Waters of the United States (WOTUS) Definition—Summary of M&N Conclusions (Apr. 7, 2019), attached as Exhibit B (“Moffat & Nichol Report”). Moffat & Nichol Report is incorporated here by reference and should be considered supplemental comments, which the agencies must respond to, by the organizations listed above.

¹⁰⁵ 84 Fed. Reg. at 4,173.

¹⁰⁶ 84 Fed. Reg. at 4,177-4,178 (“landowners may find it difficult to determine whether there is a jurisdictional break downstream of a feature on their property”); *id.* at 4,189 (“identifying remotely whether wetlands abut a jurisdictional water can be challenging”).

The proposed rule is also confusing with regard to coverage of intermittent streams, which the agencies define as those streams that have continuous flow for “certain times of a typical year.”¹⁰⁷ Unfortunately, the proposed rule offers no objective basis for determining whether or not an intermittent stream meets that description or when “certain times” occur. There exists no database of flow information that provides an answer to such a question. The proposed rule would substitute a confusing, nebulous definition of an intermittent stream for the objective, observable approach defined by the 2015 Clean Water Rule.¹⁰⁸

As the agencies admit in their proposal, assessing flow regimes would also require sophisticated professional-level tools, in conjunction with a field visit, such as:

remote and field-based tools, such as visual observations, photographs, data collection on flow, trapezoidal flumes and pressure transducers for measuring surface flow and comparing that to rainfall, StreamStats by the U.S. Geological Survey (USGS) (available at <https://streamstats.usgs.gov/ss/>), Natural Resources Conservation Service (NRCS) hydrologic tools and soil maps, desktop tools that provide for the hydrologic estimation of a discharge sufficient to generate intermittent or perennial flow, such as a regional regression analysis or hydrologic modeling, USGS topographic data, or modeling tools using drainage area, precipitation data, climate, topography, land use, vegetation cover, geology, and other publicly available information.¹⁰⁹

Requiring a specific flow rate for jurisdiction, an issue solicited for comment, would similarly be difficult and costly to implement because many streams do not have stream gauges.¹¹⁰ It is also wrong.¹¹¹

The agencies’ proposal for impoundments could also set the stage for extreme confusion. During high precipitation periods where an impoundment was generating continuous flow, the impoundment and its tributaries would be jurisdictional, whereas in drier years the reverse may be true. Those living upstream of an impoundment would be caught in the middle of a regulatory ping pong match. Some activities would be legal one year, but not the next.

All of this complexity is compounded by climate change, which the proposal does not take into account. Failing to allow for the impacts of climate change and human activities risks the loss of federal protections for vulnerable streams, rivers, and wetlands. Studies have shown that climate change and human activities have and will affect the quality and surface flow of our Nation’s waters.¹¹² By limiting jurisdiction based on that flow, waters that shift to ephemeral risk losing protection.¹¹³

¹⁰⁷ *E.g.*, 84 Fed. Reg. at 4,204.

¹⁰⁸ Clean Water Rule: Definition of “Waters of the United States”; Final Rule, 80 Fed. Reg. 37,054, 37,104, 37,105-37,106 (June 29, 2015) (“physical indicators of a bed and banks and an ordinary high water mark”).

¹⁰⁹ 84 Fed. Reg. at 4,176.

¹¹⁰ *Ex. B, Moffat & Nichol Report* at 13.

¹¹¹ *See id.*; *see also* 84 Fed. Reg. at 4,175 (“The agencies believe establishing a specific flow volume requirement for all tributaries would be inappropriate given the wide spatial and temporal variability of flow volume in rivers and streams across the country.”)

¹¹² SAB Members Comments at 7; Susan Colvin et al., *Headwater Streams and Wetlands are Critical for Sustaining Fish, Fisheries, and Ecosystem Services*, FISHERIES 76 (Feb. 2019),

At base, the waters of the United States proposed definition (which is confusing) does not fit with the agencies' rationale for it (regulatory clarity), making it arbitrary and capricious.

VI. THE PROPOSED RULE VIOLATES THE APA, CLEAN WATER ACT, AND ENDANGERED SPECIES ACT.

A. The Proposal Violates the Administrative Procedure Act.

This administration has made a practice of violating the Administrative Procedure Act.¹¹⁴ One of the more recent examples, *New York v. U.S. Department of Labor*,¹¹⁵ is perhaps the most applicable here. In that case, the Department of Labor implemented an executive order by the President to undo the Affordable Care Act. To do so, the Department reversed decades of agency policy and reinterpreted a key term under the Employment Retirement Income Security Act in a way that “scraps ERISA’s careful statutory scheme” and “exceeds the statutory authority delegated by Congress.”¹¹⁶

This rulemaking is no different. The President issued an Executive Order on February 28, 2017 directing the agencies to conduct this rulemaking. Since that time, the agencies have been set on achieving a pre-determined goal—implementing a rule based on Justice Scalia’s decision in *Rapanos*. The docket here demonstrates that pre-determination. As discussed below, although the agencies have produced lengthy documents—mostly through repeated, uninformative analyses—they have failed to provide a valid, reasoned basis for departing from decades of agency practice or explanation for how this proposal would meet the Clean Water Act’s objective. The agencies’ single-mindedness has also resulted in their consideration of factors not allowed by Congress, including their elevation of states’ rights and regulatory certainty over the purpose of the Clean Water Act. For these reasons, this proposal must be withdrawn.

1. *The proposal fails to allow for meaningful comment.*

Despite proposing a definition of waters of the United States that reverses more than 40 years of protections for waters across the country and discards the agencies long-standing interpretations of Supreme Court case law, the agencies provided just 60 days for public comments. More than 23 requests for extension that include members of Congress and hundreds of citizen groups were denied.

https://afspubs.onlinelibrary.wiley.com/doi/epdf/10.1002/fsh.10229?shared_access_token=n0H65fhj7meitiMO7UqEgU4keas67K9QMdWULTWMO8M0mooN-TbkWZVijk4pBluA_dzFAWXHzMoTvitls3grkj9paRTrkh1P9AAL7TLrpGhR0GEcilbaFsUk4SjEm0c8yB-ofqy7tyByhVUqi4OWwg%3D%3D& (last visited Apr. 8, 2019).

¹¹³ *Id.*

¹¹⁴ Fred Barbash & Deanna Paul, *The Real Reason the Trump Administration is Constantly Losing in Court*, WASHINGTON POST (Mar. 19, 2019), https://www.washingtonpost.com/world/national-security/the-real-reason-president-trump-is-constantly-losing-in-court/2019/03/19/f5ffb056-33a8-11e9-af5b-b51b7ff322e9_story.html?utm_term=.75ba7ff15b2f (last visited Apr. 11, 2019).

¹¹⁵ ___ F. Supp. 3d ___, No. 18-1747 (JDB), 2019 WL 1410370 (D.D.C. Mar. 28, 2019).

¹¹⁶ *Id.* at *2.

In addition to the short comment period, the agencies' rationale is poorly explained. It is essential that a notice of proposed rulemaking "not only give adequate time for comments, but also must provide sufficient factual detail *and rationale* for the rule to permit interested parties to comment meaningfully."¹¹⁷ As courts have recognized:

The purpose of the comment period is to allow interested members of the public to communicate information, concerns, and criticisms to the agency during the rule-making process. *If the notice of proposed rule-making fails to provide an accurate picture of the reasoning that has led the agency to the proposed rule, interested parties will not be able to comment meaningfully upon the agency's proposals.* As a result, the agency may operate with a one-sided or mistaken picture of the issues at stake in a rule-making.¹¹⁸

As discussed in more detail below, the notice fails to provide the agencies' rationale on a wide variety of poorly described possibilities for further reducing jurisdiction. The agencies provide little clue as to how agencies and regulated entities would implement the proposed rule. In addition, the agencies have requested comment on dozens of issues, making it impossible for the public to predict with any confidence what the agency is actually considering. For example, the notice seeks comment on whether to exclude protections for intermittent streams, to redefine intermittent streams, or to impose a minimum flow requirement prompts numerous questions. What is the scientific basis? What is the legal basis? How would those proposals be implemented? What would be their impacts? Asking for comment on every possibility under the sun sheds no light on what the agency proposes to do.

Similar questions could be asked for every aspect of the proposal. With no valid legal or scientific analysis to inform the public of what the agencies may do, it is not possible meaningfully comment on the full array of possibilities. Courts are reluctant to allow agencies to "issue broad [notices of proposed rulemaking] only to justify *any* final rule it might be able to devise by whimsically picking and choosing within the four corners of a lengthy 'notice.'"¹¹⁹ It is

¹¹⁷ *Fla. Power & Light Co. v. United States*, 846 F.2d 765, 771 (D.C. Cir. 1988) (emphasis added) (citing *Connecticut Light & Power Co. v. NRC*, 673 F.2d 525, 530-31 (D.C. Cir.) (1982); *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977); see also *Nat'l Elec. Mfrs. Ass'n v. EPA*, 99 F.3d 1170, 1172 (D.C. Cir. 1996).

¹¹⁸ *Connecticut Light*, 673 F.2d at 530-31 (emphasis added); see also *Nat'l Cable Television Ass'n, Inc. v. F.C.C.*, 747 F.2d 1503, 1507 (D.C. Cir. 1984) ("The purpose of the NPRM is to 'provide an accurate picture of the reasoning that has led the agency to the proposed rule,' so that interested parties can contest that reasoning if they wish.") (citing *Connecticut Light*, 673 F.2d at 530-31); *Shands Jacksonville Med. Ctr. v. Burwell*, 139 F. Supp. 3d 240, 265 (D.D.C. 2015) ("[T]he APA does require the disclosure of assumptions critical to the agency's decision, in order to facilitate meaningful comment and allow a 'genuine interchange' of views.") (citing *Connecticut Light*, 673 F.2d at 530-31); *Home Box Office, Inc. v. F.C.C.*, 567 F.2d 9, 35 (D.C. Cir. 1977) ("there must be an exchange of views, information, and criticism between interested persons and the agency. [...] Consequently, the notice required by the APA, or information subsequently supplied to the public, must disclose in detail the thinking that has animated the form of a proposed rule and the data upon which that rule is based.") (citations omitted); *Ohio Valley Envtl. Coal. v. U.S. Army Corps of Engineers*, 674 F. Supp. 2d 783, 802-04 (S.D.W. Va. 2009) (finding that notices which contained "no substantive information on mitigation" did not give the public "a clear understanding of the nature and magnitude of the activity to generate meaningful comment" and "failed to provide an accurate picture of the Corps' reasoning").

¹¹⁹ *CSX Transp., Inc. v. Surface Transp. Bd.*, 584 F.3d 1076, 1082 (D.C. Cir. 2009) (quotation marks omitted).

clear that “[s]uch a rule would hardly promote the purposes of the APA’s notice requirement.” Here, the agencies do not meet that requirement.

2. *The proposal fails to justify reversal of decades of agency practice.*

The proposal attempts to sidestep its most significant administrative obstacle—decades of agency practice that culminated in the extensive record supporting the Clean Water Rule. The agencies have spent decades making clear that more, not less, protection for water quality is needed if we are to ever achieve the Clean Water Act’s objective. While the proposal appears to concede this reversal, it fails to confront or even superficially address the extensive record of the Clean Water Rule. “The agency must articulate a satisfactory explanation for its action including a rational connection between the facts found and the choices made.”¹²⁰ In addition, “the new policy must be permissible under the statute, and the agency must acknowledge it is changing its policy and show that there are good reasons for the new policy and that the agency believes it to be better, which the conscious change of course adequately indicates.”¹²¹

One of the most glaring errors in the notice is the agencies’ failure to address the comprehensive administrative record for the Clean Water Rule. In taking action to replace the Clean Water Rule, the agencies must “display awareness that ... [they are] changing position” and “show that there are good reasons for the new policy[,]” as federal agencies “may not ... simply disregard rules that are still on the books.”¹²² The agencies cannot acknowledge their reversal without addressing the factual and scientific basis for the Clean Water Rule. The proposal fails to include any meaningful analysis of the agencies’ prior responses to comments for the Clean Water Rule, much less an explanation as to why this rulemaking reverses course. Accordingly, the agencies have not provided the “reasoned explanation [] needed for disregarding facts and circumstances that underlay or were engendered by the prior policy.”¹²³

As stated in its preamble, the Clean Water Rule made coverage under the Clean Water Act “easier to understand, more predictable, *and consistent with the law and peer-reviewed science, while protecting the streams and wetlands that form the foundation of our nation’s water resources.*”¹²⁴ The rule sought to “clarify and simplify the implementation of the CWA *consistent with its purpose.*”¹²⁵ The rule, therefore, “interprets the CWA to cover those *waters that require protection in order to restore the chemical, physical, and biological integrity*” of the *Nation’s waters.*¹²⁶ To that end, it identified and clarified protections for waters that are “integral parts of the aquatic environment” that if “polluted or destroyed” would have “a significant effect downstream,” and protects those waters by avoiding the “resource intensive process [that] results in inconsistent interpretation of CWA jurisdiction and perpetuate[s] ambiguity over where the

¹²⁰ *Nat’l Lifeline Ass’n v.*, 915 F.3d at 27 (quoting *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983)).

¹²¹ *Id.*

¹²² *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

¹²³ *Id.* at 515-16.

¹²⁴ Clean Water Rule, 80 Fed. Reg. 37,054, 37,055.

¹²⁵ *Id.* (emphasis added).

¹²⁶ *Id.* (emphasis added).

CWA applies,” as experienced under the prior regulatory scheme.¹²⁷ Those clarified protections included provisions for Carolina bays, pocosins, and other vulnerable wetlands.¹²⁸ The rule’s ultimate goal was to “more effectively focus the rule on identifying waters that are clearly covered by the CWA and those that are clearly not covered, making the rule easier to understand, consistent, *and more environmentally protective*.”¹²⁹ The agencies’ new claim that replacing this rule—adopting a wholly new regulatory scheme that would fundamentally upset the existing federal-state partnership—would promote regulatory certainty is nonsense. And they have not acknowledged what a loss of clearer protections for vulnerable waters likely means: those waters’ degradation and destruction, which would in turn substantially reduce the integrity of navigable waters.

The clearer, science-based protections in the Clean Water Rule matter. As the agencies found, the small streams and wetlands that are better protected under the Clean Water Rule are “critical to maintaining the integrity of downstream waters” and “if these waters are polluted or destroyed, there is a significant effect downstream.”¹³⁰ The headwater stream protections clarified by the rule maintain those streams’ “important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream waters.”¹³¹ The case-specific guidance for Carolina bays, pocosins, and other vulnerable wetlands recognized that these waters “function alike and are sufficiently close to function together in affecting downstream waters” and, therefore, must be considered in that context.¹³² These protections were supported by an extensive scientific analysis.¹³³ In their rush to replace the Clean Water Rule, the agencies ignore its rationale and results completely and arbitrarily.

The agencies attempt to justify such an approach based on the adoption of Justice Scalia’s decision in *Rapanos* and section 101(b). As discussed above, these form an improper legal basis for abandoning the functional, science-based approach of the significant nexus test implemented in the Clean Water Rule and under prior agency guidance. Indeed, apart from the February 28, 2017 Executive Order,¹³⁴ the agencies offer no basis for abandoning the significant nexus test that has been the cornerstone of the agencies’ analysis for more than a decade and adopted by every court to consider the issue since the *Rapanos* decision. The recent decision in *New York v. U.S. Department of Labor* is instructive on this point. The department adopted a final rule that “departs significantly from DOL’s prior sub-regulatory guidance.”¹³⁵ The final rule was a reversal of the “more-than-forty-year history” under the act in question—one that “twist[s] the language of the statute and defeat[s] the purposes of Congress.”¹³⁶ The court rejected the rule that “scraps ERISA’s careful statutory scheme . . . and exceeds the statutory authority delegated

¹²⁷ *Id.* at 37,056.

¹²⁸ *Id.*

¹²⁹ *Id.* at 37,057 (emphasis added).

¹³⁰ *Id.* at 37,056.

¹³¹ *Id.* at 37,058.

¹³² *Id.* at 37,059.

¹³³ *See id.* at 37,062-37,064.

¹³⁴ Exec. Order No. 13778, 82 Fed. Reg. 12,497 (Feb. 28, 2017) (Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the United States” Rule).

¹³⁵ *New York*, No. 18-1747 (JDB), 2019 WL 1410370 at *12.

¹³⁶ *Id.* at *17.

by Congress.”¹³⁷ This rule, and its rejection of more than 40 years of understanding of the reach of the Clean Water Act, is no different and, if finalized, this rule should suffer the same fate.

3. *The proposal considers factors not allowed by Congress.*

In departing from decades of agency efforts to achieve the objective of the Clean Water Act, the agencies have considered factors that were not intended by Congress. Courts recognize that “[a]gency action is arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider.”¹³⁸ Two factors warrant comment here: the agencies’ elevation of regulatory certainty as a stand-alone purpose and the reliance on voluntary actions by regulated entities.

Even if this convoluted proposal delivered regulatory certainty (it doesn’t), certainty for the sake of certainty is not a permissible sole consideration in rulemaking. It cannot be an end in and of itself. It can only be considered in the context of achieving the objective of the Clean Water Act, as it was for the agencies in 2015. At that time, the agencies recognized that the Clean Water Rule would “ensure protection for the Nation’s public health and aquatic resources, and increase CWA program predictability and consistency by clarifying the scope of ‘waters of the United States’ protected under the Act.”¹³⁹ That is the only circumstance in which regulatory certainty can be considered—if it advances the statute’s purpose. Here, the agencies fail to make an argument that this proposal does so.

A recent decision in the Fourth Circuit affirming EPA’s responsibility to use science succinctly summarizes why scientific expertise cannot be dispensed with in the name of regulatory certainty.

Public debate on environmental issues often rejects and disowns the relevant science when it proves convenient to do so. The law, however, reflects a different posture. Through standards of review and court/agency interactions, this case and many others underscore that law and science must work in tandem on environmental issues, not at loggerheads. Indeed, it is that partnership between law and science, as illustrated here, that offers the best hope of avoiding environmental disruptions that may one day visit serious adverse consequences upon us all.¹⁴⁰

Here, the agencies are leading the effort to “reject[] and disown[] the relevant science” under the guise of regulatory certainty. That effort is unlawful.

The next notable factor that the agencies unlawfully considered would be comical if the consequences were not so serious. Throughout the Economic Analysis, the agencies considered the prospect of regulated entities voluntarily complying with existing standards (either the pre-

¹³⁷ *Id.* at *2.

¹³⁸ *Nat’l Lifeline Ass’n v. FCC*, 915 F.3d 19 (DC Cir. 2019) (quoting *State Farm*, 463 U.S. at 43).

¹³⁹ Clean Water Rule, 80 Fed. Reg. at 37,054.

¹⁴⁰ *Sanitary Bd. of City of Charleston, WV v. Wheeler*, 918 F.3d 324, 338 (4th Cir. 2019).

2015 rule or the Clean Water Rule). The agencies note that “if an entity voluntarily continues baseline compliance practices, then there would be no change in cost or environmental outcomes.”¹⁴¹ The Economic Analysis revisits this notion repeatedly, postulating that “facilities . . . that discharge to receiving water that will lose their jurisdictional status . . . may willingly continue operating under their permit and see no need to challenge the jurisdictional status of the receiving waters.”¹⁴² Similarly, construction stormwater requirements may be “voluntarily implemented by developers.”¹⁴³ The reliance on volunteer pollution control litters the Economic Analysis.¹⁴⁴

In creating a strict-liability statute with significant penalties for the purpose of addressing a national crisis, it is safe to say that Congress did not intend for the Clean Water Act’s success to depend on voluntary efforts. The agencies have never depended on such goodwill as the primary driver of Clean Water Act implementation, and they have provided no basis for reaching a different position here.

4. *The proposal fails to consider important aspects of the rulemaking.*

By focusing on factors that the agencies cannot lawfully consider, the proposal fails to consider important aspects of the rulemaking. It is basic administrative law that “an agency rule would be arbitrary and capricious if the agency . . . entirely failed to consider an important aspect of the problem.”¹⁴⁵ Not only do the agencies fail to consider important aspects of the problem, the proposal ignores *the most* important aspect of the problem: whether the proposed rule advances the objective of the Clean Water Act.

The agencies have not assessed this proposal’s effect on the ability to achieve the Clean Water Act’s sole objective: to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”¹⁴⁶ As discussed in section IV, our Nation’s waters are in trouble. In short, where they have been assessed, most have been found not to meet the Act’s objective. We must do more, not less, if we are to achieve that objective.

There is no question that the proposal would do less to protect our waters and create an obstacle to achieving the Act’s purpose. The Economic Analysis concedes that many states (perhaps most) would not “have the resources to staff and manage the new or expanded programs” and that “decentralized programs are also more likely to be swayed by political influences which could distort the regulatory process in ways that are detrimental to social welfare.”¹⁴⁷ The “changes to the definition of ‘waters of the United States’ . . . could have a

¹⁴¹ U.S. EPA and Dep’t of Army, Economic Analysis for the Proposed Revised Definition of “Waters of the United States,” EPA-HQ-OW-2018-0149-0004, 46 (Dec. 14, 2018) (“2018 Economic Analysis”).

¹⁴² 2018 Economic Analysis at 88.

¹⁴³ *Id.* at 92.

¹⁴⁴ *See id.* at 93, 99, 101, 107, 109, 113-115, 211.

¹⁴⁵ *State Farm*, 463 U.S. 29, 43.

¹⁴⁶ 33 U.S.C. § 1251(a).

¹⁴⁷ 2018 Economic Analysis at 45.

significant effect in states with large impact areas.”¹⁴⁸ The diagram below documents the myriad ways that the proposal would dirty our waters.

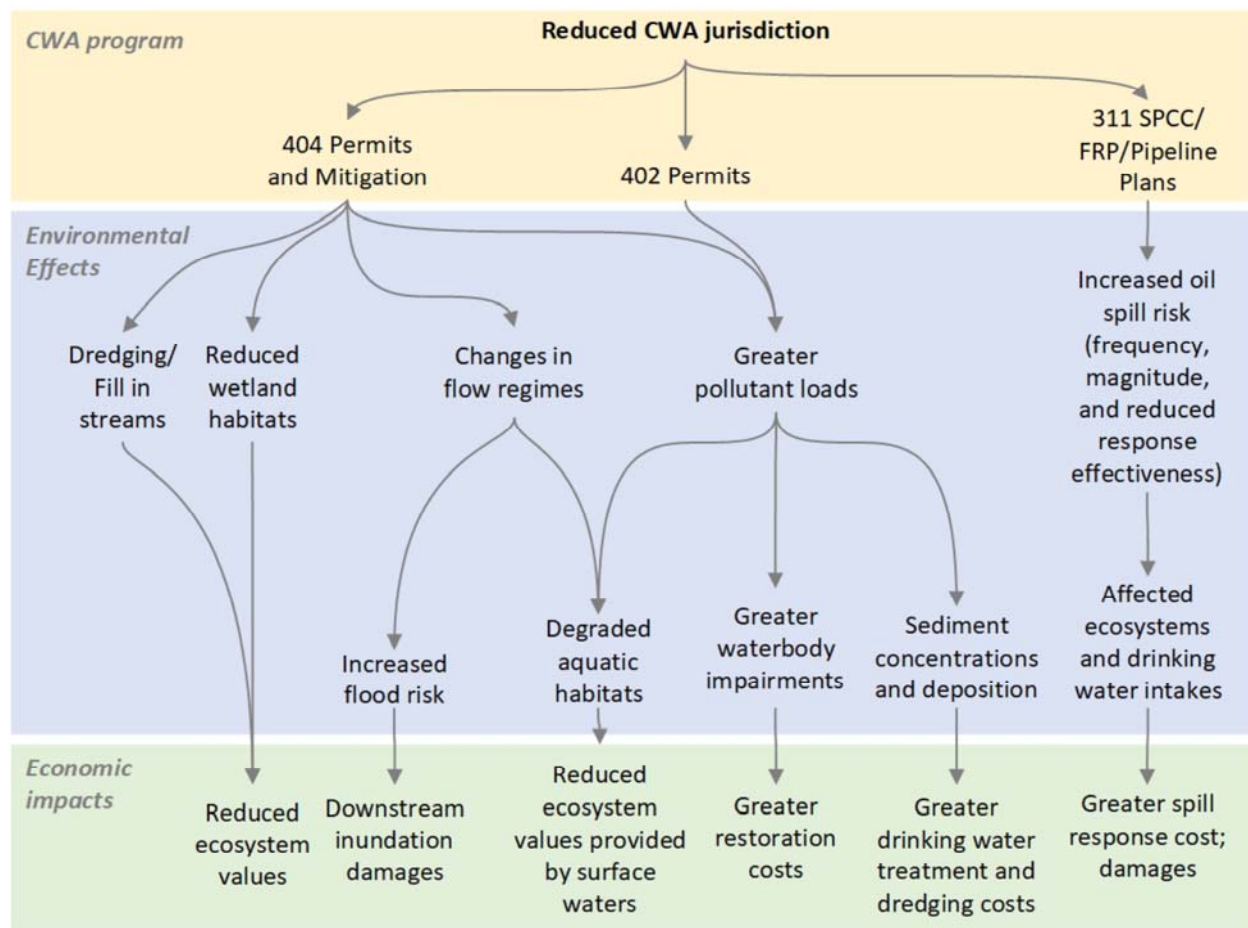


Figure 3: Overview of potential environmental impacts to selected CWA programs from proposed changes in CWA jurisdiction for certain waters.¹⁴⁹

It is also an attack on citizens’ ability to bring suit under the Clean Water Act, a necessity we have seen time and again achieve clean water. In Columbia, South Carolina, for example, SELC filed a citizen suit to stop unlawful discharges from the Carolina Water Service I-20 plant, which had been ongoing despite permit terms prohibiting that discharge. The United States District Court for the District of South Carolina agreed with the citizen plaintiffs and ordered the pollution to stop, which it now has. Actions like these have taken place across the Nation for decades, with citizens enforcing the Clean Water Act in federal court despite state agency inaction. Yet the proposal does not assess how the revised definition affects the ability to meet the purpose of the Clean Water Act. As discussed in section VIII, it does not meet the purpose of the Act.

¹⁴⁸ *Id.* at 98.

¹⁴⁹ *Id.* at 133 (Table IV-9).

In addition, the agencies failed to adequately evaluate the state programs that would purportedly rescue the Nation's waters. As noted in the Economic Analysis, "[e]ffective regulation of the resources, however, requires the political capital and fiscal resources to do so."¹⁵⁰ As discussed in section VIII(B), there are significant political and fiscal challenges that would prevent states from protecting newly non-jurisdictional waters, the agencies simply failed to meaningfully consider these challenges.

5. *The proposal fails to consider the effect of the proposal on the restoration industry and drinking water providers.*

One of the problems with upending the understanding of waters of the United States as proposed is that many industries and the public rely on the protections provided by the Clean Water Act. The Supreme Court has recognized that an agency must "provide a more detailed justification than would suffice for a new policy . . . when, for example, . . . its prior policy has engendered serious reliance interest that must be taken into account."¹⁵¹ The Court continued, "[i]t would be arbitrary and capricious to ignore such matters."¹⁵² Here, two examples warrant a close look: the ecological restoration economy and drinking water utilities.

The agencies have failed to take into account the recent growth in the restoration industry, which is dependent on existing protections. The Economic Analysis discards the restoration interests with a cursory statement that "[b]ecause fewer waters would be subject to CWA jurisdiction under the proposed rule than are subject to regulation under the 2015 Rule or current practice, there would be a reduction in demand for mitigation and restoration services, under the section 404 permitting program and a corresponding reduction in revenue for the businesses."¹⁵³

That is not sufficient. The restoration industry depends on the existing regulatory structure and protection of streams and wetlands that would be lost under this proposal.¹⁵⁴ It provides significantly more jobs per \$1 million than the oil and gas industry, school construction, or pipeline construction.¹⁵⁵ In a survey of restoration providers, nearly a third primarily worked in wetland restoration or aquatic and riparian restoration, reflecting "the role of the Clean Water Act's section 404 compensatory mitigation requirements in inducing restoration work."¹⁵⁶

The restoration industry directly provides 126,111 jobs a year in a variety of sectors, from engineers and construction firms to greenhouses and nurseries.¹⁵⁷ Including indirect and induced effects, the restoration industry has a total effect of adding 221,398 jobs each year which have a

¹⁵⁰ *Id.* at 37.

¹⁵¹ *Fox Television*, 556 U.S. at 515.

¹⁵² *Id.*

¹⁵³ 2018 Economic Analysis at 213.

¹⁵⁴ Todd BenDor et al., Estimating the Size and Impact of the Ecological Restoration Economy, PLOS ONE, 3 (2015).

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 7.

¹⁵⁷ *Id.*

gross economic impact of nearly \$25 billion each year.¹⁵⁸ The agencies cited the study that summarizes these values, yet did not evaluate the effect of the proposal on the restoration industry.

As demonstrated in the data summarized below in Figures 4 and 5, both stream and wetland mitigation credit inventory has grown significantly over the last two decades.

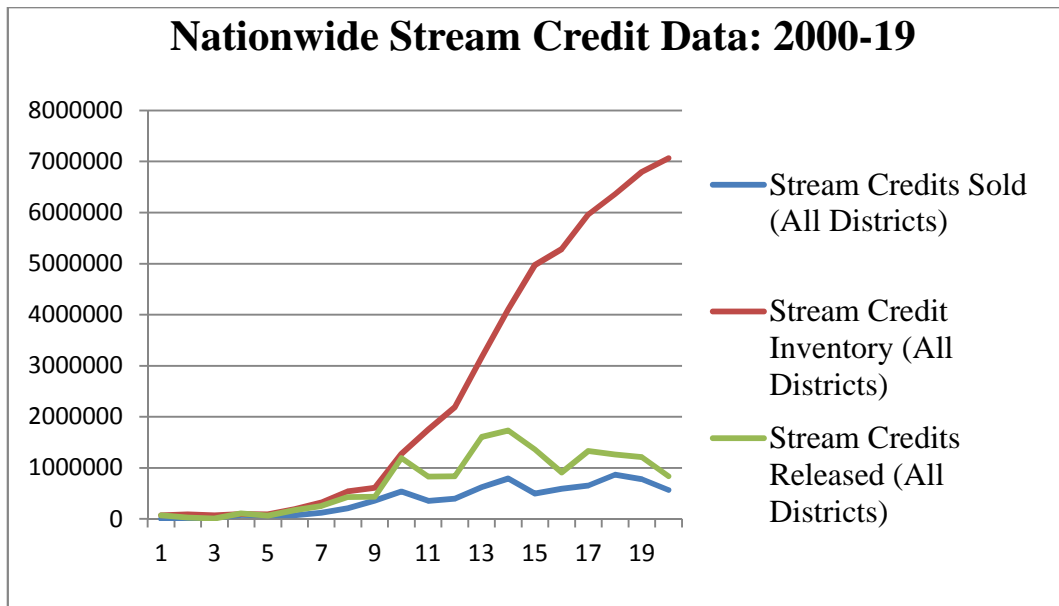


Figure 4¹⁵⁹

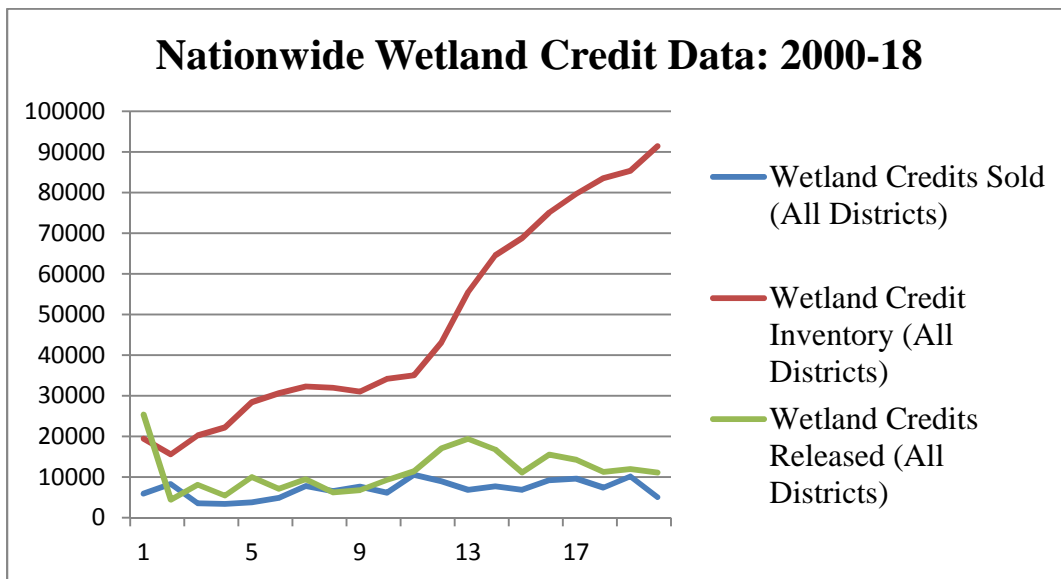


Figure 5¹⁶⁰

¹⁵⁸ *Id.* at 9.

¹⁵⁹ Data collected and analyzed by Eco Blu Analyst, <http://ecobluanalyst.com>.

¹⁶⁰ Data collected and analyzed by Eco Blu Analyst. <http://ecobluanalyst.com>.

As a result, companies engaged in restoration have significant investments in restored streams and wetlands that not only improve water quality, but are worth approximately \$1 billion.

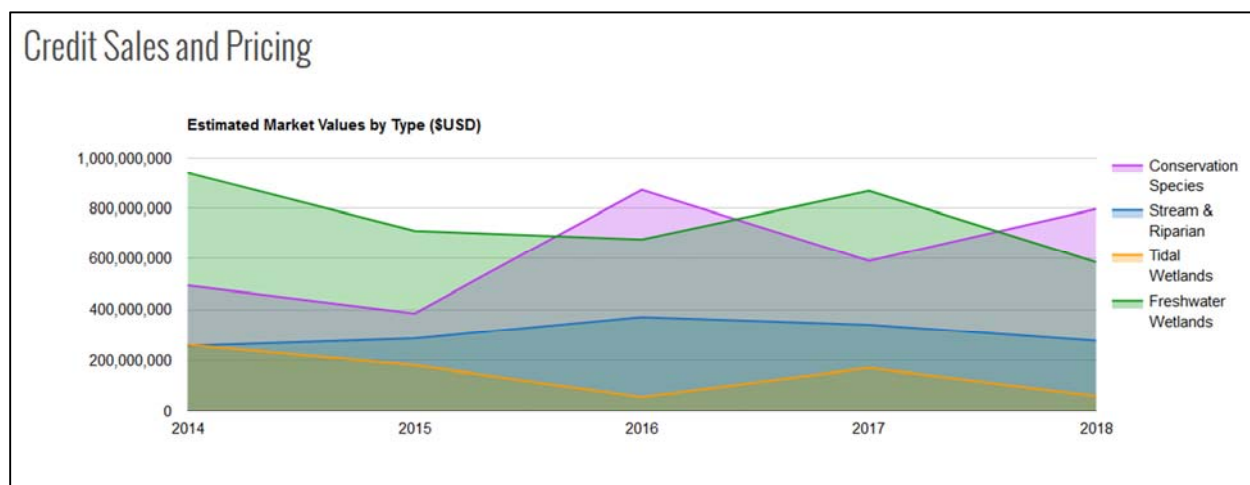


Figure 6¹⁶¹

North Carolina has similarly invested millions in restoration. According to the N.C. Division of Mitigation Services, as of May 2018, the state had awarded contracts for stream and wetland restoration valued at \$508,545,591.¹⁶² These contracts not only resulted in better water quality through watershed restoration, they represent a significant economic benefit and an investment that the state is at risk of losing with this proposal.

Similarly, little thought is given to costs that would be incurred by downstream drinking water providers. Water treatment plants are simply not equipped to handle the increasingly polluted water that would result from the proposal. They have planned, designed, and built facilities based on the existing protections. Even then, our drinking water infrastructure is in need of significant upgrades nationwide. If drinking water quality were EPA's top priority as Administrator Wheeler has stated,¹⁶³ this proposal would be withdrawn.

6. *The proposal fails to treat similar situations similarly.*

Because the agencies' approach is not centered on the Clean Water Act's objective, it treats similarly situated waters differently. In contrast, Justice Kennedy's opinion in *Rapanos* applies a single test for waters of the United States. Those that have a significant nexus to navigable waters are included; those that do not are excluded. The Clean Water Rule implemented the significant nexus standard and, therefore, was similarly consistent. But here, the agencies haphazardly fail to treat similar situations by:

¹⁶¹ Data collected and analyzed by Eco Blu Analyst, <http://ecobluanalyst.com>.

¹⁶² N.C. Division of Mitigation Services, Processes and Awards: Contract Awards, <https://deq.nc.gov/about/divisions/mitigation-services/dms-vendors/process-protocol>.

¹⁶³ Ellie Kaufman, *EPA Head says clean-water access is "biggest environmental threat"—despite regulation rollbacks*, CNN (Mar. 20, 2019), <https://www.cnn.com/2019/03/20/politics/epa-andrew-wheeler-clean-water-speech/index.html>.

- Excluding ecological considerations as a basis for asserting jurisdiction, yet proposing to use methodologies based on assessment of the biological community as the basis for determining stream jurisdiction.
- Including wetlands that provide important water quality benefits to traditional navigable waters and directly abut the traditional navigable water as jurisdictional, but excluding wetlands with important water quality benefits to traditional navigable water that are separated by a natural or man-made levee.
- Including natural tributaries that continuously flow into jurisdictional waters as jurisdictional, but excluding ditches that continuously flow into jurisdictional waters and serve the same functions as tributaries.
- Including highly modified water bodies with little “chemical, physical, or biological integrity,” such as the Los Angeles River, but excluding wetlands in close proximity to traditional navigable waters that provide important ecosystem services.
- Including groundwater as a required source of flow for jurisdictional tributaries, and a permitted source for ponds and lakes, yet excluding wetlands connected to jurisdictional waters via groundwater from jurisdiction.
- Allowing flooding from a jurisdictional water to make a lake or pond jurisdictional, but denying the same protection for flooded wetlands.
- Following Justice Scalia’s opinion in *Rapanos*, which relied in part on dictionary definitions,¹⁶⁴ and then in the proposal defining the term “abut” consistent with Webster’s II, New Riverside Dictionary (1994), but irrationally removing key parts of the definition of “adjacent,” which Webster’s II defines as “next to,” “adjoining,” “to lie near,” or “close to,” when limiting “adjacent” by the direct surface connection requirement.

The agencies’ proposal is a hodge-podge of rationales that has no unifying theme. As a result, it violates the basic premise that “[a]n agency must treat similar cases in a similar manner unless it can provide a legitimate reason for failing to do so.”¹⁶⁵

B. The Proposal Violates the Clean Water Act by Unlawfully Narrowing Federal Jurisdiction.

The proposal’s detachment from the objective of the Clean Water Act results in an additional error: the agencies’ novel interpretation of Supreme Court case law adopts a narrow view of precedent that has never been applied by the Court or the agencies. The narrowly circumscribed jurisdiction described in the proposal has not been applied by the Court or the

¹⁶⁴ 547 U.S. at 732, 735.

¹⁶⁵ *Indep. Petroleum Ass’n v. Babbitt*, 92 F.3d 1248, 1258 (D.C. Cir. 1996).

agencies because it would defeat the objective of the Act. It cannot be accepted here for that reason.

1. The agencies' interpretation of Rapanos is erroneous.

Perhaps most indicative of the errors in the agencies' interpretation of *Rapanos* is their treatment of Justice Kennedy's opinion. Contrary to the proposal, which attempts to meld Kennedy's opinion with Justice Scalia's, Kennedy rejected the plurality decision, finding that the decision "is inconsistent with the Act's text, structure, and purpose."¹⁶⁶ He specifically repudiated the two requirements for jurisdiction that the agencies accept here as the controlling law.

Justice Kennedy found that requiring "permanent standing water or continuous flow, at least for a period of 'some months' . . . makes little practical sense in a statute concerned with downstream water quality."¹⁶⁷ Justice Kennedy noted that the Los Angeles River, which "ordinarily carries only a trickle of water and often looks more like a dry roadway than a river . . . is illustrative of what often-dry watercourses can become when rain waters flow."¹⁶⁸ Kennedy points out the essential flaw in Scalia's dictionary-based test: it would include the "merest trickle, if continuous" yet exclude "torrents thundering at irregular intervals."¹⁶⁹ The significant nexus test, which relies on the stream or wetland's function, avoids this absurd outcome.¹⁷⁰ Contrary to the agencies' assumptions here, he concluded that although "Congress could draw a line to exclude irregular waterways, [] nothing in the statute suggests it has done so."¹⁷¹ "It follows that the Corps can reasonably interpret the Act to cover the paths of such impermanent streams."¹⁷²

Justice Kennedy also rejected the second key component of this rulemaking—"exclusion of wetlands lacking a continuous surface connection to other jurisdictional waters."¹⁷³ Kennedy recognized that the "*Riverside Bayview*'s observations about the difficulty of defining the water's edge cannot be taken to establish that when a clear boundary is evident, wetlands beyond the boundary fall outside the Corps' jurisdiction."¹⁷⁴ He found that the plurality decision "overlook[ed] [*Riverside Bayview*'s] broader focus on wetlands' significant effects on water quality and the aquatic ecosystem."¹⁷⁵ He concluded that "a continuous connection is not necessary for moisture in wetlands to result from flooding—the connection might well exist only during floods."¹⁷⁶ These conclusions plainly reject the proposed rule's elimination of jurisdiction over wetlands that lack an intermittent surface water connection.

¹⁶⁶ *Rapanos*, 547 U.S. at 776 (Kennedy, J., concurring).

¹⁶⁷ *Id.* at 769.

¹⁶⁸ *Id.* at 769-770.

¹⁶⁹ *Id.* at 769.

¹⁷⁰ *See id.* at 779.

¹⁷¹ *Id.* at 770.

¹⁷² *Id.*

¹⁷³ *Id.* at 772.

¹⁷⁴ *Id.* at 773.

¹⁷⁵ *Id.* (quotation marks omitted).

¹⁷⁶ *Id.* at 773-74.

“SWANCC, likewise, does not support the plurality’s surface-connection requirement,”¹⁷⁷ which the agencies adopt here. As Kennedy stated, the Court’s SWANCC decision “is not an explicit or implicit overruling of *Riverside Bayview*’s approval of adjacency as a factor in determining the Corps’ jurisdiction.”¹⁷⁸ He went on to emphasize, as the Court recognized in *Riverside Bayview*, that “[i]n many cases, moreover, filling in wetlands separated from another water by a berm can mean that floodwater, impurities, or runoff that would have been stored or contained in wetlands will instead flow out to major waterways.”¹⁷⁹ As he put it:

wetlands possess the requisite [significant] nexus, and thus come within the statutory phrase ‘navigable waters,’ if the wetlands, alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters understood as navigable in the traditional sense. When, in contrast, their effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the term “navigable waters.”¹⁸⁰

Another indication that the agencies wrongly rely on the plurality is that both Justice Kennedy and Justice Stevens, in the dissent, strongly disagreed with Justice Scalia’s treatment of ditches, which is followed here by the agencies. In the plurality decision, Justice Scalia argues that a ditch cannot be a water of the United States and a point source. As he contends, (i) the word “ditch” appears in the definition of a “discharge of a pollutant,” (ii) ditches carry intermittent flow, and (iii) waters of the United States cannot have intermittent flow; therefore, ditches must be point sources and generally not waters of the United States.¹⁸¹ He noted that his approach to regulating ditches was at odds with the Corps’ approach applicable at the time. Under the Corps’ reading of the Clean Water Act, as required by federal courts, a ditch was a tributary and was regulated if it had a perceptible ordinary high water mark.¹⁸²

In rejecting Justice Scalia’s position, Justice Kennedy begins by explaining that the Clean Water Act contains no support for the conclusion that ditches, or any water, has to be perennial to be considered a water of the United States. He then states that there is no basis to conclude that a water cannot be both a point source and a water of the United States.¹⁸³ In his conclusion, Justice Kennedy characterized ditches as tributaries.¹⁸⁴

Justice Stevens, writing for the minority, focused on Justice Scalia’s assertion that ditches are intermittent by pointing out several cases decided by the Court involving perennial ditches.¹⁸⁵

¹⁷⁷ *Id.* at 774.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 775.

¹⁸⁰ *Id.* at 717-18 (emphasis added).

¹⁸¹ *Id.* at 735 (Scalia, J. opinion).

¹⁸² *Id.* at 735 (citing 33 C.F.R. §§ 328.3(a)(5), (e)); Final Notice of Issuance and Modification of Nationwide Permits, 65 Fed. Reg. 12,818, 12,823 (Mar. 9, 2000).

¹⁸³ *Rapanos*, 547 U.S. at 771-72 (Kennedy, J., concurring).

¹⁸⁴ *Id.* at 787.

¹⁸⁵ *Id.* at 736 n.7 (citing *Jennison v. Kirk*, 98 U.S. 453 (1879); *Knoxville Water Co. v. Knoxville*, 200 U.S. 22, 27 (1906); *PUD No. 1 of Jefferson Cty. v. Washington Dep’t of Ecology*, 511 U.S. 700, 709 (1994); *New Orleans Water-Works Co. v. Rivers*, 115 U.S. 674, 683 (1885)).

Then, Justice Stevens explained that “[t]he plurality’s attempt to achieve its desired outcome by redefining terms does no credit to lexicography—let alone to justice.”¹⁸⁶

2. *SWANCC was limited to the Migratory Bird Rule.*

The agencies’ proposal also erroneously asserts that *SWANCC* stands for the premise that biological features can never be used to determine jurisdiction. That is incorrect. In reality, the Court’s decision in *SWANCC* was limited to one aspect of the agencies’ rule—the Migratory Bird Rule.¹⁸⁷ The agencies recognized that immediately following the decision¹⁸⁸ and have interpreted *SWANCC* as limited ever since.¹⁸⁹ In *Rapanos*, Justice Kennedy recognized that *SWANCC* could not be interpreted to demand the surface-connection requirement that the agencies would impose here.¹⁹⁰

Moreover, the proposal relies on biological factors to determine jurisdiction, seemingly in contradiction of the proffered interpretation of *SWANCC*. The proposal suggests that intermittent and perennial stream jurisdiction may be determined using methodology similar to that used by the EPA in the Pacific Northwest.¹⁹¹ The first question in that analysis is “Are aquatic macroinvertebrates present?” The second is “Are 6 or more individuals of the Order Ephemeroptera present?” The third also evaluates the biological makeup of the stream, asking “Are perennial indicator taxa present?” As a result, the proposal both interprets *SWANCC* to bar use of biological features to determine jurisdiction and proposes to use biological features to determine jurisdiction.

3. *Traditional navigable waters must be interpreted broadly.*

It appears that the agencies are open to restricting the reach of traditional navigable waters in two ways that are not supported by the case law. First, the agencies suggest limiting what is considered “navigable-in-fact” and second, they propose to eliminate the historic commerce test. Because the proposal is inextricably linked to the reach of traditional navigable waters, it is imperative that traditional navigable waters are properly recognized. They are not.

A century of well-developed Supreme Court precedent firmly establishes the broad reach of traditional navigable waters. The terms “navigable-in-fact” and “navigable-in-law” first appeared in *The Daniel Ball*. In that decision, the Supreme Court adopted the basic principle that, if a waterbody is used to transport goods on a ship in interstate commerce, the waterbody is subject to federal regulation.¹⁹² The Court revisited the issue of navigability later in *The Montello*, where it recognized that the vessels involved can be small.¹⁹³ The case also accepted

¹⁸⁶ *Id.* at 803 n.12.

¹⁸⁷ *SWANCC*, 531 U.S. 159, 165 (2001).

¹⁸⁸ Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of “Waters of the United States,” 68 Fed. Reg. 1,991, 1,996 (January 15, 2003).

¹⁸⁹ 84 Fed. Reg. at 4,159.

¹⁹⁰ *Rapanos*, 547 U.S. at 774.

¹⁹¹ 84 Fed. Reg. at 4,176.

¹⁹² 77 U.S. 557, 563 (1870).

¹⁹³ 87 U.S. 430 (1874).

that commercial use can be historical; the Court relied on past use by fur trappers to transport their pelts to market as the commercial activity.¹⁹⁴

Building on *The Montello*, the Court held in *Economy Light & Power v. United States*, that a water does not have to be continuously navigable regardless of whether that interruption is due to obstacles or low water levels.¹⁹⁵ The understanding of navigable waters was further expanded in *United States v. Appalachian Electric Power Company*, where the Court held that so long as a water is *susceptible* of use as a highway of commerce, it is navigable-in-fact, even if the water has never been used for any commercial purpose.¹⁹⁶ Small rafts are sufficient to demonstrate navigability.¹⁹⁷

As demonstrated by these decisions, the legal test for navigability is whether a canoe or kayak or other small craft can navigate the water in such a manner that demonstrates that meaningful commerce is or could occur. To the extent that the agencies intend to clarify Appendix D of the *Rapanos* guidance,¹⁹⁸ the test must include waters navigable by these small watercraft.

4. *Ditches that function as tributaries should be jurisdictional.*

Under the proposed rule, the agencies limit jurisdictional ditches to those that are constructed in a jurisdictional water and satisfy the definition of a tributary.¹⁹⁹ This definition is not consistent with the Clean Water Act.²⁰⁰

While it is true that the Corps initially attempted to side-step its obligations under the Clean Water Act by illegally equating the jurisdiction of the Clean Water Act with that of the Rivers & Harbors Act of 1899,²⁰¹ the Corps, under court order, soon broadened their definition of “waters of the United States.”

In 1975, the District Court for the District of Columbia held that the Corps’ narrow interpretation of its jurisdiction was unacceptable and demanded that the Corps expand its jurisdiction to include many additional water bodies, including ditches.²⁰² In *Callaway*, the court berated the Corps for “act[ing] unlawfully and in derogation of their responsibilities under section 404 of the Water Act”²⁰³ Another federal district court held similarly that the Corps’ jurisdiction under the Clean Water Act was significantly broader than its jurisdiction under the Rivers & Harbors Act.²⁰⁴ As that court stated, the Clean Water Act “was designed to deal with all facets of recapturing and preserving the biological integrity of the nation’s water by creating a

¹⁹⁴ *Id.* at 442.

¹⁹⁵ 256 U.S. 113, 123-24 (1921).

¹⁹⁶ 311 U.S. 377, 407 (1940)

¹⁹⁷ *Alaska v. Ahtna*, 891 F.2d 1401, 1405 (9th Cir. 1989).

¹⁹⁸ *See* 84 Fed. Reg. at 4,170.

¹⁹⁹ 84 Fed. Reg. at 4,179.

²⁰⁰ *See id.* at 4,155.

²⁰¹ Army Corps of Engineers, Permits for Activities in Navigable Waters or Ocean Waters, 39 Fed. Reg. 12,081, 12,115 (Apr. 3, 1974).

²⁰² *Nat. Res. Defense Council v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975).

²⁰³ *Callaway*, 392 F. Supp. at 686.

²⁰⁴ *United States v. Holland*, 373 F. Supp. 665, 668 (M.D. Fla. 1974).

web of complex interrelated regulatory programs.”²⁰⁵ Although the agencies are correct that the Corps did not regulate upland ditches initially, it was doing so by 1977.

In *United States v. Eidson*,²⁰⁶ the Eleventh Circuit Court of Appeals clearly articulated the rationale for finding ditches that function as tributaries jurisdictional.²⁰⁷ The court held:

There is no reason to suspect that Congress intended to regulate only the natural tributaries of navigable waters. Pollutants are equally harmful to this country’s water quality whether they travel along man-made or natural routes. The fact that bodies of water are ‘man-made makes no difference That the defendants used them to convey the pollutants without a permit is the matter of importance.’²⁰⁸

Citing *Eidson*, the Ninth Circuit in *Headwaters, Inc. v. Talent Irrigation District* went one step further and concluded that man-made structures should be treated the same as streams because they are tributaries. The court held that “[a]s tributaries, the [irrigation] canals are ‘waters of the United States,’ and are subject to the [Clean Water Act] and its permit requirement.”²⁰⁹ Cases decided after *SWANCC* only reinforced the holdings, that streams and ditches should be treated alike. In *Community Association for Restoration of the Environment v. Henry Bosma Dairy*,²¹⁰ the Ninth Circuit was confronted with a case involving pollutants that flowed through a series of canals and natural water bodies that ultimately flowed back into the river. The court held that the canals, like the river, were jurisdictional.²¹¹ The Fourth Circuit has similarly recognized the importance of extending jurisdiction to ditches that function as tributaries, finding that “[i]f this court were to conclude that the I-64 ditch is not a ‘tributary’ solely because it is manmade, the [Clean Water Act’s] chief goal would be subverted.”²¹²

In the three Supreme Court cases that have interpreted the term “navigable waters,” Justice Scalia’s plurality opinion was alone in adopting a narrow standard. In *Riverside Bayview*, the justices voted unanimously in upholding an approach that established comprehensive jurisdiction with the goal of addressing “pollution at its source.”²¹³ In *SWANCC*, five justices placed a single restriction on Clean Water Act jurisdiction, barring the Corps from using the migratory-bird rule in determining whether geographically isolated waters are “waters of the United States,” but leaving the door open for the agencies to base their jurisdiction over such waters on other factors.²¹⁴ And in *Rapanos*, five justices—Justice Kennedy and the dissenting justices—correctly interpreted the Clean Water Act as having a broad reach. Case law on

²⁰⁵ *Id.* at 668.

²⁰⁶ 108 F.3d 1336 (11th Cir. 1997).

²⁰⁷ *Id.* at 1340.

²⁰⁸ *Id.* at 1336 (quoting *Holland*, 373 F. Supp. at 673 and *Leslie Salt Co. v. United States*, 896 F.2d 354, 358 (9th Cir. 1990)).

²⁰⁹ 243 F.3d 526, 533 (9th Cir. 2001).

²¹⁰ 305 F.3d 943, 954 (9th Cir. 2002).

²¹¹ *Id.*

²¹² *Treacy v. Newdunn Assoc., LLP*, 344 F.3d 407, 416-417 (4th Cir. 2003), *cert. denied sub nom, Newdunn Assoc., LLP v. U.S. Army Corps of Eng’rs*, 541 U.S. 972 (2004); *United States v. Deaton*, 332 F.3d 698, 710-11 (4th Cir. 2003).

²¹³ *Riverside Bayview*, 474 U.S. at 132-33 (citing S. Rep. No. 92-414 at 77 (1972)).

²¹⁴ *SWANCC*, 531 U.S. at 165.

traditional navigable waters and ditches is similarly broad. The agencies proposal to rely on Justice Scalia’s narrow plurality opinion as the controlling interpretation of “waters of the United States” is unlawful, arbitrary and capricious.

C. The Clean Water Act Requires the Agencies to Assert Full Commerce Clause Authority.

Congress’s power to regulate the Nation’s waters derives from the Commerce Clause of the United States Constitution. The Clean Water Act requires the agencies to ensure the “integrity of the Nation’s waters.” To fulfill this obligation, the agencies must give the Clean Water Act “the broadest possible constitutional interpretation,”²¹⁵ as Congress demanded.²¹⁶

The Commerce Clause grants Congress the power “[t]o regulate Commerce . . . among the several States,”²¹⁷ including (1) channels of interstate commerce; (2) persons or things in interstate commerce; and (3) activities that substantially affect interstate commerce.²¹⁸ Federal jurisdiction over the Nation’s waters falls squarely within each of these categories. Despite the proven breadth of Congress’s Commerce Clause powers, and the clarity of Congress’s mandate under the Clean Water Act, the agencies now claim that limited authority and the need to preserve the traditional power of the States to regulate land and water drive their scheme to dismantle critical clean water protections.²¹⁹ Justice Kennedy explicitly dismissed these constitutional concerns in *Rapanos*, stating “In *SWANCC*, by interpreting the Act to require a significant nexus with navigable waters, the Court avoided applications—those involving waters without a significant nexus—that appeared likely, as a category, to raise constitutional difficulties and federalism concerns.”²²⁰

To fulfill their duties under the Clean Water Act, the agencies must give full effect to Congress’s Commerce Clause authority in protecting our Nation’s waters and define “waters of the United States” consistent with Justice Kennedy’s *Rapanos* opinion—as further defined by the 2015 Clean Water Rule. This is the only course that is consistent with the Constitution, Supreme Court jurisprudence, and the Clean Water Act.

1. *Congress’s power to protect channels of interstate commerce extends to non-navigable streams, wetlands, and interstate waters.*

When enacting the Clean Water Act, Congress understood the scientific reality that waters are “interconnected” and protections under the Act must extend to “navigable waters, portions thereof, and their tributaries,” for the health of the “aquatic ecosystem” and “well-being of human society.”²²¹ Only three years after the Act was passed, a federal court confirmed that

²¹⁵ H.R. Rep. No. 92-911 at 131 (1972); S. Conf. Rep. No. 92-1236 at 144 (1972).

²¹⁶ 33 U.S.C. § 1251(a).

²¹⁷ U.S. CONST., art. I, § 8, cl. 3.

²¹⁸ *Gonzales v. Raich*, 545 U.S. 1, 16-17 (2005); *United States v. Lopez*, 514 U.S. 549, 558-59 (1995).

²¹⁹ 84 Fed. Reg. at 4,156.

²²⁰ *Rapanos*, 547 U.S. at 776 (Kennedy, J., concurring).

²²¹ S. Rep. No. 92-414 at 76-77 (1972) (requiring “that any changes in the environment resulting in a physical, chemical or biological change in a pristine water body be of a temporary nature, such that by natural processes, within a few hours, days or weeks, the aquatic ecosystem will return to a state functionally identical to the

Congress asserted, and the Act extends, “federal jurisdiction over the nation’s waters to the *maximum extent permissible* under the Commerce Clause of the Constitution.”²²²

Consistent with the Act’s broad reach, Justice Kennedy reasoned in *Rapanos* that an interpretation of waters of the United States that relies on a significant nexus between upstream non-navigable waters and downstream traditional navigable waters raises no serious Commerce Clause concerns.²²³ Justice Kennedy’s opinion relied, in part, on the well-settled proposition that Congress’s power to regulate channels of interstate commerce also includes the power to adopt “federal legislation ‘aimed at improving safety in the channels of commerce’”²²⁴ For example, “[j]ust as control over the non-navigable parts of a river may be essential or desirable in the interests of the navigable portions, so may the key to flood control on a navigable stream be found in whole or in part in flood control on its tributaries”²²⁵ Thus, the Commerce Clause sanctions the federal government’s regulation of activities *outside* of the traditional navigable waters—*i.e.*, non-navigable tributaries—that potentially threaten navigation *within* those waters.²²⁶ Because damage to small streams and wetlands impairs navigation in a number of ways—by causing flooding downstream, by allowing silt to run off and accumulate in a downstream waterway, or (if the discharge contains toxic chemicals that flow downstream) by making use of the waterway dangerous²²⁷—they must be protected consistent with Congress’s mandate.²²⁸

Congress’s power to keep the channels of commerce free from injurious uses is also well-settled.²²⁹ Its power over channels of commerce extends to all waters that have a hydrologic connection to and form part of the tributary system of a traditionally navigable water, including

original”); see also H.R. Rep. No. 92-911 at 76-77 (1972) (discussing the goal of the legislation as preserving natural ecosystem structure and function); Brief for the Honorable John D. Dingell, The Honorable John Conyers, Jr., The Honorable Robert F. Drinan, The Honorable Gary W. Hart, The Honorable Kenneth W. Hechler, The Honorable Charles McCurdy Mathias, Jr., The Honorable Paul N. McCloskey, Jr., The Honorable Charles B. Rangel, and the Honorable Senator Richard Schultz Schweiker as Amici Curiae in Support of the Resp. at 11, *Rapanos v. United States*, 574 U.S. 715 (January 2006) (Nos. 04-1034, 04-1384) (“Amicus Br. of Congress”).

²²² *Callaway*, 392 F. Supp. at 686; see also *Katzenbach v. McClung*, 379 U.S. 294 (1974); *Heart of Atlanta Motel, Inc. v. United States*, 379 U.S. 241 (1964); *Wickard v. Filburn*, 317 U.S. 111 (1942).

²²³ *Rapanos*, 547 U.S. at 782-83 (citations omitted); see also *United States v. Cundiff*, 555 F.3d 200, 213 n.6 (6th Cir. 2009) (citations omitted) (noting a commerce clause challenge would be “rather tenuous”).

²²⁴ *Rapanos*, 547 U.S. at 782 (Kennedy, J., concurring) (citing *Pierce Cty. v. Guillen*, 537 U.S. 129, 147 (2003)).

²²⁵ *Id.* (citing *Oklahoma ex rel. Phillips v. Guy F. Atkinson Co.*, 313 U.S. 508, 525-526 (1941)); see also *Guy F. Atkinson Co.*, 313 U.S. at 525-526 (“Flood protection [along with] watershed development [are] parts of commerce control; and [thus] the power of flood control extends to the tributaries of navigable streams”) (quoting *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 426 (1940)).

²²⁶ See *United States v. Grand River Dam Auth.*, 363 U.S. 229, 232 (1960); *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 709-10 (1899); see also *Guy F. Atkinson Co.*, 313 U.S. at 525 (“There is no constitutional reason why Congress cannot, under the commerce power treat the watersheds as a key to flood control on navigable streams and their tributaries.”).

²²⁷ See section X; see also Br. of the States as Amici Curiae in Support of Respondents, *Rapanos v. United States* (Nos. 04-1034, 04-1384) (January 2006) (“The federal government rationally may conclude that pollution discharged into these wetlands substantially affects downstream traditional navigable waters.”) at 20.

²²⁸ See *Appalachian Elec. Power Co.*, 311 U.S. at 426 (“the authority of the United States is the regulation of commerce [over] waters . . . [f]lood protection, watershed development, [and] recovery of the cost of improvements through the utilization of power are likewise parts of commerce control.”)

²²⁹ See, e.g., *Lopez*, 514 U.S. at 558.

streams that flow that intermittently or ephemerally, non-navigable interstate waters, and ditches that function as tributaries.²³⁰ This is so “because pollutants added to any of these tributaries will inevitably find their way to the very waters that Congress has sought to protect.”²³¹ “It would, of course, make a mockery of [Congress’s] powers if its authority to control pollution was limited to the bed of the navigable stream itself.”²³² In the absence of federal control, “[t]he tributaries which join to form the river could then be used as open sewers” carrying waste into the navigable waters and completely undermining the federal protection over the channels of commerce.²³³ Congress’s power must extend so far to further the express purposes in the Act to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,” and attain “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.”²³⁴ The agencies must act consistently.

2. *Protection of non-navigable interstate waters is a valid exercise of Congress’s power to regulate persons and things in interstate commerce.*

Water is itself an article in commerce and is a necessary and vital component of commercial activities.²³⁵ About 9 trillion gallons of fresh water are used each year to manufacture goods.²³⁶ The burgeoning craft brewing industry relies on sources of clean water in contributing \$76.2 billion to the U.S. economy each year, along with 500,000 jobs.²³⁷ According to the United States Geological Survey, water is used for fabricating, processing, washing, diluting, cooling, or transporting a product.²³⁸ Water is also used by smelting facilities, petroleum refineries, and industries producing chemical products, food, and paper products.²³⁹ Water regulation by the federal government, therefore, is beyond question.

²³⁰ *Treacy*, 344 F.3d at 416-17 (upholding Corps’ assertion of jurisdiction over wetlands connected to a traditionally navigable water through approximately 2.4 miles of ditches and streams). *See also, e.g., United States v. Hubenka*, 438 F.3d 1026, 1032 (10th Cir. 2006) (Commerce power includes “the power to regulate waters to limit pollution, prevent obstructions to navigation, reduce flooding, and control watershed development.”) (citations omitted); *United States v. Interstate General Co.*, No. 01-4513, 39 Fed. Appx. 870, 2002 WL 1421411 *3 (4th Cir. July 2, 2002) (rejecting argument that SWANCC eliminated jurisdiction over wetlands adjacent to non-navigable tributaries); *Headwaters v. Talent Irrigation Dist.*, 243 F.3d 526, 534 (9th Cir. 2001) (“Even tributaries that flow intermittently are ‘waters of the United States’”).

²³¹ *Treacy*, 344 F. 3d at 416-17.

²³² *United States v. Ashland Oil and Transp. Co.*, 504 F.2d 1317, 1325-1326 (6th Cir. 1974).

²³³ *Id.* at 1326 (“The navigable part of the river could become a mere conduit for upstream waste.”)

²³⁴ 33 U.S.C. § 1251(a)(1)-(2).

²³⁵ *Sporhase v. Nebraska*, 458 U.S. 941 (1982). *Cf. Chem. Waste Mgmt., Inc. v. Hunt*, 504 U.S. 334, 340 n.3 (1992) (noting that waste, even if it has no value, is an “article of commerce”).

²³⁶ EPA, OFFICE OF WATER, LIQUID ASSETS 2000: AMERICA’S WATER RESOURCES AT A TURNING POINT 2(2000).

²³⁷ Brewers Association, Comment Letter Submitted on EPA-HQ-OW-2018-0149 (Mar. 7, 2019).

²³⁸ U.S.G.S., INDUSTRIAL WATER USE, https://www.usgs.gov/mission-areas/water-resources/science/industrial-water-use?qt-science_center_objects=0#qt-science_center_objects (last visited Apr. 8, 2019).

²³⁹ U.S.G.S., ESTIMATED USE OF WATER IN THE UNITED STATES IN 2015: U.S. GEOLOGICAL SURVEY CIRCULAR 1441, 59-60 (2018), <https://doi.org/10.3133/cir1441>. The need for water in these processes provides more than sufficient basis for federal regulation of those resources under the Commerce Clause. *See Sporhase*, 458 U.S. at 953-54 (finding a “significant federal interest” in conservation of scarce ground water was “a national problem” that Congress could regulate pursuant to Commerce Clause).

3. *Protection of non-navigable interstate waters is a valid exercise of Congress's power to regulate classes of activities that substantially affect interstate commerce.*

The Supreme Court has “recognized . . . that ‘[t]he power of Congress over interstate commerce is not confined to the regulation of commerce among the states,’ but extends to activities that ‘have a substantial effect on interstate commerce.’”²⁴⁰ “Congress’s power, moreover, is not limited to regulation of an activity that by itself substantially affects interstate commerce, but also extends to activities that do so only when aggregated with similar activities of others.”²⁴¹

- a. Broad protection of waters is required under the Commerce Clause because of clear and direct connections between the degradation of small streams, wetlands, and non-navigable interstate waters and interstate commerce.

Just as water is an article in commerce and is a component of commercial activity, water pollution has a significant impact on commerce and preventing water pollution has a substantial commercial effect.

Americans spend about \$44 billion each year on trips to coastal areas; the American fishing industry produces more than 10 billion pounds of fish and shellfish each year; and farmers, who produce food and fiber products worth at least \$197 billion per year, rely heavily on clean water for irrigation.²⁴² Headwater streams provide drinking water for 200 million Americans.²⁴³ According to EPA, however, nitrates and algal blooms in drinking water sources “can drastically increase treatment costs.”²⁴⁴ The tourism industry loses close to \$1 billion each year, mostly through losses in fishing and boating activities, as a result of water bodies that have been affected by nutrient pollution and harmful algal blooms.²⁴⁵ Annual losses to these industries from nutrient pollution are estimated to be in the tens of millions of dollars.²⁴⁶

The protection of wetlands is also directly linked to interstate commerce. For example, the Congaree Bottomland Hardwood Swamp in South Carolina removes a quantity of pollutants from the watershed equivalent to that which would be removed by a \$5 million treatment plant.²⁴⁷ A 2010 assessment prepared for the EPA of non-floodplain wetlands in 88 counties of

²⁴⁰ *Nat'l Fed. of Indep. Bus. v. Sebelius*, 567 U.S. 519, 549 (2012) (“*NFIB*”) (opinion of Roberts, C.J.) (quoting *United States v. Darby*, 312 U.S. 100, 118–19 (1941)); see *Lopez*, 514 U.S. at 558–59.

²⁴¹ *NFIB*, 567 U.S. at 549 (opinion of Roberts, C.J.) (citing *Wickard*, 317 U.S. at 127–28).

²⁴² EPA, *LIQUID ASSETS* 2000 at 6–7.

²⁴³ SELC GIS Analysis.

²⁴⁴ EPA, *NUTRIENT POLLUTION, THE EFFECTS - ECONOMY*. Nitrate-removal systems in Minnesota caused supply costs to rise from 5–10 cents per 1,000 gallons to over \$4 per 1,000 gallons. *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ EPA, *ECONOMIC BENEFITS OF WETLANDS* (2006).

the Carolinas also showed that non-floodplain wetlands stored significant amounts of water and, in doing so, captured heavy metals, nutrients, and carbon.²⁴⁸

The biological health of headwaters and their connection to waters of the United States also require regulation under the Act.²⁴⁹ Anadromous fish—those that live at sea but spawn in freshwater—such as the Pacific salmon, need tributaries with specific water quantity and quality in which to spawn and rear their young. The presence of these fish in the Nation’s waterways supports commercial and recreational activities that generate over \$212 billion and 1.7 million jobs.²⁵⁰

Consistent with Congress’s power over interstate commerce, the Clean Water Act requires the protection of healthy watersheds to preserve the value of water for “public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes.”²⁵¹ The agencies must apply broad water protections to achieve the Act’s mandate.

- b. Broad protection of waters under the Commerce Clause is valid because the activities being regulated are economic in nature, which substantially affect interstate commerce.

The activities resulting in the water pollution prohibited by the Clean Water Act are also economic in nature. The regulation of small streams, wetlands, and non-navigable interstate waters is therefore warranted.²⁵²

Discharges of pollutants into surface waters occur primarily as a result of industrial and commercial operations, including manufacturing, construction, resource extraction, land development, agriculture, and waste disposal.²⁵³ To be sure, one of the policies that motivated passage of the Act was Congress’ desire to end the use of the Nation’s rivers, lakes, streams, and oceans as “waste treatment systems.”²⁵⁴ Similarly, dredging and filling of wetlands regulated under section 404 are undertaken by commercial interests for monetary gain.²⁵⁵ These activities,

²⁴⁸ RTI International, Inc., *Assessing Geographically Isolated Wetlands in North and South Carolina: The Southeast Isolated Wetlands Assessment (SEIWA)*, Final Report, Prepared for U.S. EPA (Feb. 11, 2011).

²⁴⁹ See *Gibbs v. Babbitt*, 214 F.3d 483, 492 (2000) (finding it reasonable for Congress to regulate endangered species under the Commerce Clause because the species implicate commercial activities and interstate markets).

²⁵⁰ U.S. DEPT. OF COMMERCE, FISHERIES ECONOMICS OF THE UNITED STATES: ECONOMICS AND SOCIOCULTURAL STATUS AND TRENDS SERIES (Dec. 2018).

²⁵¹ 33 U.S.C. § 1313(c)(2)(A).

²⁵² See *SWANCC*, 531 U.S. at 193 (Stevens, J., dissenting) (“[t]here can be no doubt that, unlike the class of activities Congress was attempting to regulate in *United States v. Morrison*, 529 U.S. 598, 613, 120 S.Ct. 1740, 146 L.Ed.2d 658 (2000) (“[g]ender-motivated crimes”), and *Lopez*, 514 U.S., at 561, 514 U.S. 549 (possession of guns near school property), the discharge of fill material into the Nation’s waters is almost always undertaken for economic reasons.”). See also *Perez v. United States*, 402 U.S. 146 (1971) (noting that it is the “class” of regulated activities, not the individual instance, that is to be considered in the “affects” commerce analysis).

²⁵³ See, e.g., 40 C.F.R. pts. 403-610 (listing Clean Water Act effluent guidelines for 73 categories of industrial activities, which fill over 1500 pages of the Code of Federal Regulations).

²⁵⁴ S. Rep. No. 92-414 (Oct. 28, 1971).

²⁵⁵ *SWANCC*, 531 U.S. at 193 (Stevens, J., dissenting); see also U.S. FISH & WILDLIFE SERVICE, STATUS AND TRENDS OF WETLANDS IN THE CONTERMINOUS UNITED STATES 1986 TO 1997 12 (2000).

and their impacts on water quality, are within the federal government's broad authority to regulate interstate commerce, and the agencies cannot ignore them.

- c. Broad protection of waters under the Commerce Clause is required to safeguard downstream states from out-of-state pollution that they cannot themselves regulate.

Congress's Commerce Clause power extends to "activities causing air or water pollution, or other environmental hazards that may have effects in more than one state."²⁵⁶ As Justice Kennedy observed in *Rapanos*, "the [Clean Water Act] protects downstream States from out-of-state pollution that they cannot themselves regulate."²⁵⁷ Downstream states cannot control the actions of their upstream neighbors, and these upstream states have strong incentives to choose growth over resource protection because much of the cost of resource destruction is borne by downstream neighbors. Waters that are critical to our region, and which cross state lines, like pine flatwood forested wetlands that span across the Florida/Georgia state line or large Carolina bays, could be lost without a meaningful federal floor.

Moreover, voters in upstream states likely would reject regulatory measures that impose costs where they live, but deliver benefits to communities downstream.²⁵⁸ Voters in downstream states likely would conclude that regulation in their state is not worthwhile because it cannot solve the water pollution problem by itself due to the lack of protections in upstream states.²⁵⁹ As the Supreme Court clarified in *Hodel*, "prevention of this sort of destructive interstate competition is a traditional role for congressional action under the Commerce Clause."²⁶⁰

The regulation of small streams, wetlands, and non-navigable interstate waters derives from a combination of congressional concerns. Due to the harm to channels of commerce, downstream states, and interstate commerce that would result from the loss of these waters, federal protections for these waters lie at the very heart of federal Commerce Clause authority.

- D. In Proposing This Rule, the Agencies Unlawfully Abdicate Their Charge to Restore and Maintain the Nation's Waters.

As with all administrative agencies, the agencies are "creature[s] of statute and they derive [their] existence and all of [their] power from Congress."²⁶¹ Congress entrusted the agencies with the unequivocal goal of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters."²⁶² To achieve this objective, Congress made it "the national goal" to eliminate the discharge of pollutants into the Nation's waters by 1985. That deadline has long past, discharges have not been eliminated,²⁶³ and the agencies cannot now

²⁵⁶ *Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264, 282 (1981).

²⁵⁷ 547 U.S. at 777 (citation omitted).

²⁵⁸ Br. of the Ass'n of State and Interstate Water Pollution Control Administrators as Amicus Curiae in Support of Resp., *Rapanos v. U.S.*, 574 U.S. 715 (Jan. 2006) (Nos. 04-1034 & 04-1384) at 25.

²⁵⁹ *Id.*

²⁶⁰ *Hodel*, 452 U.S. at 282.

²⁶¹ *Jones Bros., Inc. v. Sec'y of Labor*, 898 F.3d 669, 674 (6th Cir. 2018).

²⁶² 33 U.S.C. § 1251(a).

²⁶³ See *supra* section IV.

undermine the very charge Congress gave them²⁶⁴ by stripping protections from the headwaters, streams, and wetlands needed to maintain the structure, function, and overall integrity of our rivers, lakes, estuaries, and oceans.²⁶⁵ To do so would be “inconsistent with [the clear] statutory mandate” that it protect Nation’s waters and it would “frustrate the congressional policy underlying [the Clean Water Act]”²⁶⁶—that is, the “exercise[of] comprehensive jurisdiction over the Nation’s waters to control pollution to the fullest constitutional extent.”²⁶⁷ Numerous courts have rejected similar agency interpretations of statutes that are in conflict with the legislative history and fundamental purpose of a statute.²⁶⁸

The agencies’ proposed rule would be a categorical, dramatic, and unprecedented loss of protections for the Nation’s waters. It strips protection from all ephemeral streams and threatens safeguards for intermittent streams. Ending protections for these water bodies would harm all of the larger streams, rivers, lakes, and reservoirs that they flow into. The rule would further endanger more than half of the Nation’s wetlands, which perform essential functions such as purifying the water that drains into nearby water bodies. It would invalidate the entire purpose of the Clean Water Act and is wholly inconsistent with congressional intent.²⁶⁹ There is no reasonable interpretation of the Clean Water Act’s text, purpose, or legislative history under which the agencies can legally move forward with this rule.

E. The Economic Analysis Is Arbitrary and Capricious.

The Economic Analysis extends for hundreds of pages, yet provides little useful information. There are four primary flaws that prevent the analysis from serving as a rational basis for the proposed reversal in policy. The analysis, therefore, falls short of demonstrating that “there are good reasons for the new policy,” as required with such an extreme change in agency position.²⁷⁰ As discussed below, if the errors in the analysis were remedied, it would support maintaining robust stream and wetland protections.

Two errors are of the utmost importance. First, the agencies assume that wetland benefits are only valued by in-state residents. That is economically and practically baseless. Second, the agencies dramatically understate the number of wetlands in each state as part of their wetland benefit analysis. Correcting those errors, even using conservative estimates, results in a loss of wetland benefits of more than \$2.4 billion every year as a result of this proposal.

²⁶⁴ *Jones Bros.*, 898 F.3d at 673 (stating an agency “may not invalidate the statute from which it derives its existence and that it is charged with implementing.”)

²⁶⁵ See generally Alexander et al., Featured Collection Introduction: Connectivity of Streams and Wetlands to Downstream Waters, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION 287 (Apr. 2018).

²⁶⁶ *N.L.R.B. v. Brown*, 380 U.S. 278, 291 (1965); see also *S.E.C. v. Sloan*, 436 U.S. 103, 118 (1978); *Rapanos*, 547 U.S. at 717 (Kennedy, J., concurring) (“The nexus required [with navigable waters] must be assessed in terms of the [Clean Water Act’s] goals and purposes.”).

²⁶⁷ S. Rep. No. 95-370, at 75 (1977).

²⁶⁸ See *Kyle v. Dir., Office of Workers' Comp. Programs, U.S. Dep't of Labor*, 819 F.2d 139, 144 (6th Cir. 1987); *Santa Fe Pac. R. Co. v. Sec'y of Interior*, 830 F.2d 1168, 1180 n. 91 (D.C. Cir. 1987); *Southland Royalty Co. v. Fed. Energy Admin.*, 512 F. Supp. 436, 451 (N.D. Tex. 1980); *Wilcox v. Ives*, 864 F.2d 915, 925 (1st Cir. 1988).

²⁶⁹ *Morton v. Ruiz*, 415 U.S. 199, 237 (1974).

²⁷⁰ *Nat'l Lifeline Ass'n*, 915 F.3d at 27 (quoting *State Farm*, 463 U.S. at 43).

1. *The agencies cannot lawfully consider state responses to abandoning federal jurisdiction.*

The premise of the agencies' proposal—that it is appropriate for the federal government to cede jurisdiction to states under section 101(b)—leads the agencies to rely on factors that Congress has not authorized. “Agency action is arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider.”²⁷¹ Congress created the Clean Water Act as a comprehensive statutory scheme. It intended to achieve the objective of the Act through the implementation of its provisions. That could not be any clearer following the 1977 Amendments. Congress rejected the notion embraced by this rulemaking—that section 101(b) is to be implemented by abandoning federal protections for waters of the United States. The agencies cannot consider whether states would make up for the agencies' failure to exercise oversight mandated by Congress. Yet the Economic Analysis is centered on a mix of scenarios in which the agencies speculate about potential future state protections. Congress did not intend for the Act to depend on wholly independent state action.

2. *The Economic Analysis systematically underestimates the benefits of stream and wetland protections.*

The Economic Analysis underestimates the benefits of protecting streams and wetlands in two principal ways. First, it narrowly defines the geographic scope of households that benefit from protections. Second, the analysis excludes any estimate of most of the impacts that are expected from the proposal.

The primary flaw in the economic analysis is the agencies' restriction of benefits to those living in the state where wetland mitigation is done. That approach is flawed both with respect to economic theory and as a practical matter.

As a matter of economic theory, there is no basis for limiting benefit calculations to state lines. Dr. John Whitehead describes in detail in the attached analysis²⁷² that “willingness to pay for natural resources is not constrained by political jurisdiction.”²⁷³ Willingness to pay declines as distance from the natural resource increases, but that benefit can extend thousands of miles.²⁷⁴ One study that evaluated willingness to pay for dam removals in Washington State found that the mean willingness to pay declined from \$78 in the state to \$58 two thousand miles away.²⁷⁵ As a result, 97 percent of the benefits from dam removal were out of state.

²⁷¹ *Id.*

²⁷² John. C. Whitehead, Comments on “Economic Analysis for the Proposed Revised Definition of ‘Waters of the United States’” (EPA-Army 2018) (Apr. 9, 2019) (“Whitehead Report”), attached as Ex. C. Dr. Whitehead's analysis is incorporated here by reference and should be considered supplemental comments, which the agencies must respond to, by the organizations listed above.

²⁷³ Ex. C, Whitehead Report at 3.

²⁷⁴ *Id.* at 3-4.

²⁷⁵ *Id.* at 4.

There are established economic equations for evaluating the reach of benefits. As described by Dr. Whitehead, “[t]he economic jurisdiction, in contrast to the political jurisdiction, is determined by this data-driven model and not by assumption.”²⁷⁶

That conclusion is well-grounded in reality. Numerous state boundaries are defined by rivers. Virginia and Maryland are separated by the Potomac River. The Savannah River creates the border between Georgia and South Carolina. The Chattahoochee River divides Georgia and Alabama. Even in the case study, the Ohio River starts in Pennsylvania and borders Ohio, West Virginia, Kentucky, and Illinois before it flows into the Mississippi River, which touches Missouri, Tennessee, Arkansas, Mississippi, and Louisiana. Clearly, wetland and stream protection, restoration, or preservation in any of these states benefits households that share the respective river.

Taking into account adjacent states in the willingness to pay analysis significantly increases the estimated benefits provided by wetland mitigation. As Dr. Jeff Mullen has calculated,²⁷⁷ including neighboring states in the Stage 1 analysis increases the benefits under every scenario analyzed by the agencies—so much so that the foregone benefits of the proposal, even if limited to wetland mitigation, outweigh the avoided costs (i.e., cost savings) when comparing the high-end costs to the high-end benefits. For example, as demonstrated in Dr. Mullen’s analysis is below, the high-end annual wetland benefits for Scenario 0 (\$445.8M) are almost twice as much as the avoided costs of regulation (\$234.4M). These estimates demonstrate that the Clean Water Rule, from a cost-benefit perspective, should not be rescinded.²⁷⁸

²⁷⁶ *Id.* at 2.

²⁷⁷ Jeffrey D. Mullen, Ph.D., Draft Review of the 2018 EPA Economic Analysis for the Proposed Definition of “Waters of the United States” (Apr. 10, 2019) (“Mullen Report”), attached as Ex. D. Dr. Mullen’s analysis is incorporated here by reference and should be considered supplemental comments, which the agencies must respond to, by the organization listed above.

²⁷⁸ Ex. D, Mullen Report at 16.

Table 1.3: Stage 1 Annual Avoided Costs and Annual Foregone Benefits by Scenario and Scope, (q₀ = 40,000 acres)

2017\$ millions	Annual Avoided Costs ^a		Annual Foregone Benefits		Annual Foregone Benefits	
			Scope = Single State		Scope = Adjacent States	
Scenario 0	Low	High	Mean ^b	High ^c	Mean ^d	High ^e
Permit	\$29.8	\$74.7				
Mitigation	\$57.4	\$159.7				
CWA 404 Total	\$87.2	\$234.4	\$59.4	\$121.4	\$216.6	\$445.8
Scenario 1	Low	High	Mean	High	Mean	High
Permit	\$15.7	\$39.5				
Mitigation	\$37.7	\$57.6				
CWA 404 Total	\$53.4	\$97.1	\$16.7	\$38.6	\$90.4	\$207.7
Scenario 2	Low	High	Mean	High	Mean	High
Permit	\$10.2	\$25.5				
Mitigation	\$26.7	\$42.1				
CWA 404 Total	\$36.9	\$67.6	\$14.3	\$33.1	\$56.0	\$127.3
Scenario 3	Low	High	Mean	High	Mean	High
Permit	\$1.5	\$3.8				
Mitigation	\$2.3	\$2.9				
CWA 404 Total	\$3.8	\$6.7	\$1.2	\$2.8	\$11.8	\$26.5

a: As reported in Tables III-10 through III-12 and Table B-1.

b: As reported in Tables III-10 through III-12 and Table B-1.

c: Uses Upper 95th WTP/household/acre from Table III-9; assumes WTP=0 for residents outside of the state.

d: Uses mean WTP/household/acre from Table III-9; includes WTP>0 for residents outside of the state.

e: Uses Upper 95th WTP/household/acre from Table III-9; includes WTP>0 for residents outside of the state.

Figure 7.

The agencies' Stage 2 analysis fares no better. Had the agencies properly accounted for adjacent states in their analysis, they would have calculated the following estimates of foregone benefits.²⁷⁹

²⁷⁹ Ex. D, Mullen Report at 31.

Table 2.1: Stage 2 Annual Avoided Costs and Annual Foregone Benefits by Scenario and Scope,
 $q_0 = 40,000$ acres

2017\$ millions	Annual Avoided Costs ^a		Annual Foregone Benefits		Annual Foregone Benefits	
			Scope = Single State		Scope = Adjacent States	
Scenario 0	Low	High	Mean ^b	High ^c	Mean ^d	High ^e
Permit ^f	\$26.6	\$26.2	\$135.6	\$300.3	\$419.5	\$898.3
Mitigation ^g	\$209.9	\$470.0				
CWA 404 Total	\$236.5	\$496.6				
Scenario 1	Low	High	Mean	High	Mean	High
Permit	\$16.0	\$16.0	\$46.8	\$104.0	\$233.9	\$496.4
Mitigation	\$118.6	\$249.7				
CWA 404 Total	\$134.6	\$265.7				
Scenario 2	Low	High	Mean	High	Mean	High
Permit	\$10.6	\$10.6	\$41.7	\$92.7	\$193.4	\$408.3
Mitigation	\$101.9	\$204.3				
CWA 404 Total	\$112.5	\$214.9				
Scenario 3	Low	High	Mean	High	Mean	High
Permit	\$2.4	\$2.4	\$6.9	\$14.2	\$74.3	\$152.9
Mitigation	\$25.3	\$60.2				
CWA 404 Total	\$27.6	\$62.6				

a: As reported in Table IV-61.

b: As reported in Table IV-62.

c: Uses Upper 95th WTP/household/acre from Table IV-62.

d: Uses mean WTP/household/acre from Table IV-62; includes WTP>0 for residents outside of the state.

e: Uses Upper 95th WTP/household/acre from Table IV-62; includes WTP>0 for residents in adjacent states.

Figure 8.

Combining the foregone benefits of the Stage 1 and Stage 2 analyses highlights the seriousness of the agencies' error here, resulting in an average of \$636.1 million and potentially more than \$1.3 billion in foregone wetlands benefits. But failing to account for wetland benefits to adjacent states is not the only essential error in the Economic Analysis.

In addition to narrowing the scope of the analysis to individual states, the agencies also dramatically underestimated the baseline number of wetlands in each state—assuming 40,000 acres.²⁸⁰ In states like Alabama, Georgia, North Carolina, South Carolina, and Virginia, which Appendix A of the Economic Analysis estimates have a combined 20,000,000 acres of wetlands, using a baseline estimate that is less than 1 percent of that total significantly underestimates the wetland benefits lost under the proposal. Using even a modestly increased value, a baseline

²⁸⁰ Ex. D, Mullen Report at 19.

estimate of 220,000 acres per state, results in significantly higher values for average wetland benefits, as summarized below.²⁸¹

Table 8.1: Single Stage Annual Foregone Benefits by Scenario and Scope ($q_0 = 220,000$)

2017\$ millions	Annual Foregone Benefits	
	Scope = Single State	Scope = Adjacent States
Scenario 0	\$772.9	\$2,403.4
Scenario 1	\$275.2	\$1,295.2
Scenario 2	\$244.2	\$984.1
Scenario 3	\$29.8	\$315.1

Figure 9.

Reliance on the artificially narrow scope and an underestimation of baseline wetland acreage considered by the agencies is arbitrary and capricious on its own, but is even more so given the range of economic effects that the agencies failed to evaluate. According to the agencies, the proposal is expected to reduce ecosystem values for streams and wetlands, increase downstream inundation damage, increase restoration costs, increase costs for drinking water providers, and increase the frequency and damage caused by oil spills.²⁸² Yet the analysis does not quantify any of those foregone benefits of existing protections.

Nor did the agencies include the cost to states of developing programs necessary to provide the protections assumed in Scenarios 1, 2, and 3. As Dr. Mullen summarizes, there are likely economies of scale that the Corps' regulatory program can take advantage of that are not available to state agencies.²⁸³

In sum, a fair economic analysis would demonstrate what history tells us is true—that the economic benefits of clean water protections far exceed the cost. In the 47 years since the passage of the Clean Water Act our economy has flourished—and our water has been made cleaner. This proposal jeopardizes those gains.

3. *The Economic Analysis's methodology fails to meaningfully evaluate existing data.*

The agencies use several methods to evaluate parts of this rulemaking rather than attempting to implement a nationwide analysis, resulting in a fractured, unhelpful assessment. It is clear from the docket, and the fractured analysis, that the agencies have the data to conduct a consistent, nationwide analysis. The absence of such an analysis has prevented the public from understanding the scope of the impact of this proposal.

The agencies have access to datasets for section 404 and 402 permits, which have been posted to the docket of this rulemaking. The section 404 permit database includes nearly 400,000

²⁸¹ Ex. D, Mullen Report at 34.

²⁸² See 2018 Economic Analysis at 133.

²⁸³ Ex. D, Mullen Report at 13, 17.

decisions.²⁸⁴ The database includes water type, impacts authorized, sector, flow characteristics, and numerous other categories of information. But the agencies chose not to evaluate that database using a consistent, clearly explained methodology. While it is difficult to predict future land use changes, analyzing whether past permitting decisions would be decided differently under the new proposal does not, however, present the same difficulties. The agencies took such an approach in 2015 and did so, to a very limited extent, in the case studies here.

The information necessary to conduct a basic form of that analysis is in the Economic Analysis and the Resource and Programmatic Assessment. The Economic Analysis identifies stream and wetland types likely to lose jurisdiction.²⁸⁵ The Resource and Programmatic Assessment expands on those identifications.²⁸⁶ Using that information as well as the agencies' notice, as we have done in the below table, shows that agencies could present to the public a baseline assessment of stream and wetland types that would no longer be jurisdictional under the proposal.

²⁸⁴ Clean Water Act Section 404 Data Used in Proposed Rule Economic Analysis and Resource and Programmatic Assessment, EPA-HQ-OW-2018-0149-0052 (Feb. 14, 2019).

²⁸⁵ 2018 Economic Analysis at 131-132 (describing classifications of R4, R6, RPWWN).

²⁸⁶ See U.S. EPA and Dep't of Army, Resource and Programmatic Assessment for the Proposed Revised Definition of "Waters of the United States," EPA-HQ-OW-2018-0149-0005 (Dec. 11, 2018) ("2018 Resource and Program Assessment") (describing isolated, Non-Relatively Permanent Water ("NRPW"), Non-Relatively Permanent Water Wetland ("NRPWW"), Tributary with Relatively Permanent Wetlands and Non-Relatively Permanent Wetlands ("TNWRPW"), Traditional Navigable Water Wetland ("TNWW"), Relatively Permanent Water ("RPW") and Relatively Permanent Water Wetland Neighboring ("RPWWN") classifications).

Water Type	Description	Jurisdictional
Isolated	Isolated (interstate or intrastate) waters, including isolated wetlands	No ²⁸⁷
NRPW	Non- Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs	No ²⁸⁸
RPW (R4, R6)	RPWs that flow directly or indirectly into TNWs, but are categorized as intermittent or ephemeral	No ²⁸⁹
NRPWW	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs	No ²⁹⁰
RPWWN	Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs	No ²⁹¹
TNWRPW (R4, R6)	Tributary consisting of both RPWs and non-RPWs	No ²⁹²
TNWW	Wetlands adjacent to TNWs	Approximately 45 percent non-jurisdictional ²⁹³

Historical permitting information can also be used to begin to identify approximately how many streams and wetlands have been protected by the Clean Water Act that would lose protection under the proposal.²⁹⁴ Using the permit data in the record, we were able to sort for permits assigned the classifications above as well as relatively permanent waters with an R4 or R6 Cowardin Code. Through this process, we can begin to approximate the scope of this proposal's impact on streams and wetlands previously permitted.²⁹⁵

²⁸⁷ 84 Fed. Reg. at 4,135.

²⁸⁸ Non-RPWs include intermittent and ephemeral streams, both of which the proposal states may lose jurisdiction. 84 Fed. Reg. at 4,177.

²⁸⁹ Streams with a Cowardin Classification R4 or R6 are intermittent or ephemeral, both of which may lose jurisdiction. 84 Fed. Reg. at 4,177.

²⁹⁰ Because NRPWs would lose jurisdiction, their adjacent wetlands would also lose jurisdiction.

²⁹¹ 2018 Economic Analysis at 132.

²⁹² Streams with a Cowardin Classification R4 or R6 are intermittent or ephemeral, both of which may lose jurisdiction. 84 Fed. Reg. at 4,177.

²⁹³ 2018 Resource and Program Assessment at 45.

²⁹⁴ Clean Water Act Section 404 Data Used in Proposed Rule Economic Analysis and Resource and Programmatic Assessment, EPA-HQ-OW-2018-0149-0052 (2019).

²⁹⁵ See 2018 Economic Analysis at 131.

Water Type	Wetland Impacts No Longer Requiring a Permit Under Proposal (acres)	Stream Impacts No Longer Requiring a Permit Under Proposal (linear feet)
Isolated	709	35,721
NRPW	1,675	5,348,506
NRPWW	2,482	133,478
RPW (R4, R6)	918	3,365,684
RPWWN	7,144	945,413
TNWRPW (R4, R6)	83	162,952
TNWW	4,621	35,721
Total	17,632	10,027,475
Annual Losses	3,526	2,005,495
Additional Losses from Clean Water Rule Repeal ²⁹⁶	1,154	--

The agencies can, and must, conduct a meaningful analysis of this existing data and release it for public comment.

The agencies can go beyond the summary permit data by evaluating approved jurisdictional determinations, as partially done to evaluate the change in jurisdiction for wetlands adjacent to traditional navigable waters. In that analysis, most of the Corps' districts reviewed approved jurisdictional determinations to determine if wetlands previously found to be jurisdictional would lose protection under the proposal.²⁹⁷ But the districts did not conduct a consistent analysis. Some reviewed each jurisdictional determination made during the time period, while others reviewed "a random sample."²⁹⁸ This basic approach, reviewing jurisdictional determinations to evaluate the effect of this rulemaking, is necessary to support the policy reversal that the agencies propose here. It must be done consistently and systematically in each Corps' district.

Similar data is available regarding the NPDES program; the docket includes NPDES permitting information for thousands of facilities.²⁹⁹ EPA previously assessed the potential effect of the *Rapanos* decision on the NPDES permitting program in each state by evaluating which NPDES discharges are to intermittent or headwater streams. That analysis is attached to these comments.³⁰⁰ There is no reason a similar analysis could not be conducted here; the data necessary to do the analysis are included in the docket. Based on our conservative analysis of the

²⁹⁶ 2018 Economic Analysis at 77-78.

²⁹⁷ 2018 Resource and Programmatic Assessment at 45.

²⁹⁸ *Id.* at 45.

²⁹⁹ Clean Water Act Section 402 Data Used in Proposed Rule Economic Analysis and Resource and Programmatic Assessment, EPA-HQ-OW-2018-0149-0058 (Feb. 14, 2019).

³⁰⁰ EPA, Location of Individual NPDES Permits on State Streams, received via Freedom of Information Request, attached as Exhibit E.

NPDES permitting information in the docket, more than 750 dischargers in SELC's six-state region discharge to small streams that could lose protection under this proposal.³⁰¹

The case studies analyzed by the agencies do not supplant the need for the agencies to, at a minimum, evaluate past permitting data. The agencies recognize that these are not representative sites and cannot be extrapolated to the rest of their respective regions or country as a whole.³⁰² More importantly, they are fundamentally flawed. For example, the Ohio River case study assumes that the Ohio River starts in Huntington, West Virginia.³⁰³ To evaluate the effect of the proposal on the end point identified, the agencies would need to assess the entire watershed upstream, which includes more than 43,000 square miles in Pennsylvania, Maryland, West Virginia, and Virginia.³⁰⁴ In addition, the case studies rely on the agencies' underestimation of wetland and stream impacts from the proposal.³⁰⁵

4. *The Economic Analysis is poorly explained, includes counter-intuitive results, and fails to evaluate the full range of the proposal.*

Finally, the Economic Analysis is not transparent and does not provide sufficient information to evaluate the analyses conducted. Without additional information, the agencies' analysis cannot be replicated or evaluated fully. Despite repeated efforts, Dr. Mullen, a professor of Agricultural and Applied Economics at the University of Georgia, was not able to replicate the agencies' analysis.³⁰⁶ To begin, it is difficult to determine how the agencies calculated the wetland acreage for each state for the willingness to pay analysis.³⁰⁷ The methods used to conduct the meta-analysis are not explained.³⁰⁸ The willingness to pay analysis finds that wetlands that provide ecosystem services are worth *less* than those that do not.³⁰⁹ The agencies have also estimated that wetlands with cultural values are worth less than wetlands that lack that attribute.³¹⁰ These issues raise significant concerns about the validity of the agencies' work.

The agencies also fail to analyze the full range of scenarios forecast by their request for comments on wide-ranging issues (*e.g.*, jurisdiction over perennial streams only, a minimum flow requirement for jurisdictional tributaries, and a distance limit for jurisdictional wetlands). Instead, the agencies only evaluate the scenario presented by the text of the proposed rule. That limited analysis constrains the public understanding of the implications of this proposal.

³⁰¹ To conduct this analysis, SELC staff sorted data in EPA-HQ-OW-2018-0149-0058, to identify permitted discharges with location data, consolidated multiple entries for individual facilities, and identified discharge points in close proximity to an intermittent stream in the National Hydrography Dataset.

³⁰² 2018 Economic Analysis at 196.

³⁰³ See *id.* at 200 (acknowledging that the water quality models cover a limited watershed and that "impacts of land use changes and forgone ecosystem services are not limited to these watersheds").

³⁰⁴ Save Local Waters.org, Ohio River Basin, <http://www.savelocalwaters.org/ohio-river-basin.html> (last visited April 13, 2019).

³⁰⁵ See *id.* 2018 Economic Analysis at 198 (excluding non-abutting wetlands and narrowly assessing permanent wetland impacts).

³⁰⁶ Ex. D, Mullen Report at 17-21.

³⁰⁷ *Id.* at 25.

³⁰⁸ Ex. C, Whitehead Report at 6.

³⁰⁹ Ex. D, Mullen Report at 30-31.

³¹⁰ *Id.* at 31.

F. The Administration Failed to Consider Environmental Justice Impacts.

The high cost of polluted water frequently falls on low-income and disenfranchised communities, yet the agencies failed to give environmental justice any consideration.³¹¹ Moving forward with this proposal without such an analysis violates Executive Order 12898, which mandates that federal agencies ensure their programs do not disproportionately impact, or limit the participation of, communities because of their race, color, national origin, or socio-economic status.³¹²

Nationwide, low-income, rural, and communities of color are exposed to the highest levels of toxic pollutants, like lead, in their drinking water. The agencies acknowledge that their proposed rule would increase pollutant loads,³¹³ yet they fail to analyze the unjust burden that the proposed rule would place on the health and well-being of disenfranchised communities.

Low-income, rural, and communities of color already disproportionately face unaffordable rates for drinking water and water sanitation. Water bills are one of the highest utility costs for families; water prices have more than doubled since 2000, far exceeding the price of other utilities.³¹⁴

Small, rural systems are especially vulnerable to drinking water violations and have less capacity and resources to manage harmful situations when they happen. For example, one study found that in 2015, 21 million people relied on community water systems that violated health-based drinking water standards, with rural areas facing the most health violations when compared to urban areas.³¹⁵ Urban areas are also struggling. Small-to-midsized cities across the country that are economically depressed are also facing problems as fewer residents and a declining tax base make it difficult for low-income residents to afford higher water rates.³¹⁶

According to EPA's own economic analysis for the proposed rule, reduced Clean Water Act coverage for waterways would likely result in greater drinking water treatment costs,³¹⁷ a cost that is usually passed on to consumers and would exacerbate existing challenges in providing clean drinking water.

³¹¹ Paul Mohai & Bunyan Bryant, *Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards*, 63 U. COLO. L. REV. 921 (1992).

³¹² Exec. Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, 59 Fed. Reg. 32 (Feb. 11, 1994).

³¹³ 2018 Economic Analysis at 133.

³¹⁴ Joseph W. Kane & Lynn E. Broaddus, *Striking a Better Balance Between Water Investment and Affordability*, BROOKINGS (Sept. 12, 2016), <https://www.brookings.edu/blog/the-avenue/2016/09/12/striking-a-better-balance-between-water-investment-and-affordability/> (last visited Apr. 8, 2019).

³¹⁵ Maura Allaire et al., *National trends in drinking water quality violations*, Proceedings of the National Academy of Sciences (Feb. 27, 2018), <https://www.pnas.org/content/115/9/2078.short?rss=1> (last visited Apr. 8, 2019).

³¹⁶ Rep. Brenda Lawrence, *Environmental Injustice: Access and Affordability of Clean Water*, THE HILL (May 17, 2018), <https://thehill.com/blogs/congress-blog/politics/388154-environmental-injustice-access-and-affordability-of-clean-water>.

³¹⁷ 2018 Economic Analysis at 125, 133-34.

In addition, the proposal would harm under-represented communities that rely on subsistence fishing for their way of life. Fisheries would be degraded by increased pollution and the loss of fish habitat.³¹⁸ For low-income communities and communities of color that rely more heavily on subsistence fishing,³¹⁹ the rule threatens a food source and a means of family bonding.³²⁰ The cultural identity for many Native American families is strongly linked to fishing; many tribes' existence is tied to the continued survival of indigenous fish species.³²¹ Yet the agencies failed to consider the impacts the proposal would have on subsistence fishing and the communities that rely on that tradition.

The proposal would further harm low income communities by threatening protections for most of the 110 million acres of wetlands in the contiguous United States.³²² The agencies acknowledge that increased flood risk would result from the loss of wetland protection under their proposal.³²³ Low-income and disenfranchised communities are especially vulnerable to increased flooding.³²⁴ They are not only among the least able to recover from the damage flooding causes, but they also tend to live in flooding-prone areas because the land was historically cheaper to build on.³²⁵ The agencies failed to evaluate how the proposal would affect those communities most at risk.

Without conducting any analysis, the agencies bypass Executive Order 12898 by asserting “there is not significant evidence of disproportionately high and adverse human health or environmental effects” on these communities.³²⁶ They are wrong. The agencies' proposal poses substantial risks to minority, low-income, and indigenous communities. The agencies must consider these impacts.

G. The Agencies Failed to Meet the Requirements of the Endangered Species Act.

In the rush to eliminate clean water protections, the agencies have disregarded the requirements of the Endangered Species Act. For more than four decades, the Endangered Species Act has “represented the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”³²⁷ The statute established a vital program for the conservation of both imperiled species and “the ecosystems upon which ... [they]

³¹⁸ Colvin et al., *supra* note 112, at 76-77.

³¹⁹ Ralph B. Brown & John F. Toth Jr., *Natural Resource Access and Interracial Associations: Black and White Subsistence Fishing in the Mississippi Delta*, 17 SOUTHERN RURAL SOCIOLOGY 81, 104 (2001).

³²⁰ *Id.*

³²¹ Colvin et al., *supra* note 112, at 85.

³²² U.S. FISH AND WILDLIFE SERVICE, STATUS AND TRENDS OF WETLANDS IN THE CONTERMINOUS UNITED STATES 2004-2009 (2009) at 37.

³²³ See 2018 Resource and Programmatic Assessment at 98; 2018 Economic Analysis at 133.

³²⁴ Dalbyul Lee & Juchul Jung, *The Growth of Low-Income Population in Floodplains: A Case study in Austin, TX* KSCE JOURNAL OF CIVIL ENGINEERING (2014) at 684; Jonathan M. Katz, *Who suffers when disasters strike? The poorest and most vulnerable*, WASHINGTON POST (September 1, 2017).

³²⁵ See *id.*

³²⁶ 84 Fed. Reg. No. at 4,203.

³²⁷ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978).

depend[.]”³²⁸ Central to this program is the consultation requirements of section 7, which the agencies have ignored.³²⁹

Under section 7(a)(2) of the Act, “[e]ach Federal agency” is required,

in consultation with and with the assistance of the Secretary [of the Interior or the Secretary of Commerce], [to] insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat[.]³³⁰

This language imposes both substantive and procedural obligations on federal agencies. Substantively, agencies must make certain their actions are “not likely” to leave an imperiled species in jeopardy or adversely modify its critical habitat.³³¹ Procedurally, agencies must evaluate the potential impact of their actions “in consultation with” federal wildlife experts.³³² Before moving forward with the proposal, the agencies must satisfy these requirements.³³³

As the agencies acknowledge, their proposed changes to Clean Water Act jurisdiction would “result in the decline in wildlife habitat quantity and quality,”³³⁴ by stripping essential water-quality protections from wetlands and streams across the United States.³³⁵ One-third of all plants and animals listed as threatened or endangered depend on wetland ecosystems for their survival.³³⁶ “Ephemeral waterbodies provide habitat to threatened and endangered species,” including the threatened Strecker’s chorus frog in Kansas, which breeds in ephemeral pools where there are no predator fish present.³³⁷ Some species cannot survive outside the microclimates provided by ephemeral streams.³³⁸ Headwaters on the whole are key to the

³²⁸ 16 U.S.C. § 1531(b).

³²⁹ 16 U.S.C. §§ 1536, 1538(a), (g).

³³⁰ *Id.* § 1536(a)(2); *see also id.* § 1536(a)(1) (requiring federal agencies to “utilize their authorities in furtherance of the purposes of ... [the Endangered Species Act] by carrying out programs for the conservation of endangered species and threatened species listed” under the statute).

³³¹ *Id.* § 1536(a)(2).

³³² *Id.*

³³³ *See, e.g., Cal. ex rel. Lockyer v. Dep’t of Agric.*, 575 F.3d 999, 1018-19 (9th Cir. 2009) (holding that consultation was required under the Endangered Species Act before the defendant agency could repeal and replace regulatory protections that had been “in effect without injunction for three months,” as the agency had “fail[ed] to cite any support for the proposition that it can ignore a valid rule, codified in the Code of Federal Regulations, simply because the rule was not in effect long enough”).

³³⁴ 2018 Economics Analysis at 133.

³³⁵ *See, e.g., U.S. EPA and Dep’t of the Army, Economic Analysis for the Proposed Definition of “Waters of the United States”—Recodification of Pre-Existing Rules at 2* (June 2017) (acknowledging that eliminating the Clean Water Rule’s protections would “result[] in an overall reduction in positive jurisdictional determinations” under the Clean Water Act), *available at* https://www.epa.gov/sites/production/files/2017-06/documents/economic_analysis_proposed_step1_rule.pdf (last visited Apr. 8, 2019).

³³⁶ National Park Service, *Why are Wetlands Important?*, <https://www.nps.gov/subjects/wetlands/why.htm> (last updated Apr. 15, 2019).

³³⁷ 2018 Economics Analysis at 184.

³³⁸ *Id.* at 196.

sustainability of fish stocks in both upstream and downstream waters. Thus, with their certain destruction under the proposal, threatened and endangered species would be harder to recover, and more species would be at risk of becoming imperiled.³³⁹

By allowing damage to critical wetlands and streams, the agencies' rollback of clean water protections would affect listed species by supporting activities that cause the destruction of important habitat for endangered birds and other animals. Accordingly, the agencies were obligated to consult with the United States Fish and Wildlife Service to "insure" that the implementation of their proposed revised definition of "waters of the United States" would not jeopardize threatened or endangered species.³⁴⁰

VII. THE ADMINISTRATION'S PROPOSAL IS ANTITHETICAL TO THE GOALS OF THE CLEAN WATER ACT.

A. The Agencies Ignore Science.

The agencies claim that their proposal is "informed by science,"³⁴¹ but, in fact, they defy it. That choice—to exclude any scientific analysis—is astonishing in light of EPA's history and purpose. As demonstrated in the citations below, the agency has historically conducted, compiled, and funded leading research about our natural world. This proposal openly rejects the EPA's own expertise. The proposed rule dismisses the indisputable scientific reality—long recognized in legislative history, federal court precedent, agency policy, and peer-reviewed science—that water moves in "hydrologic cycles,"³⁴² and that the degradation of one part of the cycle will adversely affect the chemical, physical, and biological functions of waters throughout the entire system.³⁴³ Instead, the proposal is controlled by the layperson's understanding of waters and wetlands outline by Justice Scalia, no matter how scientifically uninformed it may be.

³³⁹ See also, e.g., U.S. EPA, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence B-4 (Jan. 2015) ("EPA Connectivity Report") (noting that Carolina bays, which are granted additional protections under the Clean Water Rule, have been found to support "amphibians [that] are endangered or threatened, including the flatwoods salamander (*Ambystoma cingulatum*) and the gopher frog (*Rana capito*)"); *id.* (noting that "[e]ndangered wood storks (*Mycteria americana*) nest in Carolina bays"); U.S. EPA Science Advisory Board, SAB Review of the Draft EPA Report "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," 20 (Oct. 17, 2014) ("SAB Review") (noting that "[h]abitats that are seasonally dry or even dry for several years in a row can be critical to the biological integrity of downgradient waters because a wide range of species (e.g., fish, amphibians, reptiles, birds, mammals, and invertebrates) use them to complete certain annual or life-cycle stages[,] and "[w]hen these upstream, lateral, and disconnected aquatic habitats are degraded or destroyed, populations decline and species can become threatened or endangered (or otherwise imperiled), or are extirpated"); *id.* at 43 (noting that "floodplain wetlands and off-channel waters play an important role as spawning grounds and fish nurseries during high-water seasons for species (including several endangered fishes) that ultimately populate downstream fisheries").

³⁴⁰ See 16 U.S.C. § 1536(a).

³⁴¹ 84 Fed. Reg. at 4,175; see also *id.* at 4,176 ("Thus, the agencies use the Connectivity Report to inform certain aspects of this proposed definition . . . but acknowledge that science cannot be used to draw the line between Federal and State waters[.]"); and 4,187 (definition "informed by, though not dictated by, science").

³⁴² See Clean Water Rule, 80 Fed. Reg. at 37,056 (citing *Riverside Bayview*, 474 U.S. at 132-133 (citing S. Rep. No. 92-414 at 77 (1972))).

³⁴³ See generally EPA Connectivity Report; Ex. A, Literature Review.

The 2015 Clean Water Rule, by contrast, is supported by an overwhelming scientific record that reflects the necessity of a broad “waters of the United States” definition if we are to achieve the Act’s objective. In promulgating the Clean Water Rule, EPA’s Office of Research and Development developed a scientific report entitled “Connectivity of Stream and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence.”³⁴⁴ The Connectivity Report was the culmination of an exhaustive evaluation of over 1,200 peer-reviewed scientific reports³⁴⁵ on the “connectivity and mechanisms by which streams, wetlands, open waters, singly or in the aggregate, affect the physical, chemical, and biological integrity of downstream waters.”³⁴⁶ The Connectivity Report reached five major conclusions, summarized below, which the agencies openly ignore here:

- Streams, regardless of size or frequency of flow, are “physically, chemically, and biologically connected to downstream waters and strongly influence their function.”
- Riparian and floodplain wetlands are “physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs.”
- Wetlands located “outside of riparian areas and floodplains, even when lacking surface water connections, provide physical, chemical, and biological functions that could affect the integrity of downstream waters. Some potential benefits of these wetlands are due to their isolation rather than their connectivity.”
- “Variations in the degree of connectivity are determined by the physical, chemical and biological environment, and by human activities. These variations support a range of stream and wetland functions that affect the integrity and sustainability of downstream waters.”
- The “incremental contributions of individual streams and wetlands are cumulative across entire watersheds, and their effects on downstream waters should be evaluated within the context of other streams and wetlands in that watershed.”³⁴⁷

To ensure the accuracy of the Connectivity Report, the EPA’s Science Advisory Board, which provides the agency with independent advice on technical issues, reviewed it (“SAB Review”).³⁴⁸ The Science Advisory Board panel that reviewed the Connectivity Report was comprised of 27 experts, which included hydrologists, stream and wetland ecologists, biologists, and geomorphologists from academia, industry, environmental groups, and consulting firms.³⁴⁹ Because the current proposal is “inconsistent with science, based on flawed logic, and too

³⁴⁴ EPA Connectivity Report.

³⁴⁵ EPA Connectivity Report at ES-2.

³⁴⁶ *Id.* at ES-6.

³⁴⁷ *Id.* at ES-2 to ES-6.

³⁴⁸ Clean Water Rule, 80 Fed. Reg. at 37,062.

³⁴⁹ *Id.*

ambiguous for decision-making,” thirteen members of the Science Advisory Board panel have submitted comments “strongly oppos[ing]” it.³⁵⁰

Although the proposal contains some text from the SAB Review, the SAB Review does not support the agencies’ policies here. As members of the Board put it in their recent comment letter, the proposal “is fully at odds with the EPA’s own scientific Connectivity Report”; “[i]n cases where the agencies [do] refer to science, they cherry pick from the SAB Review, misinterpreting and taking information out of context.”³⁵¹

By limiting jurisdiction as proposed, the agencies rely solely on surface water connections,³⁵² adopting the very “binary”—“connected versus not connected”—approach rejected by the Science Advisory Board.³⁵³ As the Board made clear, the connectivity of waters cannot be determined by looking at “hydrologic connectivity alone,”³⁵⁴ *much less surface water connections alone*. Rather, connectivity must be evaluated in terms of all of the physical, chemical, and biological functions streams and wetlands provide downstream waters, including the transport and transformation of groundwater, wood, food resources, sediment, nutrients, and contaminants; habitat for fish and other species; movement of organisms or their seeds and eggs; and the delayed or regulated release of stormwater.³⁵⁵

Much of the agencies’ arbitrary line-drawing is also based on their misconception that “connectivity” only matters when there is a *high* “frequency, duration, magnitude, timing, and rate” of surface water flow (*i.e.*, “ephemeral flows are less important than intermittent or perennial ones”).³⁵⁶ For this principle, they cite a “conceptual model” lifted without context to claim that “the SAB found perennial and intermittent streams have a greater probability to impact downstream waters compared to ephemeral streams.”³⁵⁷ The notion that the proposal reflects the science of connectivity or the SAB’s conclusions is false. In their comments on the current proposal, Science Advisory Board members criticize the agencies for misrepresenting the conceptual model, distorting the Board’s conclusions, and failing to recognize that “*even low levels of connectivity can be important relative to impacts on the chemical, physical, and biological integrity of downstream waters.*”³⁵⁸

Indeed, it is *the variations* in “frequency, duration, magnitude, timing, and rate” of *all* streams and wetlands functions that are critical to the integrity and sustainability of downstream waters.³⁵⁹ As the agencies previously explained:

³⁵⁰ Sullivan et al., Scientific Societies Comments on Proposed Rule - Revised Definition of “Waters of the United States,” 1, 7 (Apr. 5, 2019) (“SAB Members Comment Letter”).

³⁵¹ *Id.* at 3.

³⁵² *E.g.*, 84 Fed. Reg. at 4,188 (requiring a “direct hydrologic surface water connection to a jurisdictional water” and stating “ecological connections between physically separated wetlands and otherwise jurisdictional waters cannot be used to determine adjacency according to this proposal”).

³⁵³ SAB Review at 2; SAB Members Comment Letter at 5.

³⁵⁴ SAB Review at 54 n.3.

³⁵⁵ *See* SAB Review at 21, 30.

³⁵⁶ 84 Fed. Reg. at 4,176.

³⁵⁷ *Id.* (citing SAB Review fig. 3 at 54).

³⁵⁸ SAB Members Comment Letter at 3 (emphasis in original).

³⁵⁹ U.S. EPA, CWR Response to Comments – Topic 9 Scientific Evidence Supporting Rule 20 (emphasis added).

Connections with low values of one or more descriptors (e.g., low-frequency, low-duration streamflows caused by flash floods) can have important downstream effects when considered in the context of other descriptors (e.g., large volume or magnitude of water transfer). At the other end of the frequency range, high-frequency, low-magnitude vertical (surface-subsurface) and lateral flows contribute to aquatic biogeochemical processes, including nutrient and contaminant transformation and organic matter accumulation. The timing of an event can alter both connectivity and the magnitude of its downstream effect. For example, when soils become saturated by previous rainfall effects, even low or moderate rainfall can cause streams or wetlands to overflow, transporting water and other materials to downstream waters. Fish that use non-perennial or perennial headwater stream habitats to spawn or rear young, and invertebrates that move into seasonally inundated floodplain wetlands prior to emergence, have life cycles that are synchronized with the timing of flows, temperature thresholds, and food resource availability into those habitats.³⁶⁰

The agencies ignore this well-founded concept by categorically excluding ephemeral streams—and by soliciting comment on whether to exclude intermittent streams,³⁶¹ whether and how a downstream segment should break jurisdiction,³⁶² and whether to set a minimum flow rate (e.g., 5 cubic feet per second),³⁶³ which would exclude all intermittent and some perennial streams.³⁶⁴ The agencies’ hydrologic surface connection and “abutting” requirements for wetlands coverage dismiss “the importance of chemical and biological connectivity between wetlands and downstream waters.”³⁶⁵ They would also exclude a wide range of non-floodplain wetlands (*i.e.*, wetlands with no direct surface water connection to a water of the United States), and even potentially some riparian and floodplain wetlands, despite their water quality and ecological connections to jurisdictional waters.³⁶⁶ Here again, the Science Advisory Board relies on science where the agencies do not:

³⁶⁰ *Id.*; see also SAB Review at 22 (“Low-frequency, high-magnitude flows connect channels to the furthest reaches of the floodplains, thereby controlling species composition and abundance in forests and aquatic habitats in the floodplain and transporting large clasts and/or woody debris that otherwise cannot be transported by more-frequent, lower-magnitude flows.”) (internal citations omitted); *id.* at 37 (“Finally, the SAB recommends that the conclusions concerning ephemeral streams be strengthened by clarifying how and when ephemeral headwaters provide critical habitat and corridors for biota commonly connected to habitats associated with downstream rivers.”).

³⁶¹ 84 Fed. Reg. at 4,177.

³⁶² *Id.*

³⁶³ *Id.*

³⁶⁴ SELC GIS Analysis; Ex. B, Moffat & Nichol 2019 at 9-15.

³⁶⁵ SAB Members Comment Letter at 5.

³⁶⁶ See *id.* at 5.

[T]he available science supports defining adjacency or determination of adjacency [for waters and wetlands] on the basis of functional relationships, not [solely] on how close an adjacent water is to a navigable water. The Board also notes that local shallow subsurface water sources and regional groundwater sources can strongly affect connectivity.³⁶⁷

Indeed, some wetland functions, such as protecting downstream waters from pollutants, are “enhanced by the relative isolation” of wetlands.³⁶⁸ As detailed in the Connectivity Report, wetlands “next to,” “near,” or “close to”³⁶⁹ other “waters of the United States,” but not necessarily abutting or having a direct hydrologic surface connection (*e.g.*, many floodplain wetlands), often exhibit functional connections to other waters of the United States and merit protection.³⁷⁰ Take for example the floodplain wetlands in the Inner Coastal Plain and Piedmont regions of North Carolina, most of which would be lost under the proposal.³⁷¹ These wetlands provide habitat for amphibians, store floodwaters, and remove pollutants from stormwater runoff that would otherwise pollute nearby jurisdictional waters.³⁷² Under the science-backed Clean Water Rule, these wetlands, as shown in the Piedmont below,³⁷³ would appropriately be protected:



Next, the agencies draw “artificial distinctions between upland and bottomland, with direct implications for determining jurisdiction (*e.g.*, of ditches).”³⁷⁴ They draw artificial lines in

³⁶⁷ Science Advisory Board, Consideration of the Adequacy of the Scientific and Technical Basis of the Clean Water Rule 2-3 (Sept. 30, 2014).

³⁶⁸ SAB Review at 21.

³⁶⁹ Clean Water Rule, 80 Fed. Reg. at 37,063; Webster’s II, New Riverside University Dictionary (1994) (defining “adjacent” as “next to,” “adjoining,” “to lie near,” or “close to”). The agencies arbitrarily limit the definition.

³⁷⁰ See SAB Members Comment Letter at 5.

³⁷¹ Ex. B, Moffat & Nichol 2019 at 4-6.

³⁷² *Id.* at 53.

³⁷³ Photo credit - Phil May (2019).

³⁷⁴ SAB Member Comment Letter at 5.

suggesting that ephemeral or underground segments break connectivity—and thus jurisdiction—in an otherwise jurisdictional stream.³⁷⁵ They fail to account for broad watershed processes or the cumulative, aggregate effects of streams and wetlands on downstream waters.³⁷⁶ And their suggestion for setting a distance limit for jurisdictional wetlands ignores the physical, chemical, and biological connections between contiguous wetlands and downstream jurisdictional waters.³⁷⁷

Even though science has shown that surface water and groundwater are a single resource,³⁷⁸ the agencies disregard groundwater connectivity.³⁷⁹ Likewise the agencies exclude “features that flow only in response to precipitation” (*i.e.*, rain or snowfall) and connections through groundwater,³⁸⁰ even though “[v]irtually every ‘water’ is fundamentally dependent on rates of precipitation, accumulation on the surface, and infiltration into the ground.”³⁸¹

The agencies proposed rule requires streams and wetland surface water connections to be intermittent or perennial *in a typical year*, and they solicit comment on whether there should be a specific duration of flow required for intermittency.³⁸² These proposals also reject science.

Streams, wetlands, lakes, and ponds that do not have a direct hydrologic surface connection to a jurisdictional water “in a typical year” “can be functionally important to downstream [and nearby] waters.”³⁸³ The agencies should protect all tributaries including ephemeral and use long-tested, scientifically accepted geomorphic characteristics of bed, bank, and ordinary high-water marks.³⁸⁴ A specific duration of intermittency similarly ignores scientifically meaningful connections and would require needlessly complex implementation. Moreover, to require a minimum flow annual duration, such as at least one month per calendar year, would arbitrarily exclude vast numbers of intermittent streams.³⁸⁵

A litany of other issues proposed or solicited for comment run contrary to science and the goals of the Clean Water Act, including:

- An alternative definition that would exclude wetlands separated by a dike, even if they have a direct hydrologic surface connection.³⁸⁶ Although connectivity cannot be determined based on hydrologic connections alone,³⁸⁷ features with a

³⁷⁵ 84 Fed. Reg. at 4,178.

³⁷⁶ SAB Review at 2; *see also* SAB Members Comment Letter at 3.

³⁷⁷ Ex. B, Moffat & Nichol at 9-11.

³⁷⁸ SAB Review at 36 (“A substantial body of evidence unequivocally demonstrates connectivity *above and below ground*.”) (emphasis in original); SAB Member Comment Letter at 5.

³⁷⁹ SAB Members Comment Letter at 5.

³⁸⁰ 84 Fed. Reg. at 4,155.

³⁸¹ SAB Member Comment Letter at 6.

³⁸² 84 Fed. Reg. at 4,178.

³⁸³ SAB Members Comment Letter at 5.

³⁸⁴ *Id.*

³⁸⁵ *Id.* at 6.

³⁸⁶ 84 Fed. Reg. at 4,209.

³⁸⁷ *E.g.*, SAB Review at 54 n.3.

hydrologic surface connection to downstream waters must remain jurisdictional.

- The possibility of removing jurisdiction over certain categories of impoundments, such as those that release water downstream on a less-than-intermittent basis.³⁸⁸ As has been established, ephemeral flow should be sufficient for jurisdiction.³⁸⁹ Still, research has found that large impoundments will increasingly suffer significant flow shortages—up to 20 percent by 2050 and up to 35 percent by 2100.³⁹⁰ Those managing impoundments may, in the face of a crisis (or to avoid jurisdiction) drastically reduce the amount of water released downstream. Hinging jurisdiction for the impoundment, as well as for entire watershed upstream of the impoundment, on the amount of downstream flow is unsound.
- Potentially eliminating jurisdiction if a jurisdictional wetland becomes a pond, but no longer meets the elements of the lakes and ponds category.³⁹¹ Ponds can be created in wetlands by wildlife, such as beavers; despite the change, the connectivity remains, as should jurisdiction.³⁹²

It is not surprising that the agencies have failed to produce a record that responds to this body of science. The outcome of the rulemaking was pre-determined, driven not by science or any reasoned analysis, but by politics. The process began when President Trump signed the Executive Order seeking the repeal of the Clean Water Rule and the adoption of jurisdiction consistent with Justice Scalia’s *Rapanos* opinion and is all but certain to end at that destination.³⁹³ In the process, the agencies have abandoned their expertise. There is no science that supports this proposal. Decades of EPA research demonstrates that this proposal would prevent us from ever achieving the objective of the Clean Water Act. The waters of the United States definition rule must be driven by science and advance the congressional goals of the Clean Water Act. This proposal falls far short.

B. The Proposal Would Degrade Rather Than Maintain and Restore the Integrity of Our Nation’s Waters in Violation of the Clean Water Act.

The agencies admit that their “proposed changes” to Clean Water Act jurisdiction “could have a wide range of impacts on the ecosystem services provided by aquatic resources, including decline in wildlife habitat quantity and quality, downstream inundation damages, greater drinking water treatment and dredging costs, greater spill response cost and damages.”³⁹⁴ But, nowhere in the agencies’ entire rulemaking record did the agencies quantify impacts of the proposed rule on the integrity of the Nation’s waters. Failure to do that is fatal to the proposal.

³⁸⁸ 84 Fed. Reg. at 4,173.

³⁸⁹ *Id.*; see also SAB Review at 37.

³⁹⁰ Bradley Udall & Jonathan Overpeck, *The Twenty-First Century Colorado River Hot Drought and Implications for the Future*, 53 WATER RESOURCES RESEARCH 2404, 2404 (2017), <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016WR019638>.

³⁹¹ 84 Fed. Reg. at 4,182.

³⁹² Several other issues are highlighted throughout Ex. B, Moffat & Nichol 2019.

³⁹³ Exec. Order No. 13,778.

³⁹⁴ 2018 Economic Analysis at 136-137.

By limiting federal jurisdiction so narrowly, the agencies ensure the degradation of our Nation's waters and a return to pre-Clean Water Act water conditions. The proposed rule threatens fish and the headwater ecosystems on which they rely. It would also make it impossible for other critical Clean Water Act programs to succeed. It would result in severe economic losses, and cause irreparable cultural and social damage. The agencies' proposed new definition of "waters of the United States" would immunize from direct federal regulation disposal of oil, chemicals, and other pollutants into the vast majority of our Nation's wetlands and waterways. It would also allow indiscriminate filling and destruction of wetlands. It ignores the scientific importance of these waters and would make it impossible to protect the chemical, physical, and biological integrity of downstream and other navigable waters.

1. Loss of protection over headwaters and small streams guarantees more pollution downstream, the loss of habitat, and impacts to drinking water.

Without considering science or assessing the impact, the agencies' proposal would categorically remove jurisdiction from ephemeral streams despite their well-documented contributions to the hydrological, biogeochemical, and ecological health of watersheds. Among other issues, the agencies have also asked the public to comment on proposals to limit jurisdiction to perennial streams only or to impose minimum flow requirements. If implemented, these approaches could strip protections from at least 60 percent of the stream miles in the continental United States.³⁹⁵ In addition, the agencies' definition of ditches ignores that ditches often function as tributaries.³⁹⁶ The only ditches that would be regulated are those that have been carved out of intermittent or perennial streams, qualify as a traditional navigable water, or flow through an adjacent wetland.³⁹⁷ No ditch constructed in uplands regardless of its flow or connections to downstream waters would be considered a water of the United States.

Because of the importance of these waters,³⁹⁸ any rule that excludes or greatly reduces their protection will have far reaching implications for fish, wildlife, and their habitats, as well as economies dependent on those ecosystems.

As the agencies accept, ephemeral streams "perform similar hydrological and ecological functions [as those provided by perennial and intermittent streams], including moving water, sediments, and nutrients, providing connectivity within the watershed and habitat to wildlife."³⁹⁹ They support the greatest concentrations of wildlife in arid regions.⁴⁰⁰ And, some species cannot survive outside them.⁴⁰¹ With their certain destruction under the proposal, threatened and endangered species would be harder to recover, and more species would be at risk. Many threatened desert fishes, such as pupfishes, that depend on one or more isolated spring-fed headwaters, would lose their only habitat.⁴⁰² Karst features critically important to threatened and

³⁹⁵ See 2018 Economic Analysis, Appendix A.

³⁹⁶ 84 Fed. Reg. at 4,179.

³⁹⁷ *Id.*

³⁹⁸ See *supra* section VII.A; see generally EPA Connectivity Report; Ex. A, Literature review; Colvin et al., *supra* note 112; AQ Scientists Comments.

³⁹⁹ 2018 Economic Analysis at 198.

⁴⁰⁰ *Id.* at 199.

⁴⁰¹ *Id.*

⁴⁰² Colvin et al., *supra* note 112, at 79.

endangered cavefish, intermittent streams used by imperiled fish for spawning and early rearing, and intermittent side channels and floodplains that provide critical habitat for juvenile salmon are all at risk.⁴⁰³

The proposal would also open up our Nation's waters to pollution. Any person or corporation wanting to dispose of toxic "chemical wastes or any other pollutant could (and presumably some of them would) send their tanker trucks loaded with those toxic chemicals to some [stream or wetland], anywhere upstream . . . of the end or limit of CWA jurisdiction."⁴⁰⁴ "Of course, within hours or days of the dumping, those chemical wastes would be carried downstream"⁴⁰⁵ where they would become part our Nation's drinking water supplies, the flesh of the fish and shellfish that we eat, and our ecosystem in general, where they would poison people, as well as fish, shellfish, and wildlife.

Channel alterations, excess nutrients and sediments, and losses of flows in headwater streams would further deteriorate water quality (*e.g.*, eutrophication and hypoxia) in downstream systems throughout the United States. The destruction caused by pollutants transported downriver to coastal communities is well documented, and sure to occur under the current proposal. For example, NOAA estimates that the annual cost of damages to the Gulf of Mexico from agricultural runoff in the Midwest is nearly \$82 million. Throughout New England, pollution in freshwater systems has depressed runs of migratory fish, including river herring, since the early 1900s. These species play a critical role in the marine food web, providing a forage base to commercially harvested fish such as Atlantic Cod.⁴⁰⁶

Ultimately, communities across the Nation would also lose the economic, social, and cultural benefits derived from headwaters.⁴⁰⁷ Even more so than perennial streams, ephemeral streams play a critical role in carbon sequestration.⁴⁰⁸ And they are critically important because they connect many wetlands—29 percent of the headwater forests in the North Carolina Piedmont and Inner Coastal Plain,⁴⁰⁹ for example—which provide physical, chemical, and biological functions to downstream waters of the United States. All of these wetlands, and their associated functions, would be lost.

Although the cumulative effects from losing ephemeral streams, and associated wetlands, would be debilitating, the agencies' threat (through requests for comments) to further reduce

⁴⁰³ *Id.*

⁴⁰⁴ Lance Wood, Don't Be Misled: CWA Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands (A Response to the Virginia Albrecht/Stephen Nickelsburg ELR Article, to the Fifth Circuit's Decision In re Needham, and to the Supreme Court's Dicta in SWANCC), ENVIRONMENTAL LAW INSTITUTE, 34 E.L.R. 10,187, 10,195 (2004).

⁴⁰⁵ *Id.* Even if the pollutant, once reaching downstream waters, could give rise to Clean Water Act liability in the abstract sense, the practical problems of matching the discharged pollutant downstream with a discharger in an upstream-but-non-jurisdictional area are immense and must be addressed as a foreseeable result of your proposal.

⁴⁰⁶ Martin D. Smith et al., Seafood Prices Reveal Impacts of a Major Ecological Disturbance, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 114, no. 7, 1512–17 (February 14, 2017), <https://doi.org/10.1073/pnas.1617948114> (last visited Apr. 15, 2019).

⁴⁰⁷ Colvin et al., *supra* note 112, at 85-86.

⁴⁰⁸ Ex. A, Literature review at 30-31.

⁴⁰⁹ Ex. B, Moffat & Nichol at 8.

protections would be catastrophic. In particular, removing protections for intermittent streams⁴¹⁰ or imposing a 5 cubic-foot-per-second minimum flow⁴¹¹ would likely eliminate protections from more than 90 percent of streams in parts of North Carolina.⁴¹² In significant parts of Virginia, North Carolina, South Carolina, and Georgia, the proposal could strip protection for more than 40 percent of streams⁴¹³; in the arid and semi-arid Southwest United States, for at least 80 percent for streams.⁴¹⁴ A minimum flow requirement could eliminate protections for even perennial streams that have low flow rates due to little topography.⁴¹⁵

Significantly, EPA has estimated that more than 40 percent of individual NPDES discharges outside Alaska are into headwaters, and that more than 90 percent of drinking water intakes are in small headwaters.⁴¹⁶ Conservatively, this translates into at least 43 percent of the permitted industrial pollutant discharges in the Southeast going into headwater streams, a main source of our region's drinking water.⁴¹⁷ If jurisdiction under the Clean Water Act no longer reaches these streams, then the numerous industrial facilities holding Clean Water Act section 402 permits could dump their untreated chemical and industrial wastes into the tributary streams without direct regulation under the Act, just as they did before enactment of the law, leading to significant negative effects on people and the environment downstream.⁴¹⁸

2. *Loss of protections over wetlands guarantees downstream pollution, more flooding, and the loss of fisheries.*

Wetlands would be particularly hard hit by this proposal. The agencies have proposed to limit jurisdiction to those wetlands that directly touch a jurisdictional stream or river or have a surface water connection to a covered stream or river. Because wetland jurisdiction is also dependent on streams, loss of stream jurisdiction would make wetland losses even more extreme.

Estimates show that most of the 110 million acres of wetlands across the contiguous United States could lose protection under the extreme limits in this proposal.⁴¹⁹ At-risk wetlands provide essential functions such as improving water quality, recharging groundwater, augmenting low flow for nearby streams, storing floodwater, and providing habitat for threatened and endangered aquatic species, such as amphibians. Wetlands often provide these benefits

⁴¹⁰ 84 Fed. Reg. at 4,177.

⁴¹¹ *Id.* at 4,178.

⁴¹² Ex. B, Moffat & Nichol at 10.

⁴¹³ Ex. B, Moffat & Nichol at 12-15.

⁴¹⁴ Leibowitz et al., Connectivity of Streams and Wetlands to Downstream Waters: An Integrated Systems Framework, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION 304 (Apr. 2018).

⁴¹⁵ Ex. B, Moffat & Nichol at 10.

⁴¹⁶ Br. of Amici Curiae Association of State Wetland Managers et al., *Rapanos v. United States*, 574 U.S. 715 (January 2006) (Nos. 04-1034, 04-1384) at 19-20, Appx. A at 3a-4a (Letter to J. Christie, Association of State Wetland Managers from B. Grumbles, Asst. Administrator, U.S. EPA (Jan. 9, 2005)).

⁴¹⁷ Ex. E, U.S. EPA, Location of Individual NPDES Permits on State Streams. Based on NHD data, an incomplete dataset of the Nation's streams, and NPDES Permit Data as of June 7, 2004, there were 7,146 total NPDES Individual Permits issued in the Southeast Region. *Id.* Of the 87 percent of those permits with data on the discharge locations, 43 percent discharged into headwater streams. *Id.*

⁴¹⁸ Wood, *supra* note 404, at 10,187, 10,195.

⁴¹⁹ See U.S. FISH AND WILDLIFE SERVICE, STATUS AND TRENDS OF WETLANDS IN THE CONTERMINOUS UNITED STATES 2004-2009 37 (2009).

*because they lack permanent surface water, a characteristic that would eliminate existing protections under the proposed rule.*⁴²⁰

Moreover, more distant wetlands—unprotected under this proposal—can have higher connectivity than wetlands that are closer to downstream waters due to variability in factors such as topography, slope, and soil permeability. For example, in the prairie pothole region, an area dominated by flat, open basins and lakes, small changes in surface-water levels can consolidate wetlands that were previously disconnected by distances more than 1 km; these wetlands connect to one another first, forming wetland complexes, prior to connecting to a stream channel.⁴²¹ Should the agencies impose a limit on the distance beyond which wetlands would no longer be jurisdictional, they would ignore the connectivity of wetlands to each other and to downstream waters. Unless the agencies protect all wetlands within a “complex of wetlands,” they effectively are not protecting any.⁴²²

As EPA has acknowledged: “If wetlands are destroyed or damaged, it can be difficult or impossible to replace all of these functions.”⁴²³ The agencies’ misguided proposal could result in the loss of over 50 percent of our Nation’s wetlands. Unregulated and uncontrolled destruction of wetlands would adversely affect water quality and flood control for the rivers and streams downstream, and would destroy valuable fish and wildlife habitat.⁴²⁴

In the absence of wetlands, increased levels of agricultural run-off and other pollutant-saturated wastewater make their way directly into tributaries and then into larger downstream waters, including rivers, lakes, and estuaries. The effects of nutrient pollution can be devastating. A striking example is where nutrient-rich runoff from the Mississippi River has caused the Gulf of Mexico’s “dead zone,” a vast oxygen-depleted area that damages biodiversity and commercial fisheries, with major economic and social costs.⁴²⁵ According to EPA, over 166 dead zones have been documented nationwide, affecting waterbodies like the Chesapeake Bay.⁴²⁶

Pocosins, Carolina bays, and similar wetlands, are all at-risk under the agencies’ proposal, as are the biologically diverse species that depend on them. Out of the total of 274 at-risk plant and animal species supported by non-floodplain wetlands, 35 percent are not known to be supported *by any other type of habitat*.⁴²⁷ Additionally, 86 plant and animal species that have been identified as “threatened,” “endangered,” or candidates for listing under the Endangered Species Act are found in non-floodplain wetland habitats,⁴²⁸ including the endangered Venus flytrap.

⁴²⁰ See, e.g., Ex. B, Moffat & Nichol at 2-3.

⁴²¹ Leibowitz et al., *supra* note 414, at 311.

⁴²² *Id.*

⁴²³ U.S. EPA, ECONOMIC BENEFITS OF WETLANDS.

⁴²⁴ See Wood, *supra* note 404, at 10,193.

⁴²⁵ Colvin et al., *supra* note 112, at 76.

⁴²⁶ CONGRESSIONAL RESEARCH SERVICE, FRESHWATER HARMFUL ALGAL BLOOMS: CAUSES, CHALLENGES, AND POLICY CONSIDERATIONS 3 (2018).

⁴²⁷ P. Comer et al., Biodiversity Values of Geographically Isolated Wetlands in the United States, NATURE SERVE 1 (2005), http://www.natureserve.org/sites/default/files/projects/files/isolated_wetlands.pdf (last visited Apr. 15, 2019).

⁴²⁸ *Id.*

Finally, the revised exclusion for prior converted cropland creates a significant loophole that allows the development or further degradation of these converted wetlands without obtaining a 404 permit. Under the proposed rule, the only way for prior converted cropland to lose its status as an excluded water under the Act is when the area is abandoned (*i.e.*, not in the previous five years “used for, *or in support of, agricultural purposes*”⁴²⁹) *and* has reverted to a wetland meeting the regulatory definition of “wetlands.”⁴³⁰ That means, according to the agencies, the “majority” of these converted wetlands would never regain protection, even after abandoned, because of their “altered nature.”⁴³¹ That this provision opens the door for development of these converted wetlands without a 404 permit is signaled by the fact that the National Association of Realtors lists “Discussions with the Environmental Protection Agency regarding the Waters of the U.S. (WOTUS) rule and the prior converted cropland exclusion” as one of its key lobbying interests for 2019.⁴³² The agencies must disclose and address the impacts of this proposed change and what it means for the integrity of the Nation’s waters.

3. *Interpreting waters of the United States narrowly would make it impossible for other Clean Water Act programs to succeed.*

Limiting discharges of pollutants including dredge and fill is the cornerstone for the Clean Water Act’s programs. Clean Water Act programs to develop restoration plans, protect the Great Lakes, restore our estuaries and others cannot succeed with this proposal.

The National Estuary Program established by section 320 is just one example. As discussed above, our estuaries are in trouble. That is not surprising—streams flow into rivers which flow into estuaries. As small streams and rivers become more polluted, so too do the estuaries. EPA is well aware of this problem, citing “[c]ommercial, industrial, and residential development” as well as “[h]ighway construction” as the primary threats to estuaries due to “increased runoff of sediment, nutrient and chemical pollutants.”⁴³³ The solution is no mystery: we must protect our wetlands. “[W]etlands protect water quality; riparian and coastal wetlands provide storage for excess water during flooding, as well as support valuable fisheries.”⁴³⁴ When those wetlands are lost and water quality is degraded, estuaries “are less able to perform the

⁴²⁹ See, e.g., 84 Fed. Reg. at 4,204 (emphasis added). Under the proposal, the terms “agricultural purposes” are undefined. The use of these terms “for, or *in support of, agricultural purposes*” appear much broader than prior agency practice whereby prior converted cropland was “abandoned unless: [f]or once in every five years the area has been used *for the production of an agricultural commodity*.” 58 Fed. Reg. at 45,034.

⁴³⁰ *Id.*

⁴³¹ 84 Fed. Reg. at 4,194-4,195 (“The altered nature of prior converted cropland and its conditions constitute the ‘normal circumstances’ of such areas. The agencies expect the majority of prior converted cropland in the Nation to fall into this category and not be subject to CWA regulation, even after it is abandoned.”).

⁴³² National Association of Realtors, LD-2 Disclosure Form 19 (2019). Cf. 2018 Resource and Programmatic Assessment at 50 (under the proposed prior converted cropland exclusion “fewer wetlands may be identified as jurisdictional under the proposed rule compared to [the 2015 Clean Water Rule and the regulations that preceded it]”).

⁴³³ U.S. EPA, ESTUARY HABITAT LOSS AND DEGRADATION: WHAT’S THE PROBLEM?, <https://www.epa.gov/nep/estuary-habitat-loss-and-degradation> (last visited Apr. 15, 2019).

⁴³⁴ *Id.*

economic, environmental and aesthetic functions that coastal populations depend on for their livelihoods and protection.”⁴³⁵

The Great Lakes would likewise suffer under this proposal. As EPA has recognized, the lakes “are sensitive to pollutants” because “[p]ollutants that enter the lakes are retained in the system and become more concentrated with time.”⁴³⁶ EPA has spent millions of dollars in recent years to restore the lakes, including the restoration of 32 acres of wet prairie⁴³⁷—a type of wetland that would lose protection under this proposal. The Great Lakes would never be restored with this proposal, rendering this Clean Water Act program, and others like it, useless.⁴³⁸

This proposal must be rejected. Agencies “cannot interpret federal statutes to negate their own stated purposes.”⁴³⁹ Here, the proposal not only negates the overall objective of the Clean Water Act, it would ensure that the various geographically focused restoration efforts implemented under the Act fail as well.

C. The Proposed Rule’s Degradation of the Nation’s Waters Would Have a Significant Negative Economic Impact.

EPA has recognized that “protecting and efficiently managing our water resources is essential to maintaining a strong, vibrant economy,”⁴⁴⁰ yet now the agencies propose a rule that would expose every river, creek, lake, bay, and estuary in our country to far greater levels of degradation. The proposal puts both our waters and our economy at risk.

Without intact wetlands, there would be an increased risk of flooding. A single acre of wetlands can store approximately 1 million gallons of floodwater.⁴⁴¹ During Hurricane Sandy, in 2012, wetlands prevented \$625 million in flood damage by shielding property in 12 states.⁴⁴² Since that time, incidents of flooding have only increased. NOAA officials have referred to the current flood season as “potentially unprecedented.”⁴⁴³ These floods have already caused billions of dollars in damages throughout the Midwest and multiple deaths.⁴⁴⁴ The EPA has reported that

⁴³⁵ *Id.*

⁴³⁶ U.S. EPA, RESTORING THE GREAT LAKES, <https://www.epa.gov/greatlakes/restoring-great-lakes> (last visited Apr. 15, 2019).

⁴³⁷ U.S. EPA, *News Release: EPA provides \$300,000 to Metroparks Toledo to restore wet prairie in Maumee River AOC* (June 26, 2018), <https://www.epa.gov/newsreleases/epa-provides-300000-metroparks-toledo-restore-wet-prairie-maumee-river-aoc> (last visited Apr. 15, 2019).

⁴³⁸ See 33 U.S.C. §§ 1258, 1268.

⁴³⁹ *New York State Dep’t of Soc. Servs. v. Dublino*, 413 U.S. 405, 419-20 (1973).

⁴⁴⁰ U.S. EPA, THE IMPORTANCE OF WATER TO THE U.S. ECONOMY 5 (2013), <https://www.bafuture.org/sites/default/files/key-topics/attachments/Importance-of-water-synthesis-report.pdf> (last visited Apr. 9, 2019 (“EPA 2013 REPORT”).

⁴⁴¹ U.S. EPA, WETLANDS: PROTECTING LIFE AND PROPERTY FROM FLOODING 1 (May 2006).

⁴⁴² Siddharth Narayan, et al., The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA, SCIENTIFIC REPORTS (Aug. 31, 2017), <https://www.nature.com/articles/s41598-017-09269-z>.

⁴⁴³ NOAA, SPRING OUTLOOK: HISTORIC, WIDESPREAD FLOODING TO CONTINUE THROUGH MAY (Mar. 21, 2019), <https://www.noaa.gov/media-release/spring-outlook-historic-widespread-flooding-to-continue-through-may>.

⁴⁴⁴ John Schwartz, *25 States Are at Risk of Serious Flooding This Spring, U.S. Forecast Says*, N.Y. TIMES (Mar. 21, 2019), <https://www.nytimes.com/2019/03/21/climate/climate-change-flooding.html>; Mark Berman & Reis Thebault, *Two dead, two missing amid ‘historic’ flooding across the Midwest*, WASHINGTON POST (Mar. 18, 2019),

it would cost \$1.5 million annually to replace the natural flood-control functions of a 5,000-acre tract of drained Minnesota wetlands alone.⁴⁴⁵ The Midwest's flooding has only risen in recent years, in both frequency and severity.⁴⁴⁶ Our Nation's flooding risks are going to grow.⁴⁴⁷

Record-setting algal blooms and associated “dead zones”—oxygen depleted areas created when algae die and decompose—threaten drinking water quality and Lake Erie's critical \$12.9 billion tourism industry and world class fishery.⁴⁴⁸ These are caused by excessive levels of nutrients, specifically phosphorus carried from major rivers during storms.⁴⁴⁹ In August 2014, more than 500,000 people were without drinking water for three days when elevated levels of algal toxins forced the closure of the Toledo, Ohio, drinking water treatment plant.⁴⁵⁰ Algal toxins can make pets, livestock, and humans sick, and can even cause death.⁴⁵¹

Drinking water contamination is not only dangerous to human health, it is extremely costly for our economy. Polluted drinking water is crippling expensive to clean up. In North Carolina, two water utilities are spending nearly \$150 million, collectively, to clean up water polluted with toxic chemicals from an upstream manufacturing facility.⁴⁵² And when drinking water does not get cleaned up—because municipalities cannot afford expensive treatment technologies, because even costly technologies cannot remove some pollutants, or because those affected depend on private wells rather than public water supplies—the country's economy suffers when people drinking the water get sick. In one such example, a disease outbreak caused by polluted runoff in Milwaukee, Wisconsin cost \$96.2 million in medical costs and productivity losses.⁴⁵³ The proposed rule, by leaving out protections for headwaters and small streams, threatens drinking water across the Nation.

The proposal also threatens food sources and related industries that depend on clean water. As we have seen all too often, the agriculture industry, which contributed \$992 billion to the U.S. gross domestic product in 2015,⁴⁵⁴ and human health both take a hit when polluted

https://www.washingtonpost.com/nation/2019/03/16/emergencies-declared-across-midwest-amid-historic-flooding/?utm_term=.c263edbe6d83 (last visited Apr. 15, 2019)..

⁴⁴⁵ U.S. EPA, WETLANDS: PROTECTING LIFE AND PROPERTY FROM FLOODING (May 2006).

⁴⁴⁶ Gary Galluzo, *Study finds Midwest flooding more frequent*, IOWA NOW (Feb. 9, 2015),

<https://now.uiowa.edu/2015/02/study-finds-midwest-flooding-more-frequent> (last visited Apr. 15, 2019).

⁴⁴⁷ NOAA, *supra* note 443.

⁴⁴⁸ U.S. EPA, U.S. ACTION PLAN FOR LAKE ERIE 1 (Feb. 2018).

⁴⁴⁹ *Id.*

⁴⁵⁰ *Id.* at 2.

⁴⁵¹ *Id.*

⁴⁵² Tim Buckland, *CFPUA: Filtering GenX can be done, but will cost customers*, WILMINGTON STAR NEWS, (Aug. 15, 2018), www.starnewsonline.com/news/20180815/cfpua-filtering-genx-can-be-done-but-will-cost-customers; Johanna Ferebee, *Brunswick's \$100-million treatment plant will concentrate contaminants, discharge them back into Cape Fear River*, PORT CITY DAILY (Oct. 12, 2018), <https://portcitydaily.com/local-news/2018/10/12/brunswicks-100-million-treatment-plant-will-concentrate-contaminants-discharge-them-back-into-cape-fear-river/>.

⁴⁵³ EPA 2013 REPORT AT 16.

⁴⁵⁴ U.S. DEPARTMENT OF AGRICULTURE: ECONOMIC RESEARCH SERVICE, *AG AND FOOD SECTORS AND THE ECONOMY*, <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy.aspx> (last visited Apr. 8, 2019).

water used for crop irrigation leads to food-borne illnesses.⁴⁵⁵ Likewise, “[l]ong-term degradation of aquatic or coastal habitat . . . [can] have a devastating effect act on commercially viable fish stocks,”⁴⁵⁶ jeopardizing the Nation’s commercial and seafood industry responsible for 1.2 million jobs and \$144.3 billion in sales in 2016.⁴⁵⁷

Recreational activities that rely on clean water, such as boating, fishing, and swimming, are also at risk. In 2016, boating and fishing alone accounted for nearly \$37 billion.⁴⁵⁸ Recognizing this economic boon, Congress recently enacted the Outdoor Recreation Jobs and Economic Impact Act authorizing the Department of Commerce’s Bureau of Economic Analysis to assess outdoor recreation’s contribution to the Nation’s gross domestic product.⁴⁵⁹

Just as clean water boosts our economy, polluted water burdens it. For instance, nutrient pollution alone “can [] cost billions of dollars to clean up polluted water bodies.”⁴⁶⁰ As EPA put it, “[e]very dollar spent on protecting sources of drinking water [from pollution] saves in water treatment costs.”⁴⁶¹

The agencies’ narrow definition of “Waters of the United States” would make it impossible to achieve the Clean Water Act’s mandates. It would also impose significant costs and harms on American citizens, businesses, and communities, as they experience deteriorated water quality, more limited water supplies, more severe flood and storm damage, lost fisheries, reduced recreational activities, and degraded wildlife habitat. Compensating for these losses will result in significant additional financial burden. In all, the agencies’ proposal would deal a significant blow to our Nation’s economy.

VIII. IF LEFT TO THE STATES, THE INTEGRITY OF THE NATION’S WATERS WOULD SUFFER.

Contrary to the agencies’ rhetoric, states would not serve as a backstop against the elimination of federal clean water protections, regardless of how broadly they define “waters of the state.”⁴⁶² Thirty-six states, or two-thirds of the country, have laws on the books that hinder

⁴⁵⁵ See CDC, SURVEILLANCE FOR WATERBORNE DISEASE OUTBREAKS ASSOCIATED WITH DRINKING WATER – UNITED STATES, 2013-2014 (2017), <https://www.cdc.gov/mmwr/volumes/66/wr/pdfs/mm6644a3-H.pdf>; CDC, WATERBORNE AND FOODBORNE DISEASE OUTBREAKS, https://www.cdc.gov/pictureofamerica/pdfs/picture_of_america_outbreaks.pdf; David Pimental et al., Water Resources: Agricultural and Environmental Issues, BIOSCIENCE 913 (Oct. 2004).

⁴⁵⁶ EPA 2013 Report at 17.

⁴⁵⁷ NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, FISHERIES ECONOMICS OF THE UNITED STATES (2016), <https://www.fisheries.noaa.gov/resource/document/fisheries-economics-united-states-report-2016> (last visited Apr. 8, 2019).

⁴⁵⁸ U.S. BUREAU OF ECONOMIC ANALYSIS, OUTDOOR RECREATION SATELLITE ACCOUNT: UPDATED STATISTICS FOR 2012-2016, RELATED MATERIALS: TABLE – GROSS OUTPUT BY ACTIVITY, *available at* https://www.bea.gov/system/files/2018-09/orsa0918-Gross-Output-by-Activity_0.xlsx (last visited Apr. 8, 2019).

⁴⁵⁹ Pub. L. No: 114-249 (Dec. 8, 2016).

⁴⁶⁰ U.S. EPA, NUTRIENT POLLUTION, THE EFFECTS: ECONOMY, <https://www.epa.gov/nutrientpollution/effects-economy> (last visited Mar. 18, 2019).

⁴⁶¹ *Id.*

⁴⁶² 2018 Resource and Programmatic Assessment at 55 (“[S]tates typically have very broad definitions which include waters that are not ‘waters of the United States’ under the CWA, *i.e.* groundwater. Many states choose to then limit their regulations to fewer waters, even though the definition itself is broader in scope.”) (internal citations omitted).

them from protecting waters that are left unprotected by the federal government.⁴⁶³ In these states, loss of federal protection means a loss of state protection. As evidenced by history, many would exploit the absence of federal regulation, and allow the unfettered destruction of our Nation's waters. For the agencies to claim otherwise is disingenuous. Congress learned from experience that only a comprehensive approach to water-pollution regulation at the federal level can achieve the Nation's hopes for clean water.

A. The Clean Water Act Provides the Only Lawful Mechanism for More State Control Over Stream and Wetland Permitting.

Under the Clean Water Act, Congress provided the specific mechanism for states to exert more authority over the waters within their borders: the option to assume the regulatory program under section 404(g).⁴⁶⁴ Only two states have opted for assumption, Michigan and New Jersey.⁴⁶⁵

The reality is it is extremely expensive and difficult for states to take total control of the regulatory program under section 404(g). The states that are serious about protecting their waters almost invariably do so in partnership with the Corps and EPA enforcing the Clean Water Act. Some two-thirds of states lack independent regulatory programs that would fully protect non-floodplain wetlands and other waters that the proposal would not protect; instead, they rely on the longstanding state-certification requirements under section 401 of the Clean Water Act for federally issued permits.⁴⁶⁶ Through this certification authority, many states implement vigorous protections for their wetlands without the prohibitive expense of creating and administering independent state permitting programs. Said another way, removing federal jurisdiction shrinks state authority to review and certify projects to reduce water quality impacts.

B. States Lack the Resources and Knowledge to Protect the Nation's Waters.

If forced to assume sole responsibility for regulating fill activities in the millions of acres of wetlands that lose federal protections under the proposal, many states simply could not afford to take over. The agencies concede this.⁴⁶⁷ And the states that have considered, but rejected the idea of assuming the 404 program, have cited a lack of resources—staff, financial resources, training, and knowledge—to develop a compliance and enforcement program consistent with the

⁴⁶³ ENVIRONMENTAL LAW INSTITUTE, STATE CONSTRAINTS: STATE-IMPOSED LIMITATIONS ON THE AUTHORITY OF AGENCIES TO REGULATE WATERS BEYOND THE SCOPE OF THE FEDERAL CLEAN WATER ACT 7 (2013), <https://www.eli.org/sites/default/files/eli-pubs/d23-04.pdf>; see also 2018 Resource and Programmatic Assessment at 56-57.

⁴⁶⁴ 33 U.S.C. § 1344(g).

⁴⁶⁵ 2018 Resource and Programmatic Assessment at 58; see also Oliver A. Houck & Michael Rolland, *Federalism in Wetlands Regulation: A Consideration of Delegation of Clean Water Act Section 404 and Related Programs to the States*, 54 MD. L. REV. 1242, 1276 (1995); Lance D. Wood, *The Ecos Proposal for Expanded State Assumption of the CWA § 404 Program: Unnecessary, Unwise, and Unworkable*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10209, 10213 (2009).

⁴⁶⁶ See Jon Kusler, Ass'n of State Wetland Managers, *The SWANCC Decision: State Regulation of Wetlands to Fill the Gap*, at 13-14 (Updated and Revised Mar. 4, 2004), https://www.aswm.org/pdf_lib/swancc_decision_030404.pdf (last visited Apr. 8, 2019).

⁴⁶⁷ 2018 Economic Analysis at 48 (Many states do not "have the resources to staff and manage the new or expanded programs").

federal program.⁴⁶⁸ The State of Minnesota, for instance, calculated that it would need 102 regulators to run the program at the level the Corps' St. Paul's district is currently doing.⁴⁶⁹ Because Minnesota already has a robust state wetlands program, its staffing needs are likely lower than for the majority of states without a wetlands program.⁴⁷⁰ Virginia determined that administering a program as robust as the federal program would cost \$18 million to implement initially and \$3.4 million annually.⁴⁷¹ One of the key costs identified by Virginia in deciding against assumption was the loss of the Corps' knowledge base.⁴⁷²

In the face of multi-billion dollar budget shortfalls,⁴⁷³ states simply lack the funds, staff, and training to protect our waters. Tellingly, even without this added responsibility, states already frequently do not meet water quality goals.⁴⁷⁴ And in states with the resources and desire to fill the gap, experience shows, that during the time it would take to enact and implement new state protections, many developers would rush to destroy unprotected streams and wetlands, and the states could suffer devastating and irreplaceable losses.⁴⁷⁵ Withdrawal of Clean Water Act jurisdiction would simply mean open season for millions of acres of wetlands and headwaters.

In addition to the considerable costs associated with setting up and maintaining as many as 50 different state 404 programs with new state 404 bureaucracies, the economies of scale—and uniformity and predictability for regulated entities—that came with single federal government program would be lost. Given that all but two states have been unwilling to dedicate the resources required for assuming the 404 program, it is highly unlikely that states would develop a wetlands program of any substance now. Even if they did, the result would be a messy patchwork of conflicting regulatory requirements among the states—a reality that the agencies must disclose and address.

C. States Lack the Political Will and Capital to Take on Powerful Polluters.

Another critical limitation is the vulnerability of both existing and emerging state permitting programs to political and legal attack by industrial and development interests in the

⁴⁶⁸ Florida and Minnesota may assume the program in the coming year. FLORIDA DEP'T OF ENVTL. QUALITY, STUDY OF THE COSTS AND BENEFITS OF STATE ASSUMPTION OF THE FEDERAL § 404 CLEAN WATER ACT PERMITTING PROGRAM, (Dec. 2012); FLORIDA DEP'T OF ENVTL. PROT., CONSOLIDATION OF STATE AND FEDERAL WETLAND PERMITTING PROGRAMS IMPLEMENTATION OF HOUSE BILL 759 (Chapter 2005-273, Laws of Florida) (Sept. 2005); MINNESOTA DEP'T OF NAT. RES., STATE OF MINNESOTA FEDERAL SECTION 404 ASSUMPTION FEASIBILITY STUDY, No. 66-505 (Aug. 31, 1989).

⁴⁶⁹ DEP'T OF NAT. RES., MINNESOTA FEDERAL CLEAN WATER ACT SECTION 404 PERMIT PROGRAM FEASIBILITY STUDY 62 (Jan. 17, 2017).

⁴⁷⁰ See ASS'N OF STATE WETLAND MANAGERS, STATUS & TRENDS REPORT ON STATE WETLAND PROGRAMS IN THE U.S. (2015).

⁴⁷¹ VIRGINIA DEP'T OF ENVTL. QUALITY, REPORT TO LEGISLATURE: STATE ASSUMPTION OF FEDERAL § 404 CLEAN WATER ACT PERMITTING PROGRAM FEASIBILITY STUDY at 2 (Dec. 2012), https://www.aswm.org/pdf_lib/va_study_state_assumption_2012.pdf (last visited Apr. 15, 2019).

⁴⁷² *Id.* at 3.

⁴⁷³ Truth in Accounting, *Financial State of the States* (Sept. 2018). For example, they found that Virginia had a \$5.4 billion shortfall, Georgia had a \$11.1 billion shortfall, North Carolina had a \$24.3 billion shortfall, and South Carolina had a \$26.2 billion shortfall. *Id.*

⁴⁷⁴ See *supra* section IV.

⁴⁷⁵ See Traci Watson, *Developers rush to build in wetlands after ruling*, USA TODAY (Dec. 6, 2002).

absence of a federal floor. For example, North Carolina’s “isolated” wetlands program—used by the agencies to predict that the state “may” strengthen its regulations⁴⁷⁶—has been under attack in the courts ever since it was promulgated over fifteen years ago.⁴⁷⁷ In 2015, North Carolina narrowed these already limited⁴⁷⁸ protections to just two types of wetlands: basin wetlands and bogs.⁴⁷⁹ North Carolina’s wetland program would therefore provide little, if any, coverage for wetlands that lose federal protection under the agencies’ proposal, including pocosins, Carolina bays, pine savannas, pine flats, and headwater forest wetlands.⁴⁸⁰

States also do not always have the political will to take on powerful companies. For example, when North Carolina’s Department of Environmental Quality under Republican Governor Pat McCrory was investigated for its cozy relations with Duke Energy and not enforcing the law, the EPA conducted a criminal investigation which resulted in Duke Energy pleading to nine criminal violations of the Clean Water Act at its leaking, unlined coal ash sites across the state and agreed to pay a \$68 million criminal fine and spend \$34 million on environmental projects and land conservation to benefit rivers and wetlands in North Carolina and Virginia.⁴⁸¹ In the absence of a federal backstop, companies would feel more emboldened to push back against state enforcers, likely resulting in fewer and smaller settlements, and less deterrence of future violations.⁴⁸²

As we have seen time and time again, states alone do not and cannot protect our waters: sometimes for a lack of resources or political capital, and still others where they simply do not do their jobs. For example, located roughly 20 miles west of Birmingham, the Maxine Mine site, owned by Drummond Company, is one of the worst of hundreds of abandoned mines in the Black Warrior River basin. Maxine Mine and many of the other inactive mine sites continue to pollute Alabama’s streams and groundwater. Despite this ongoing pollution, Alabama regulators have basically ignored abandoned mine sites like Maxine. As a result, these mine sites are unregulated and unchecked. There are no discharge permits in place, and no one in state government is testing for pollution at these sites, or trying to control the pollution from them. SELC stepped into the void in late 2016 and, on behalf of the Black Warrior Riverkeeper, filed a Clean Water Act citizen suit against Drummond to stop the company’s pollution from seeping into the Black Warrior Basin.

⁴⁷⁶ 2018 Economic Analysis at 41-42 & n.1 (“Any states that have already expanded their regulatory scope . . . will be assumed to continue such practices.”).

⁴⁷⁷ See Richard Whisnant, Wetlands in North Carolina, ENVIRONMENTAL AND CONSERVATION LAW 6 (Dec. 1999).

⁴⁷⁸ North Carolina’s Isolated Wetlands law provides limited protections for Basin Wetlands and Bogs. N.C. Sess. Law 2015-286, s. 4.18(c).

⁴⁷⁹ N.C. Sess. Law 2015-286, s. 4.18.

⁴⁸⁰ Ex. B, Moffat and Nichol at 5-9.

⁴⁸¹ See SELC, *Groups Sue Drummond over Abandoned Mine’s Pollution of the Locust Fork*, <https://www.southernenvironment.org/news-and-press/press-releases/groups-sue-drummond-over-abandoned-mines-pollution-of-the-locust-fork> (last visited Apr. 14, 2019); SELC, *Partners Urge Cleanup of Abandoned Mine Site Polluting Black Warrior River*, <https://www.southernenvironment.org/news-and-press/news-feed/selc-partners-urge-cleanup-of-abandoned-mine-site-polluting-black-warrior-r> (last visited Apr. 14, 2019).

⁴⁸² INSTITUTE FOR POLICY INTEGRITY, IRREPLACEABLE: WHY STATES CAN’T AND WON’T MAKE UP FOR INADEQUATE FEDERAL ENFORCEMENT OF ENVIRONMENTAL LAWS 2 (June 2017).

More pollution would surely occur if individual states are left responsible for the integrity of our Nation's waters. The country needs broad federal jurisdiction to ensure our Nation's waters are protected.

D. States Are Incapable of Protecting Water Quality Because Water Pollution Is Not Confined Within State Boundaries.

Federal regulation is particularly important because of the “transboundary” nature of water pollution.⁴⁸³ Water knows no political boundaries, so inevitably states often share rivers, lakes, bays, etc.⁴⁸⁴ Discharges into small streams and wetlands in one state affect the waters of downstream states.⁴⁸⁵ This is “[o]ne reason why the state and local governments had proven themselves both incapable of and unwilling to control water pollution in the years before the [Clean Water Act].”⁴⁸⁶ Without federal standards, the country would suffer from “tragedy of the commons.”

Downstream states would find themselves significantly hampered in protecting their own water quality. No “downstream” state could benefit from local efforts to control water pollution as long as upstream states continued to send their uncontrolled, polluting wastes downstream.⁴⁸⁷ Instead, states would “race to the bottom,” as they have done in the past,⁴⁸⁸ refusing to enforce laws within their own borders, spend local tax dollars on pollution control, or jeopardize industrial development, by enacting effective measures to control water pollution.⁴⁸⁹ Moreover, most states would not invest in preventing pollution within their own borders when the people who would benefit live downriver in another state.⁴⁹⁰ Meanwhile, “any state with strong pollution control regulation could lose industry to competing states and still suffer from water pollution coming from other, *e.g.*, “upstream,” states.”⁴⁹¹

⁴⁸³ Wood, *supra* note 404, at 10,194.

⁴⁸⁴ *Id.*

⁴⁸⁵ N.Y. STATE DEP'T OF ENVTL. CONSERVATION & CONN. DEP'T OF ENVTL. PROT., A TOTAL MAXIMUM DAILY LOAD ANALYSIS TO ACHIEVE WATER QUALITY STANDARDS FOR DISSOLVED OXYGEN IN LONG ISLAND SOUND 16-18 (Dec. 2000), https://www.dec.ny.gov/docs/water_pdf/tmdllis.pdf (last visited Apr. 9, 2019). For example, a study of Long Island Sound by New York and Connecticut found that 13.5 percent of the estimated 100,436 tons of nitrogen entering the Sound each year came from headwater tributary watersheds north of Connecticut. *Id.*

⁴⁸⁶ Wood, *supra* note 404, at 10,194.

⁴⁸⁷ *Id.*

⁴⁸⁸ Per. G. Fredriksson, *Environmental Federalism: Lessons Learned from the Literature*, EPA-HQ-OW-2018-0149-0011, 3 (Feb. 28, 2018).

⁴⁸⁹ Wood, *supra* note 404, at 10,194.

⁴⁹⁰ *Id.*

⁴⁹¹ *Id.*; *see also, e.g.*, Delaware Dep't of Nat. Res. and Env'tl. Control, Comments on Advance Notice of Proposed Rulemaking On Definition of “Waters of the United States,” Docket ID No. OW-2002-0050, 14 (Apr. 16, 2003) (“Loss of federal regulation would put environmentally protective states at an economic disadvantage relative to less protective neighbor states, removing the ‘level playing field’ that now exists and creating pressure for reduced state protection.”); State of Maine, Dep't of Env'tl. Prot., “Advance Notice of Proposed Rulemaking On Definition of “Waters of the United States,” Docket ID No. OW-2002-0050, 1 (Apr. 16, 2003) (“[T]he competitive disadvantage this may impose on Maine with respect to other states might lead to pressures to roll-back our own protections.”); State of New York, Dep't of Env'tl. Conservation, Comments on Advance Notice of Proposed Rulemaking On Definition of “Waters of the United States,” Docket ID No. OW-2002-0050, 2 (Mar. 27, 2003) (“It is imperative that we maintain strong nationwide Clean Water Act standards to ensure that individual states, or groups of states, cannot

Both upstream and downstream states voiced these concerns when commenting on the agencies' 2003 rulemaking proposal that similarly threatened to narrow federal jurisdiction. It is unsurprising that downstream states would be concerned over a rollback of water protections. For instance, Michigan—one of the only two states that have assumed responsibility for implementing section 404 of the Clean Water Act—stressed the importance of broad federal protections because, even if Michigan responsibly manages its waters, the health of the state's waters also depends on the actions of other states. Michigan recognized that other states may not fill the gaps left by the federal government's abandonment of its water protection obligations. In Michigan's words:

[G]iven the fundamental importance of our freshwater resources to the public, it is essential that the federal standards be maintained not only in Michigan but in states whose actions impact Michigan. The State of Michigan exists on two peninsulas in the center of the Great Lakes, and we are ever aware that the quality of those interstate and international waters that surround us is influenced not only by the actions of our own citizens, but by those of other states (and other nations).⁴⁹²

Even upstream states recognized the danger of pulling back federal protections. For instance, Montana, a "headwater state"⁴⁹³ upstream of other states, acknowledged that it might not be able to control development within its borders in order to prevent flooding in downstream states.⁴⁹⁴ Headwater states, like Montana, export floodwaters, with the greatest flood damage frequently occurring hundreds of miles and many states downstream. Much of the water that Montana would otherwise export is contained in wetlands that play an invaluable role by "absorbing runoff and moderating flood flows for downstream states."⁴⁹⁵ Montana recognized the benefits of preserving these wetlands, but concluded that "[t]hese wetlands will be highly vulnerable to filling and draining in the absence of protection under Section 404 of the Clean Water Act."⁴⁹⁶ It is politically difficult—if not impossible—for a state to tell its own citizens that they have to forego development on a portion their own property in order to prevent the risk of exacerbating flooding in a state downstream. The Clean Water Act tackles that obstacle head on, with the science-based premise that we can only achieve clean water if we each do our part. Federal jurisdiction ensures that.⁴⁹⁷

benefit from the location of industry, business, or other activities within those states, on the expectation of lower environmental regulatory hurdles.").

⁴⁹² State of Michigan, Dep't of Env'tl. Quality, Comments on Advance Notice of Proposed Rulemaking On Definition of "Waters of the United States," Docket ID No. OW-2002-0050, 2 (Apr. 16, 2003).

⁴⁹³ Montana Dep't of Env'tl. Quality, Comments on Advance Notice of Proposed Rulemaking On Definition of "Waters of the United States," Docket ID No. OW-2002-0050, 4 (Apr. 16, 2003).

⁴⁹⁴ See *id.* at 2-4.

⁴⁹⁵ *Id.* at 4.

⁴⁹⁶ *Id.* at 2.

⁴⁹⁷ See *id.*

Relying on state regulation to keep our waters clean is simply an unrealistic solution. No matter how comprehensively one state regulates its waters, if a neighboring state does not, everyone would suffer.⁴⁹⁸

E. The Agencies' Proposal Would Strip Away the States' Existing Tools for Protecting Water Quality.

Redefining “waters of the United States” as proposed would eliminate the existing tools states have under the Clean Water Act to protect the waters within their borders. For example, section 402(b) gives downstream states notice, the opportunity for comment, and the opportunity for a hearing on any upstream discharger’s NPDES permit application.⁴⁹⁹ These rights would disappear if the upstream discharger no longer had to obtain a permit because the water discharged into was no longer jurisdictional. In addition, section 401(a)(2) prohibits the issuance of any federal license or permit, which “may result” in any discharge into waters of the United States over the objection of an affected state unless compliance with the affected state’s water quality requirements can be ensured.⁵⁰⁰ This right would be lost for every federal license or permit authorizing a discharge into waters whose protection had been abandoned.

Restricting the Act’s coverage would also diminish the states’ water quality standards certification authority under section 401.⁵⁰¹ This authority allows states to condition or, if necessary, bar federal permits, including section 404 dredge and fill permits, to ensure that federally permitted activities comply with the state’s water quality standards. Most states rely exclusively on their 401 certification authority to protect their wetlands, lakes, streams and other waters from activities that result in discharges of dredged or fill material into those waters. Although South Carolina, Tennessee, and Virginia have some extended coverage beyond the 401 certification, that coverage would not make up for loss of federal protections because they either do not operate independently of other permits (South Carolina),⁵⁰² are infrequently enforced (Tennessee),⁵⁰³ or are inadequately staffed (Virginia).⁵⁰⁴ Thus, with the proposed rollbacks, most

⁴⁹⁸ See, e.g., Indiana Dep’t of Env’tl. Mgmt., Comments on Advance Notice of Proposed Rulemaking On Definition of “Waters of the United States,” Docket ID No. OW-2002-0050, 2 (Apr. 16, 2003) (“Even if we manage to fill the gaps that would be created by a redefinition of ‘Waters of the U.S.’ in Indiana, nothing guarantees that all of our nearby states will also fill these gaps.”); Vermont Dep’t of Env’tl. Conservation, Comments on Advance Notice of Proposed Rulemaking On Definition of “Waters of the United States,” Docket ID No. OW-2002-0050, 8 (2003) (“Vermont cannot control its own destiny and must rely on effective, uniform regulation at the federal level to manage these out-of-state resources that significantly impact the state’s economy.”).

⁴⁹⁹ 33 U.S.C. § 1342(b).

⁵⁰⁰ *Id.* at § 1342 (a)(2).

⁵⁰¹ *Id.* at § 1341.

⁵⁰² See S.C. DEP’T OF HEALTH AND ENVTL. CONTROL, FACT SHEET: FRESHWATER WETLANDS MANAGEMENT 1 (Mar. 7, 2003) (stating that “applications are reviewed for consistency with the SCCMP, which includes policies for managing freshwater wetlands without distinction between isolated & contiguous wetlands”), http://www.scdhec.gov/HomeAndEnvironment/Docs/FS_FWM.pdf.

⁵⁰³ See ENVIRONMENTAL LAW INSTITUTE, STATE CONSTRAINTS: STATE-IMPOSED LIMITATIONS ON THE AUTHORITY OF AGENCIES TO REGULATE WATERS BEYOND THE SCOPE OF THE FEDERAL CLEAN WATER ACT 203 (May 2013), <https://www.eli.org/sites/default/files/eli-pubs/d23-04.pdf>.

⁵⁰⁴ See VIRGINIA DEP’T OF ENVTL. QUALITY: REPORT TO THE LEGISLATURE, STATE ASSUMPTION OF FEDERAL § 404 CLEAN WATER ACT PERMITTING PROGRAM FEASIBILITY STUDY 2 (Dec. 2012).

states would lose their only tool for preventing discharges of dredged and fill material in their waters.⁵⁰⁵

The proposed rollbacks would also mean that the number of waters for which states develop water quality standards would be radically reduced. The agencies correctly describe water quality standards as “the foundation for a wide range of programs under the CWA.”⁵⁰⁶ Without them, water quality is guaranteed to further deteriorate. To be sure, “[t]hey serve multiple purposes including establishing the water quality goals for a specific waterbody, or portion thereof, and providing the regulatory basis for establishing water quality-based effluent limits beyond the technology-based levels of treatment required by Clean Water Act sections 301(b) and 306.”⁵⁰⁷ States must “hold a public hearing to review their standards at least once every three years (i.e., triennial review),” and the EPA must “review and approve or disapprove” any new or revised state standards for “waters of the United States.”⁵⁰⁸ States must develop total maximum daily loads (TMDLs) for waters that are not meeting established water quality standards and must submit those TMDLs to EPA for approval.⁵⁰⁹ But states are only required to develop water quality standards for “waters of the United States.”⁵¹⁰ For waters that are no longer jurisdictional, water quality standards and the associated requirements (TMDLs, triennial reviews) “would not be in effect for Clean Water Act purposes.”⁵¹¹

Against this backdrop, many states would not replace federal clean water protections with state protections. They would more likely revert to the pre-1972 actions that pitted state against state, sacrificed water quality in favor of industrial polluters, and gave rise to the need for the bipartisan Clean Water Act in the first place.

IX. THE LEGISLATIVE HISTORY OF THE CLEAN WATER ACT CONFIRMS THAT CONGRESS INTENDED THE ACT TO APPLY BROADLY TO PROTECT THE NATION’S WATERS.

Congress’s intent in enacting the Clean Water Act is clear. Set out in the first section of the statute, the Clean Water Act’s objective “is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”⁵¹² This unequivocal objective incorporates Congress’s “broad, systemic view of the goal of maintaining and improving water quality.”⁵¹³ As “the House Report on the legislation put it, the word ‘integrity’ . . . refers to a condition in which the natural structure and function of ecosystems [are] maintained.”⁵¹⁴ “Protection of aquatic

⁵⁰⁵ See 2018 Resource and Programmatic Assessment at 13.

⁵⁰⁶ *Id.* at 70.

⁵⁰⁷ *Id.*

⁵⁰⁸ *Id.* at 71.

⁵⁰⁹ *Id.* at 72.

⁵¹⁰ 40 C.F.R. § 131.3(i) (“Water quality standards are provisions of State or Federal law which consist of a designated use or uses for the *waters of the United States* and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.”) (emphasis added).

⁵¹¹ 2018 Resource and Programmatic assessment at 72.

⁵¹² 33 U.S.C. § 1251(a).

⁵¹³ *Riverside Bayview Homes*, 474 U.S. at 132-33.

⁵¹⁴ *Id.* (quoting H.R.Rep. No. 92-911, at 76 (1972) (alterations in original)).

ecosystems, Congress recognized, demanded broad federal authority to control pollution because “[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.”⁵¹⁵ If the sources of our waterways were not included, Congress realized that it could not accomplish its goal of cleaning up the Nation’s waters—polluters could release toxins into those waters, which would wash down into larger waters downstream. It would have been futile for Congress to pass the Clean Water Act but not extend its protections to, as the agencies propose, “physically remote wetlands and wetlands lacking a direct hydrologic surface connection”⁵¹⁶ (*i.e.*, non-floodplain wetlands) or small streams that, in some areas, comprise 80 percent or more of the stream miles in a watershed.

In keeping with these views, the Clean Water Act prohibits the unauthorized discharge of any pollutant—including dredged or fill material—into “navigable waters,” defined as the “waters of the United States, including the territorial seas.”⁵¹⁷ Congress’s use of the term “waters of the United States” was a deliberate rejection of the more limited concept of traditional navigable waters, in recognition of the fact that such a narrow focus was ill-suited to the Act’s water quality goals.

The House and Senate Committees expressed concern that “navigable waters” might be given an unduly narrow reading.⁵¹⁸ While the House emphasized the Act’s scope should be “given the broadest possible constitutional interpretation,”⁵¹⁹ and the Senate report spoke to the scientific reality of waters being interconnected, both signaled their desire to extend the reach of the act to “navigable waters, portions thereof, and their tributaries, for the health of the ‘aquatic ecosystem’” and “well-being of human society.”⁵²⁰

When the House and Senate met in conference committee, they took an additional step to ensure that the definition of “navigable waters” did not result in unduly narrow interpretations. As discussed in the report of the Conference Committee, the word “navigable” was deleted from the from the Act’s definition of “navigable waters.” Thus, the definition of navigable waters read: “The term ‘navigable waters’ means waters of the United States, including the territorial seas.”⁵²¹ In explaining this change, the Conference report emphasized the same point made in the House: the term “navigable waters” must “be given the broadest possible constitutional

⁵¹⁵ *Id.* (quoting S.Rep. No. 92-414, at 77 (1972)).

⁵¹⁶ 84 Fed. Reg. at 4,189.

⁵¹⁷ 33 U.S.C. §§ 1311(a), 1344, 1362(6), 1362(7).

⁵¹⁸ H.R. Rep. No. 92-911 at 131 (1972); S. Rep. No. 92-414 at 77 (1971).

⁵¹⁹ H.R. Rep. No. 92-911 at 131 (1972).

⁵²⁰ S. Rep. No. 92-414, at 76-77 (1972) (requiring “that any changes in the environment resulting in a physical, chemical or biological change in a pristine water body be of a temporary nature, such that by natural processes, within a few hours, days or weeks, the aquatic ecosystem will return to a state functionally identical to the original”); *see also* H.R. Rep. No. 92-911, at 76-77 (1972) (discussing the goal of the legislation as preserving natural ecosystem structure and function); Br. for the Honorable John D. Dingell, The Honorable John Conyers, Jr., The Honorable Robert F. Drinan, The Honorable Gary W. Hart, The Honorable Kenneth W. Hechler, The Honorable Charles McCurdy Mathias, Jr., The Honorable Paul N. McCloskey, Jr., The Honorable Charles B. Rangel, and the Honorable Senator Richard Schultz Schweiker, as Amici Curiae in Support of the Respondent at 11, *Rapanos v. United States* (Nos. 04-1034, 04-1384) (Jan. 2006) (“Amicus Br. of Congress”).

⁵²¹ S. Rep. No. 92-1236 at 144 (1971).

interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes.”⁵²²

The debate in Congress confirmed the intent that the Act’s clean water protections apply broadly. Congressman John Dingell, an architect of the Act, explained the term “navigable waters” must be read “broadly for *water quality purposes*,” meaning “all ‘the waters of the United States’ in a geographical sense”⁵²³—“*all water bodies, including main streams and their tributaries*.”⁵²⁴

Representative Dingell’s statements, read together with the manner in which both the Senate and House committees defined the breadth of Clean Water Act jurisdiction, belie any possibility that Congress intended to focus on a narrow subset of waterbodies.⁵²⁵ Because “aquatic ecosystems” consist of “intricately connected hydrological systems,” this legislative history confirms Congress’s understanding that protecting traditional navigable waters requires protecting the aquatic ecosystem as a whole.⁵²⁶ It also clarifies that the Act “covers not only traditionally navigable waterways, but smaller streams, all tributaries, and wetlands that form components of and are essential to the ‘chemical, physical, and biological integrity’ of the larger aquatic ecosystem.”⁵²⁷

Any doubt that remains concerning the intended reach of the Clean Water Act is laid to rest by looking at the 1977 amendments to the statute. Congress hotly debated proposals to limit the jurisdictional reach of section 404, including one proposal by Senator Lloyd Bentsen of Texas that would have limited jurisdiction to the “traditional navigable waters and their adjacent wetlands.”⁵²⁸ Arguing against Senator Bentsen’s proposal, Senator Gary Hart (D-Co.) emphasized the connectivity of all waters,⁵²⁹ the importance of broad clean water protections to the national interest, and the conference committee’s adoption of broad clean water protections:

The Congress can permit activities of a dredge-and-fill nature to go forward on those small streams, marshes, wetlands, and swamps which will make their way into the bigger waterways of this country and have a tremendous adverse effect on the people of this country and on their welfare, on their crops, on many of their activities. Or we can establish a program of the sort the committee has established, which will protect all of those water systems; which will protect all of the elements of those systems⁵³⁰

⁵²² S. Conf. Rep. No. 92-1236 at 144 (1972).

⁵²³ 118 Cong. Rec. 33,756-33,757 (statement of Sen. John Dingell (D-Mich.) (daily ed. Oct. 4, 1972) (emphasis added).

⁵²⁴ *Id.* (emphasis added).

⁵²⁵ Amicus Br. of Congress at 13.

⁵²⁶ Amicus Br. of Congress at 14.

⁵²⁷ *Id.*

⁵²⁸ 123 Cong. Rec. 26,690, 26,710-11, 26,726 (Aug. 4, 1977) (amendment of Sen. Bentsen).

⁵²⁹ 123 Cong. Rec. 26,713 (daily ed. Aug. 4, 1977) (“So now what the Senator from Texas is suggesting is that we are only going to treat the cancer if it occurs in the trunk of the body, but not allow any treatments for the arms or the legs, so that if you have cancer in the hand, the arm, the foot, or the knee, we cannot treat that even though it may spread to the rest of the body or cause the loss of that limb.”).

⁵³⁰ 123 Cong. Rec. 26,713 (1977).

On the other side of the aisle, Howard Baker, a Senator from Tennessee, similarly stressed the importance of uniform federal protections and comprehensive coverage for the “protection of the aquatic environment.” He understood that the discharge of pollutants—whether into “small streams or into major waterways,” “marshes,” or “swamps”—threaten the “entire resource” because these “once seemingly separable types of aquatic systems are, we now know, interrelated and interdependent.” In Senator Baker’s opinion, downstream water users should not suffer the pollution of those located upstream. Whether it is to protect the ecological integrity of the Nation’s waters or the wellbeing of the businesses that rely on those waters, Congress determined that selecting only certain waters for protection would not address the water-quality crisis facing the Nation.⁵³¹

The Committee Report affirmed Congress’s view that the “Clean Water Act exercised comprehensive jurisdiction over the Nation’s waters to control pollution to the fullest constitutional extent.”⁵³² In the end, Congress rejected proposals to narrow the scope of Clean Water Act jurisdiction.⁵³³ Senator Bentsen conceded that the “program would still cover all waters of the United States, including small streams, ponds, [geographically] isolated marshes, and intermittently flowing gullies.”⁵³⁴ Congress endorsed the significant relationship between these waters and water quality; it intended to protect all interconnected waters to restore and maintain the integrity of the Nation’s waters. In light of this history, the current proposal is indefensible.

X. CONSISTENT WITH THE LEGISLATIVE HISTORY, JURISDICTION UNDER THE CLEAN WATER ACT MUST BE CONSTRUED BROADLY TO PROTECT THE NATION’S WATERS.

Consistent with Congress’s view,⁵³⁵ EPA’s Connectivity Report for the 2015 Clean Water Rule,⁵³⁶ and the over 1,200 peer-reviewed scientific studies that support that report, headwater streams, wetlands, and other waters are critical to protecting the biological, chemical, and physical integrity of larger waterbodies.⁵³⁷ This conclusion is corroborated by numerous other scientific studies and the attached Literature Review,⁵³⁸ and is illustrated in Figures 1 and 2 from the Connectivity Report below, which show the hydrologic and biologic interconnectivity of waters. The health of streams, wetlands, and open waters directly affects the health of larger downstream rivers, lakes, estuaries, and oceans. They must be protected to ensure the integrity of the Nation’s waters.

⁵³¹ 123 Cong. Rec. 26718 (1977) (emphasis added).

⁵³² S. Rep. No. 95-370, at 75 (1977).

⁵³³ 123 Cong. Rec. 26,707 (1977); U.S. EPA, Technical Support Document for the Clean Water Rule of the United States 424 (May 2015).

⁵³⁴ 123 Cong. Rec. 26,711 (Aug. 4, 1977).

⁵³⁵ 33 U.S.C. § 1251(a).

⁵³⁶ See 80 Fed. Reg. at 37,062; see generally EPA Connectivity Report.

⁵³⁷ See generally EPA Connectivity Report.

⁵³⁸ See generally, Ex. A, Literature Review.

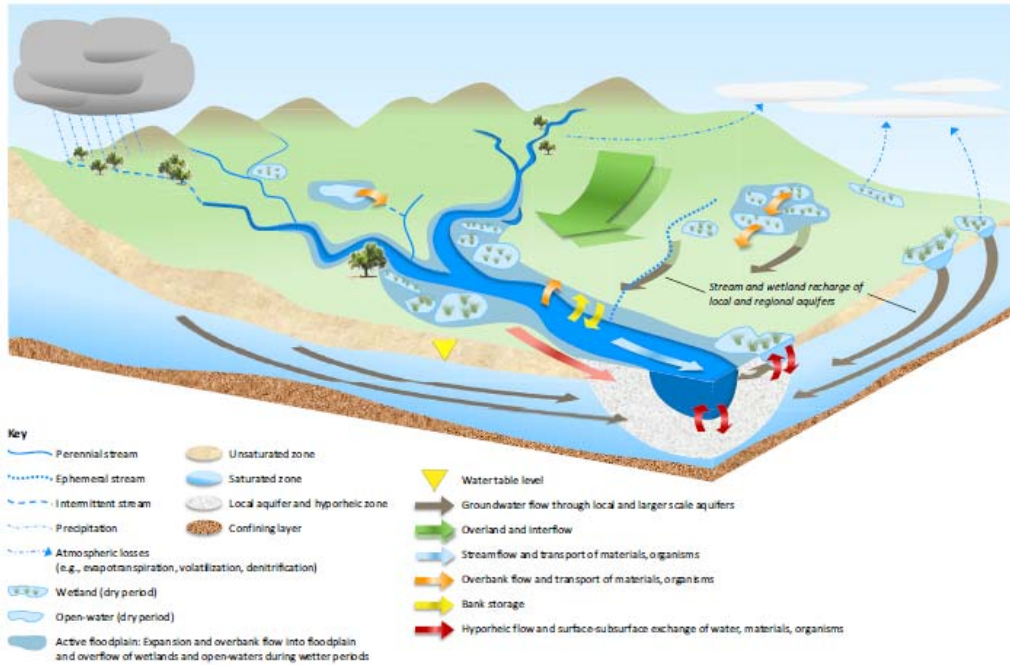


FIGURE 1. Hydrologic flow paths. Arrows are representative of surface water and groundwater flows occurring throughout a watershed. Subsurface flows are shown within the cross section, and by faded arrows outside the cross section. Source: USEPA (2015). 539

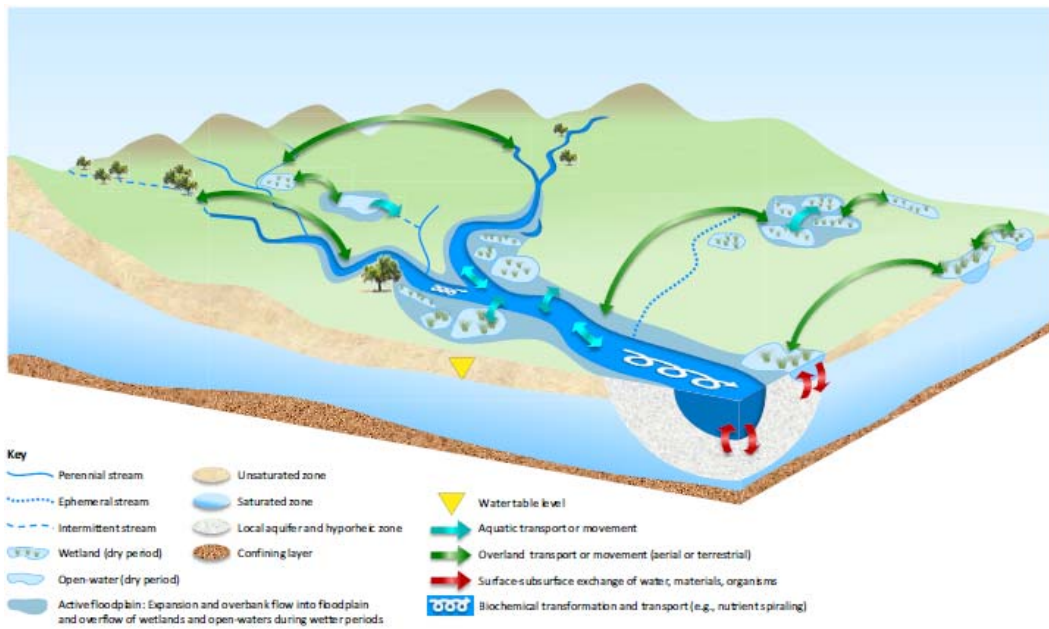


FIGURE 2. Biological pathways. Arrows are representative of biological pathways occurring throughout a watershed. This figure also includes representative biogeochemical pathways occurring in streams and floodplains. Source: USEPA (2015). 540

⁵³⁹ EPA Connectivity Report at 1-5; Alexander et al., *supra* note 265, at 289.

⁵⁴⁰ EPA Connectivity Report at 1-6; Alexander et al., *supra* note 265, at 291.

A. The Protection of Intermittent and Ephemeral Streams and Headwaters Is Essential to the Chemical, Physical, and Biological Integrity of Downstream Waters.

Intermittent and ephemeral streams and headwaters (“small streams”) make up a majority of the stream miles in the United States,⁵⁴¹ and they impact the chemical, physical, and biological integrity of our waters. Intermittent and ephemeral streams alone comprise 79 percent of river length in the coterminous United States, and they directly drain over 70 percent of the land area, underscoring the need for their protection.⁵⁴² In arid and semi-arid states, including Arizona, New Mexico, Nevada, Utah, Colorado, and California, over 81 percent of stream miles have been classified as ephemeral or intermittent.⁵⁴³ Even in some non-arid states, intermittent streams are predominant; in Alabama, 80 percent of stream miles on national-forest lands are classified as intermittent.⁵⁴⁴ The importance of these small streams to the Nation’s clean and safe drinking water is indisputable. Not only do these waters sustain fisheries and important ecosystem functions,⁵⁴⁵ they are the source of drinking water for 200 million Americans.⁵⁴⁶

Perennial, ephemeral, or intermittent headwater streams, whether considered individually or cumulatively, impact downstream flooding, base flows, water quality, and the entire food chain.⁵⁴⁷ The processes occurring upstream within these waters affect the entire river network’s chemical, physical, and biological structure and function.⁵⁴⁸ For the health of larger downstream rivers, estuaries, and oceans, these waters cannot be ignored.

1. *Ephemeral, intermittent, and headwater tributaries are essential to maintaining the chemical integrity of downstream waters.*

Small streams, regardless of flow permanence, control the transport of pollution, nutrients, and carbon to downstream waters. Through filtration, sequestration, storage, and

⁵⁴¹ See, e.g., Colvin et al., *supra* note 112, at 74, 77, 86.

⁵⁴² *Id.* at 74.

⁵⁴³ Lainie R. Levick et al., The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest, U.S. EPA and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046 (2008); Goodrich et al., Southwestern Intermittent and Ephemeral Stream Connectivity, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION 401 (Apr. 2018).

⁵⁴⁴ J.L. Meyer et al., Comments of Professional Aquatic Scientists on Advanced Notice of Proposed Rulemaking for on the Clean Water Act Regulatory Definition of “Waters of the United States” (Docket ID No. OW-2002-0050) 2 (Apr. 10, 2003) (“AQ Scientists Comments”).

⁵⁴⁵ Colvin et al., *supra* note 112, at 74.

⁵⁴⁶ SELC GIS Analysis; see also U.S. EPA, GEOGRAPHIC INFORMATION SYSTEMS ANALYSIS OF THE SURFACE DRINKING WATER PROVIDED BY INTERMITTENT, EPHEMERAL, AND HEADWATER STREAMS IN THE U.S. (“EPA, GIS Analysis”), available at http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (117 million).

⁵⁴⁷ See generally AQ Scientists Comments; Goodrich et al., *supra* note 543, at 402; Alexander et al., *supra* note, 265, at 291; Fritz et al., Physical and Chemical Connectivity of Streams and Riparian Wetlands to Downstream Waters: A Synthesis, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION (Apr. 2018).

⁵⁴⁸ See generally AQ Scientists Comments; Goodrich et al., *supra* note 543, at 402; Alexander et al., *supra* note, 265, at 291.

accumulation of toxins by microorganisms, algae, plants, and animals,⁵⁴⁹ they prevent pollution and excess nutrients from entering downstream community water supplies, rivers, lakes, and eventually estuaries.⁵⁵⁰ Dryer phases in intermittent and ephemeral streams allow precipitation and runoff to pass through soil and bed material, providing further opportunities for filtering pollution before it enters groundwater and downstream waterways.⁵⁵¹ This overall reduction in pollutants decreases the cost of water treatment, the degradation of downstream water quality, and the risks to human health and aquatic life while improving recreational opportunities such as fishing. Where small headwater streams are polluted, the impacts can be felt throughout a watershed, including in downstream perennial streams and rivers.⁵⁵²

Small streams process nitrogen, which is important because it decreases the loading of nitrogen to larger downstream waters.⁵⁵³ Excess nitrogen exported downstream causes increased harmful algal growth, decreased light penetration, and reduced oxygen levels, which can lead to toxic water, fish kills, and economic damage.⁵⁵⁴

Small streams also transform and store carbon before it can be transported downstream.⁵⁵⁵ They break down leaf litter and other organic matter, which ephemeral streams release downstream in pulses during storm events.⁵⁵⁶ These pulses provide an important source of carbon for downstream animals.⁵⁵⁷ Ephemeral streams—even more so than perennial—play a critical role in carbon sequestration, a process in which carbon is stored in sediment or taken up by organisms rather than being released into the atmosphere where it contributes to climate change.⁵⁵⁸

When intermittent and ephemeral streams are piped, buried or otherwise degraded, the intrinsic capacity of these stream reaches to purify water and process nutrients is compromised, which leads to declines in downstream water quality.⁵⁵⁹ These processes are so important that having intact headwater streams is more predictive of downstream water quality than downstream factors such as local land use or riparian cover.⁵⁶⁰

⁵⁴⁹ See generally Thibault Datry et al., Flow intermittence and ecosystem services in rivers of the Anthropocene, *JOURNAL OF APPLIED ECOLOGY* (2017).

⁵⁵⁰ Ex. A, Literature Review at 30-33; AQ Scientists Comments at 4; Fritz 2018.

⁵⁵¹ Ex. A, Literature Review at 30.

⁵⁵² Ex. A, Literature Review at 33.

⁵⁵³ Ex. A, Literature Review at 31; Colvin et al., *supra* note 112, at 78; Judy L. Meyer et al., The Contribution of Headwater Streams to Biodiversity in River Networks, *JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION* 99 (2007).

⁵⁵⁴ Ex. A, Literature review at 31; Colvin et al., *supra* note 112, at 76; Meyer et al., *supra* note 553, at 88.

⁵⁵⁵ Ex. A, Literature Review at 30-31.

⁵⁵⁶ Ex. A, Literature Review at 30-31.

⁵⁵⁷ *Id.*

⁵⁵⁸ *Id.*

⁵⁵⁹ *Id.* at 33.

⁵⁶⁰ *Id.*

2. *Ephemeral, intermittent and small headwater streams contribute to the physical integrity of downstream waters.*

Small streams are also physically connected to downstream waters. They retain and transfer sediment, organic matter, nutrients, contaminants, and heat energy to downstream waters.⁵⁶¹ They are closely connected with wetlands and groundwater flows, and are important in regulating the flow of water into downstream water bodies. An estimated 55 percent of the annual water volume in large rivers originates in small (first-order) streams, the majority of which only flow intermittently.⁵⁶² They also play an important role in replenishing groundwater in the arid West, which people heavily depend on for irrigation and drinking water.⁵⁶³

Small streams transport organic material, including large wood, from adjacent and upstream riparian systems, that are essential for the ecological condition of downstream ecosystems.⁵⁶⁴ The provisioning of large wood for habitat development is crucial for aquatic species, including juvenile salmon and trout.⁵⁶⁵

Water temperature in small streams positively influences downstream waters and the species that depend on them.⁵⁶⁶ For example, confluences with spring-fed streams were identified as the coldest patches along a northeastern Oregon river that otherwise had summer water temperatures too hot for native salmonids to survive.⁵⁶⁷

3. *Ephemeral, intermittent, and headwater tributaries contribute to the biological integrity of downstream waters.*

Small streams provide vital habitat and protection for insects, fish, mussels, and plants. Most aquatic species spend at least some portion of their lifecycle in perennial, intermittent, or ephemeral streams. “Ephemeral headwater streams can support levels of aquatic invertebrate diversity and abundance comparable to, or greater than, those estimated for perennial headwaters, as well as plants and animals found nowhere else in the watershed.”⁵⁶⁸

a. Small streams serve as vital spawning habitats.

Small streams provide essential breeding habitat for numerous species, many of which live in larger waterbodies during most of the year.⁵⁶⁹ The trispot darter, for instance, spends most months in large perennial streams, but “moves upstream to spawn and attaches its eggs to submerged blades of grass in tiny rivulets that flow from ephemeral ponds in fields.”⁵⁷⁰ In the Southeast, ephemeral streams can also have important aquatic life and hydrology functions during periods of protracted rainfall and related high local water tables.⁵⁷¹ In the Southwest, dry

⁵⁶¹ E.g., Fritz et al., *supra* note 547, at 329-330.

⁵⁶² Ex. A, Literature Review at 32; Fritz et al., *supra* note 547, at 327.

⁵⁶³ 2018 Economics Analysis at 195.

⁵⁶⁴ Colvin et al., *supra* note 112, at 77.

⁵⁶⁵ *Id.*

⁵⁶⁶ E.g., Fritz et al., *supra* note, at 329.

⁵⁶⁷ *Id.*

⁵⁶⁸ Colvin et al., *supra* note 112, at 76.

⁵⁶⁹ AQ Scientists Comments at 6.

⁵⁷⁰ *Id.*

⁵⁷¹ Ex. B, Moffat & Nichol 2019 at 3-4.

streambeds are “seed and egg banks” for aquatic biota, and when flowing, disperse these downstream.⁵⁷² Many ephemeral headwaters of the western Great Plains and dry valleys of the intermountain West are important habitats for many minnows, suckers, sunfishes, and darters during months when they have water.⁵⁷³ Intermittent streams are also important spawning and refuge habitats for trout, darters, minnows, suckers, and other fishes, including federally listed Coho salmon and Chinook salmon, whose juveniles occupy headwater tributaries and seasonal floodplain wetlands during winter.⁵⁷⁴ Degradation of these habitats would impact the viability of fish populations in the entire watershed.⁵⁷⁵

b. Small streams serve as nursery habitat for juvenile fish.

Small headwater streams serve as vital nursery areas for numerous fish species, including brook trout.⁵⁷⁶ Intermittent streams provide rearing habitat for juvenile Chinook salmon and Coho salmon.⁵⁷⁷ Juvenile Coho salmon that inhabit pools in intermittent headwater streams in Oregon are larger than those from perennial streams in the same river.⁵⁷⁸ Because larger Coho have higher ocean survival rates, the loss of these intermittent streams could be detrimental to salmon populations.⁵⁷⁹

c. Small streams provide a thermal refuge at critical life stages or during critical times of the year.

Small streams serve as a thermal refuge for species that spend most of their lives in larger river systems.⁵⁸⁰ The Arkansas darter, a federal candidate darter species, uses small streams as a summer time refuge from heat and drought in the Ozarks.⁵⁸¹ Unpolluted headwaters are also essential for maintenance of coldwater fish, including Chinook Salmon, Coho Salmon, and Brook Trout.⁵⁸² Groundwater is often warmer than stream water during winter, so small spring-fed streams also provide a refuge from freezing for stream fishes.⁵⁸³ Given climatic extremes, access to thermal refuges such as those provided by small spring-fed streams is important for stream fishes’ survival.⁵⁸⁴

d. Small streams provide critical habitat for unique and threatened species.

Ephemeral and intermittent headwater streams provide critical habitat for diverse and often unique communities of aquatic organisms. The degradation and elimination of these streams increases the chance of extinction for aquatic invertebrate, amphibian, and fish species.

⁵⁷² Colvin et al., *supra* note 112, at 78.

⁵⁷³ *Id.* at 81-82.

⁵⁷⁴ Colvin et al., *supra* note 112, at 80-81.

⁵⁷⁵ *E.g.*, AQ Scientists Comments at 6.

⁵⁷⁶ *Id.*

⁵⁷⁷ *Id.*

⁵⁷⁸ Colvin et al., *supra* note 112, at 81.

⁵⁷⁹ *Id.*

⁵⁸⁰ Colvin et al., *supra* note 112, at 78. 2019; AQ Scientists Comments at 5-6, 8.

⁵⁸¹ Colvin et al., *supra* note 112, at 78. 2019; AQ Scientists Comments at 5, 7.

⁵⁸² Colvin et al., *supra* note 112, at 78. 2019; AQ Scientists Comments at 5-6.

⁵⁸³ Colvin et al., *supra* note 112, at 78. 2019; AQ Scientists Comments at 6.

⁵⁸⁴ AQ Scientists Comments at 6.

In the National Forests of Alabama, for example, 70 of the 113 “at risk” aquatic species live primarily in these headwater streams, including crayfish, mussels, snails, amphibians, and fish.⁵⁸⁵

Ephemeral and intermittent streams provide vital habitat for amphibians, many of which are state and/or federally threatened and endangered, such as Chiricahua leopard frog.⁵⁸⁶ Keeping headwaters free from sediment, silt, excessive nutrients, and toxins is critical, as amphibians are especially sensitive to changes in water quality.⁵⁸⁷

Headwater streams also support endangered and threatened fish. In the Southeast, headwaters support the most biodiverse and imperiled freshwater fish communities in North America.⁵⁸⁸ Often, species in ephemeral and intermittent headwaters are a subset of the species found downstream. For example, brook trout are found in both perennial and intermittent Appalachian streams.⁵⁸⁹

Headwaters often provide the last refuge for species threatened by loss of habitat elsewhere in the watershed. The federally endangered Yellowcheek Darter (endemic to the Boston Mountains of Arkansas) and the federally threatened Leopard Darter (endemic to a few headwater streams in the Ouachita Mountains of southeastern Oklahoma and southwestern Arkansas) depend on headwater streams for survival.⁵⁹⁰ Protecting headwaters also enables the recovery and delisting of endangered fishes. The recently delisted Modoc Sucker is now abundant in intermittent and low-flow headwater streams in northeastern California and southern Oregon. Its delisting was in large part due to the protection of headwater tributaries and wetlands on public and private lands from threats like livestock grazing and stream channelization, which had eliminated refuge pools.⁵⁹¹

B. Protecting Wetlands Is Essential to Restoring and Maintaining the Chemical, Physical, and Biological Integrity of the Nation’s Waters.

Wetlands perform critical hydrological, physical, and biological functions affecting downstream systems.⁵⁹² They can be connected to downstream waters through ephemeral or intermittent streams, shallow subsurface-water, groundwater flows, and through biological and chemical connections.⁵⁹³ Even where wetlands lack a visibly consistent surface-water connection to a river network, they are connected to downstream waters. These non-floodplain wetlands are

⁵⁸⁵ AQ Scientists Comments at 6-7.

⁵⁸⁶ *Id.* at 7.

⁵⁸⁷ Kurt A. Buhlman et al., Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States, Technical Bulletin 22, 30 (2016).

⁵⁸⁸ Ex. A, Literature Review at 28.

⁵⁸⁹ *Id.* at 29.

⁵⁹⁰ Colvin et al., *supra* note 112, at 84.

⁵⁹¹ *Id.*

⁵⁹² *See generally*, Dennis F. Whigham & Thomas E. Jordan, Isolated Wetlands and Water Quality, 23 WETLANDS 541, 541-49 (2003); Charles R. Lane et al., Hydrological, Physical, and Chemical Functions and Connectivity of Non-Floodplain Wetlands to Downstream Waters: A Review, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION (Apr. 2018); Colvin et al., *supra* note 112; Ex. A, Literature Review.

⁵⁹³ *Id.*

connected from an “ecological”⁵⁹⁴ and functional perspective.⁵⁹⁵ Even in the absence of hydrologic connections, they are connected by overland or aerial movements of aquatic and semiaquatic organisms and the materials that they retain and transport.⁵⁹⁶

Because of these connections, even wetlands that appear geographically isolated can have significant effects on the health of downstream waters. They recharge groundwater that sustains river baseflows; retain and transform nutrients, metals, sediment, and pesticides; export organisms to downstream waters; store and release floodwaters; and provide habitats for stream species.⁵⁹⁷ Some of these functions are inversely related to their rate of connectivity (*i.e.*, slower connections could result in larger effects). For instance, wetlands that intercept storm runoff store water and process entrained materials (*e.g.*, nutrients) may have a slow or diffuse connection with downstream waters (*e.g.*, via groundwater or atmosphere), but the functional effect of retaining nutrients and stormwater may be great.⁵⁹⁸ Accordingly, the loss of chemically, physically, or biologically connected, yet geographically isolated, wetlands would have negative effects on the quality of downstream waters, as well as the human and ecological communities that rely on them.⁵⁹⁹

1. *Wetlands are essential to maintaining the chemical integrity of downstream waters.*

Wetlands are commonly referred to as “nature’s kidneys” because they provide a similar function by absorbing waste products from the environment.⁶⁰⁰ They treat and retain pollutants including toxic chemicals, sediments, and harmful levels of nutrients like nitrogen and phosphorus, thereby reducing pollution in downstream waters.⁶⁰¹ Wetlands reduce nitrogen pollution in surface waters by converting polluting forms of nitrogen into harmless gaseous forms in a process called denitrification. Since some forms of nitrogen are highly mobile in groundwater, wetlands that do not have a surface hydrologic connection but have a sub-surface groundwater connection can be important to reducing nitrogen pollution to nearby surface waters.⁶⁰² While other ecosystems provide some denitrification only, wetlands have this tremendous capacity to intercept and remove nitrogen, thus maintaining the water quality of adjacent and downstream waters.

A wetland’s relative “isolation” from downstream waters can increase its ability to restore and maintain the integrity of those downstream waters. For example, waterborne contaminants that enter a wetland cannot be transported to a river, except by non-hydrologic

⁵⁹⁴ Whigham & Jordan, *supra* note 592, at 23; *see generally*, Schofield et al., Biota Connect Aquatic Habitats Throughout Freshwater Ecosystem Mosaics, JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION (Apr. 2018).

⁵⁹⁵ *E.g.*, Leibowitz et al., *supra* note 414, at 304.

⁵⁹⁶ Schofield et al., *supra* note 594, at 375-376; Alexander et al., *supra* note 265, at 294.

⁵⁹⁷ *See* Ex. A, Literature Review at 13, 17, 21-26; Lane et al., *supra* note 592, at 353; Alexander et al., *supra* note 265, at 294.

⁵⁹⁸ Lane et al., *supra* note 592, at 347.

⁵⁹⁹ *Id.*

⁶⁰⁰ Ex. A, Literature Review at 13.

⁶⁰¹ *Id.* at 13-14.

⁶⁰² NAT’L RESEARCH COUNCIL, NAT’S ACADEMY OF SCIENCES, CLEAN COASTAL WATERS: UNDERSTANDING AND REDUCING THE EFFECTS OF NUTRIENT POLLUTION (2000).

pathways, if the wetland is hydrologically isolated from the river. Increased isolation can also decrease the spread of pathogens and invasive species. Draining or filling these wetlands decreases their ability to filter out pollution and sequester carbon, nitrogen, and phosphorus.⁶⁰³ Altering wetland hydrology in this way prevents wetlands from absorbing pollution, negatively affecting downstream waters.⁶⁰⁴

2. *Wetlands contribute to the physical integrity of downstream waters.*

Wetlands maintain the physical integrity of downstream waters by capturing and storing large amounts of water, acting as sponges. Wetlands store surface water following precipitation events and moderate flow of adjacent and downstream waters.⁶⁰⁵ As wetlands absorb flood water, run-off, and rain, they also filter pesticides, excess nutrients, sediment, and other pollutants, protecting the health of downstream tributaries, rivers, and wetlands.⁶⁰⁶

Long-term surface water storage in wetlands maintains the base flow and seasonal flow distribution in adjacent streams. Wetlands slowly release stored water through surface and sub-surface connections and “recharge” the streams maintaining flow during periods of low precipitation.⁶⁰⁷ Carolina bays provide a flow-through wetland system, receiving groundwater contained in adjacent uplands and recharging the groundwater to lower topographic areas.⁶⁰⁸

Wetlands also play a key role in filtering out sediments that would otherwise harm downstream and adjacent waters.⁶⁰⁹ Sediment adversely affects water quality by smothering streambeds destroying and degrading aquatic habitat.⁶¹⁰ Other toxic materials including pesticides, industrial wastes, and metals can also be bound to sediment and carried into water bodies. Wetlands may remove up to 80 percent of suspended sediments from the water that flows through them.⁶¹¹ Sediment accumulation can be similar or even greater in non-floodplain wetlands compared to other wetlands.⁶¹²

3. *Wetlands play a critical role in ensuring the biological integrity of downstream waters.*

Wetlands are important to the overall maintenance of biodiversity and the aquatic ecosystem. They play a critical role in ensuring the biological integrity of downstream waters by supporting the growth of plants and animals that form the basis of the aquatic food chain and

⁶⁰³ Ex. A, Literature Review 15.

⁶⁰⁴ *Id.*

⁶⁰⁵ Ex. A, Literature Review at 200; *E.g.*, AQ Scientists Comments at 3-4.

⁶⁰⁶ *E.g.*, AQ Scientists Comments at 3-4.

⁶⁰⁷ T.C. Winter, U.S. Geological Survey Circular, Groundwater and Surface Water: A Single Resource 1139 (1999).

⁶⁰⁸ Ge Sun et al., Modeling the Climatic and Subsurface Stratigraphy Controls on the Hydrology of a Carolina Bay Wetland in South Carolina, USA, 26 WETLANDS 567, 567-80 (2006).

⁶⁰⁹ Ex. A, Literature Review at 18-19.

⁶¹⁰ U.S. EPA, NATIONAL WATER QUALITY INVENTORY: REPORT TO CONGRESS (Aug. 2017), https://www.epa.gov/sites/production/files/2017-12/documents/305btrc_finalowow_08302017.pdf (last visited Apr. 8, 2019).

⁶¹¹ John F. Elder & Gerald L. Goddard, Sediment and Nutrient Trapping Efficiency of a Constructed Wetland Near Delevan Lake, Wisconsin, 1993-1995.

⁶¹² Ex. A, Literature Review at 15.

providing habitat for aquatic species, like fish that spawn in wetlands and move to open waters later in life.⁶¹³

Non-floodplain wetlands provide greater habitat diversity compared to other wetlands due to the inherent variability of non-floodplain wetlands. Numerous rare, threatened, and endangered species depend non-floodplain wetlands in the Southeast, including:

- Rare species like the Hessel's hairstreak butterfly, the federally endangered pine barrens tree frog, and the specialized swallowtail, rely on pocosins for their habitat.⁶¹⁴
- The federally endangered red-cockaded woodpecker inhabits mature pond pines in pocosins.⁶¹⁵
- The North Carolina state-endangered eastern diamondback rattlesnake and American alligator are found in pocosins.⁶¹⁶
- The *Lindera melissifolia* (common name Pondberry or Southern Spicebush), a federally endangered shrub, is endemic to isolated wetlands of the southeast.⁶¹⁷ Unfortunately, habitat availability is declining steeply for the species due to wetland conversion to other land uses.⁶¹⁸

Many species travel between wetlands, thereby linking wetlands to one another and to other waters. The following exemplify the presence and movement of ducks, fish, amphibians, and reptiles in Southeastern wetlands:

- Wood ducks living in the riverine wetlands of the Tennessee-Tombigbee Rivers and Waterway in Alabama and at Noxubee National Wildlife Refuge in Mississippi travel from these traditional navigable waters to non-floodplain scrub-shrub wetlands to breed.⁶¹⁹
- Green tree frogs, which are typically found in permanent lakes, ponds, and swamps, and occasionally in temporary ponds, interbreed with barking frogs, which dwell entirely in non-floodplain wetlands. Their hybrids return to these non-floodplain wetlands to breed.⁶²⁰
- The semi-aquatic Eastern mud turtle is a bottom-dweller of shallow, slow-moving water bodies and non-floodplain wetlands, but during the late summer and fall,

⁶¹³ Ex. A, Literature Review at 10; Colvin et al., *supra* note 112, at 84.

⁶¹⁴ Ex. A, Literature Review at 13.

⁶¹⁵ *Id.*

⁶¹⁶ *Id.*

⁶¹⁷ *Id.* at 10-11.

⁶¹⁸ *Id.*

⁶¹⁹ Brian Davis et al., Survival of Wood Duck Ducklings and Broods in Mississippi and Alabama. 71 JOURNAL OF WILDLIFE MANAGEMENT 507, 507-517 (2007).

⁶²⁰ Margaret S. Gunzburger, Differential Predation on Tadpoles Influences the Potential Effects of Hybridization between *Hyla cinerea* and *Hyla gratiosa*, 39 JOURNAL OF HERPETOLOGY 682, 682-87 (2005).

individuals leave their aquatic habitat for extended periods to overwinter on land. Movement between water bodies is common.⁶²¹

- Chicken turtles, which are found primarily in shallow and seasonally fluctuating wetlands in the Southeastern United States but are rare in permanent wetlands, move distances of several hundred meters between non-floodplain wetlands.⁶²²
- Sirens and salamanders in the Savannah River Site in South Carolina colonize non-floodplain wetlands through temporary aquatic connections to other bodies of water.⁶²³
- Fish found in non-floodplain Carolina-bay wetlands in the Savannah River Site confirm surface-water connections between the wetlands and the Savannah River during times of wetland overflow flooding.⁶²⁴
- Red-spotted newts in a series of mountain ponds in the Shenandoah Mountains of Virginia migrate “en masse” every August and September, moving to and from ponds to breed.⁶²⁵
- Several species of aquatic and semi-aquatic worm snakes, found primarily in non-floodplain wetlands, formed clustered populations in the Lower Atlantic Coastal Plain of South Carolina during periods of inundation when wetland boundaries expanded and the wetland system became more interconnected.⁶²⁶
- Alligators in southern Georgia depend on seasonal wetlands, uplands, and creek-river systems at various times in their lives. As alligators progress from juvenile life stages to adulthood, they shift from using wetland habitat to using riverine habitat. Females also return to wetlands to breed.⁶²⁷

⁶²¹ Leigh Anne Harden et al., Terrestrial Activity and Habitat Selection of Eastern Mud Turtles (*Kinosternon subrubrum*) in a Fragmented Landscape: Implications for Habitat Management of Golf Courses and Other Suburban Environments, 1 *COPEIA* 78, 78-84 (2009).

⁶²² Kurt A. Buhlmann et al., Ecology of Chicken Turtles (*Deirochelys Reticularia*) in a Seasonal Wetland Ecosystem: Exploiting Resource and Refuge Environments, 65 *HERPETOLOGICA* 39, 39-53 (2009).

⁶²³ Joel W. Snodgrass et al., Influence of Hydroperiod, Isolation, and Heterospecifics on the Distribution of Aquatic Salamanders (*Siren* and *Amphiuma*) among Depression Wetland, 53 *CAN. J. FISH. AQUAT. SCI.* 443 (1999).

⁶²⁴ Joel W. Snodgrass et al., Factors Affecting the Occurrence and Structure of Fish Assemblages in Isolated Wetlands of the Upper Coastal Plain, U.S.A., 53 *CAN. J. FISH. AQUAT. SCI.* 443, 443-454 (1996).

⁶²⁵ Douglas E. Gill, The Metapopulation Ecology of the Red-spotted Newt, *Notophtalmus viridescens* (Rafinesque), 48 *ECOLOGICAL MONOGRAPHS*, 145, 145-166 (1978).

⁶²⁶ Kevin R. Russell, Aspects of the Ecology of Worm Snakes (*Carphophis amoenus*) Associated with Small Isolated Wetlands in South Carolina, 33 *JOURNAL OF HERPETOLOGY* 339, 339-344 (1999).

⁶²⁷ Amanda L. Subalusky et al., Ontogenetic Niche Shifts in the American Alligator Establish Functional Connectivity Between Aquatic Systems, 142 *BIOLOGICAL CONSERVATION* 1507, 1507-1514 (2008).

In addition to providing essential habitat for a variety of species, non-floodplain wetlands preserve biodiversity by allowing the formation of clusters of organisms on a regional scale.⁶²⁸ This phenomenon has been documented extensively in populations of pond-breeding amphibians, like newts.⁶²⁹ Individuals migrate between non-floodplain wetlands and navigable waters and their tributaries via overland corridors that connect them, forming clusters, which are essential to maintaining the integrity of local and regional populations.⁶³⁰

Each of these functions provided by small streams and wetlands serve to protect and enhance the integrity of the Nation's water, as well as the health and wellbeing of all who depend on clean water. They must be meaningfully considered by the agencies in the present rulemaking.

XI. CONCLUSION

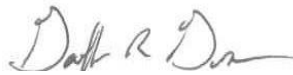
Clean water is not a political issue. It is a basic right of every American. To be effective, the Clean Water Act must control pollution at its source: upstream in the headwaters and wetlands that flow downstream through communities to our major lakes, rivers, and bays. That was Congress's clear intent, and it is backed by science.

We urge the agencies to change course. We urge you to abandon the current proposal, which is sure to return us to pre-Clean Water Act conditions. We urge you to reaffirm the 2015 Clean Water Rule, or propose and carefully consider a revised rule that is as scientifically, legally, and ecologically sound as the 2015 Clean Water Rule. Our members and supporters, and communities across the country, will settle for nothing less than a Clean Water Act that protects the Nation's waters.

Sincerely,



Kelly F. Moser
Senior Attorney



Geoffrey R. Gisler
Senior Attorney

⁶²⁸ J. Whitfield Gibbons, *Terrestrial Habitat: A Vital Component for Herpetofauna of Isolated Wetlands*, 23 WETLANDS, 630, 630-635 (2003).

⁶²⁹ Douglas E. Gill, *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque)*, 48 ECOLOGICAL MONOGRAPHS, 145, 145-166 (1978).

⁶³⁰ *Id.*

A handwritten signature in black ink, appearing to read "J. Blanding Holman, IV". The signature is fluid and cursive, with a long horizontal stroke at the end.

J. Blanding Holman, IV
Managing Attorney

A handwritten signature in black ink, appearing to read "William W. Sapp". The signature is cursive and somewhat stylized.

William W. Sapp
Senior Attorney