

Revised Definition of “Waters of the United States”
Response to Comments Document
SECTION 17 – ECONOMIC ANALYSIS

See the Introductory Section of the Response to Comments (RTC) Document for a discussion of the Environmental Protection Agency and the Department of the Army’s (hereinafter, the agencies’) comment response process and organization of the eighteen sections.

17	ECONOMIC ANALYSIS	3
17.1	STATE AND TRIBAL RESPONSES TO CHANGES IN FEDERAL JURISDICTION	3
17.1.1	National costs and benefits informed by state programs.....	3
17.1.2	Tribes filling the regulatory gap.....	4
17.1.3	States filling the regulatory gap	5
17.1.4	Costs to states.....	12
17.1.5	Other comments on supplementary material to the economic analysis	9
17.2	SCOPE OF JURISDICTION	12
17.2.1	Primary baseline.....	12
17.2.2	Secondary baseline.....	16
17.2.3	Other baselines	18
17.3	BENEFITS.....	19
17.3.1	General benefits comments	19
17.3.2	Additional benefits categories.....	21
17.3.3	Number of wetlands and aquatic resource benefits studies.....	23
17.3.4	Willingness to pay studies.....	23
17.3.5	Selection of wetlands and aquatic resource benefits studies.....	24
17.3.6	Benefits transfer approach	26
17.4	COSTS	28
17.4.1	General costs comments.....	28
17.4.2	Permit costs	29
17.4.3	Mitigation costs.....	30
17.4.4	Costs associated with regulatory uncertainty	31
17.4.5	Costs associated with permitting changes.....	33
17.4.6	Costs associated with Clean Water Act programs other than the section 404 program.....	36
17.4.7	Additional cost categories	38
17.5	DISTRIBUTION OF COSTS AND DISTRIBUTION OF BENEFITS	42
17.5.1	General comments on accuracy and adequacy.....	42

17.5.2	Interstate and transboundary benefits.....	44
17.5.3	Case studies.....	45
17.6	ENVIRONMENTAL JUSTICE IMPLICATIONS	45
17.6.1	Use of the primary baseline related to environmental justice concerns.....	45
17.6.2	Comprehensiveness of the environmental justice analysis	47
17.6.3	Ecosystem services in the environmental justice analysis	48
17.6.4	Cumulative risk and environmental justice analysis.....	49
17.6.5	Environmental justice concerns from implementation of the 2020 NWPR.....	49
17.6.6	Environmental justice issues associated with changes from the pre-2015 regulatory text and the pre-2015 regulatory regime	51
17.6.7	Distributional and other considerations in the environmental justice analysis	53
17.6.8	Disproportionate impacts related to water	53
17.6.9	Relationship of race to other factors	55
17.7	SECTOR IMPACT ANALYSIS.....	55

17 ECONOMIC ANALYSIS

17.1 State and Tribal Responses to Changes in Federal Jurisdiction

17.1.1 National costs and benefits informed by state programs

A few commenters disagreed with the agencies' assumption that the proposed rule would have no effect on states that define "waters of the State" at least as broadly as the proposed "waters of the United States" definition and urged the agencies to include all states in their analysis. Some commenters stated that the agencies were wrong to assume that the proposed rule would produce no benefits in those states that have broader protections than the proposed rule, stating that these states often cannot or will not provide the same level of protection and that there is nothing to prevent them from reducing state protections.

A commenter urged the agencies to conduct a sensitivity analysis to examine the risk of states repealing laws that are more protective. A commenter stated that the agencies did not analyze whether states have adequate capacity and resources to implement programs for non-jurisdictional waters. A commenter stated that the agencies' assessment of which states have more stringent protections is inaccurate and does not include the myriad factors that determine whether a state, in practice, is protecting more waters than the proposed rule.

Another commenter asserted that resource constraints at the state level may lead to underenforcement, citing comments from states that emphasize constraints. The commenter urged the agencies to consider these impacts before concluding that increased federal protections offer no benefits in these states. One commenter stated that states may not have analogous programs for every Clean Water Act requirement, giving the example that only a handful of states have authority to run a biosolids management program and only three states are authorized to issue section 404 permits. This commenter stated that even where analogous programs exist, they may not be as stringent or stringently enforced as the federal counterparts. The commenter stated that statutory authority to regulate waters does not mean regulations are in place, noting that any needed rulemaking would entail costs that could be avoided through stronger federal regulations. The commenter stated that the agencies should perform a more expansive analysis of states' statutory authority and not assume that they will promulgate regulations to fill the gap. The commenter also argued that developments after the 2020 Navigable Waters Protection Rule (2020 NWPR) was promulgated demonstrate the problems of assuming no benefits in these states. A few commenters stated that Indiana and Ohio reduced protections in response to the 2020 NWPR, stating that this demonstrates vulnerability in the absence of a federal baseline of protection, in contrast to the agencies' assumption in the 2020 NWPR about states filling the gap.

One commenter challenged the assumption that all the incremental wetlands affected by the definitional change would be compromised if federal jurisdiction were not expanded and that all these wetlands would be preserved or mitigated if it is expanded. The commenter stated that this is inaccurate since tribal, state, and local governments frequently protect wetlands in the absence of federal jurisdiction. To the contrary, the commenter asserted state and local planning, monitoring, and enforcement activities may be better-suited to effectively preserve wetland resources, so the benefits associated with expanding federal jurisdiction over wetlands could be partially offset by programmatic changes that pass control from tribes, states and municipalities to federal agencies.

Agencies' response: The agencies agree with commenters who asserted that states with regulations relating to “waters of the States” that are at least as broad as the Clean Water Act will still receive some benefits from the final rule. The agencies agree with commenters who stated that the economic analysis did not include an assessment of the resources available to states to fully enforce existing state regulations relating to “waters of the States.” The agencies are unable to determine what resources states would have required to fill the regulatory gap left by the 2020 NWPR. The agencies agree with the commenter that stated that not all newly jurisdictional wetlands under the final rule would equate to a full distribution of costs and benefits, as some states have regulatory programs which can partially fill the gap. The agencies are unable to determine what proportion of costs and benefits within given states would be offset by state regulatory programs.

The agencies agree with the commenters that recommended including all states in the economic analysis. The agencies have estimated potential benefits for all states for both the proposal and final analysis. Including all states in the total costs and benefits calculations removes the prior assumptions that were inherent in the quantified costs and benefits calculations in the Economic Analysis for the Proposed Rule. These assumptions included: states that have regulations in place that are as broad as the Clean Water Act will not see benefits from the proposed rule, and states that have regulations in place that are less broad than the Clean Water Act will see full benefits from the proposed rule. So as not to unduly overestimate benefits and costs, the agencies have also accounted for existing state laws and regulations that would produce the same or similar outcomes as federal requirements. The agencies have catalogued state regulatory programs and definitions related to state waters in the Supplementary Material to the Economic Analysis for the Final Rule. The agencies have also provided costs and benefits by state in Appendix C of the Economic Analysis for the Final Rule. See Chapter II of the Economic Analysis for the Final Rule.

The agencies agree with the commenters that stated that Indiana and Ohio deregulated definitions of “waters of the State” after implementation of the 2020 NWPR began. The agencies acknowledge the commenter that requested a sensitivity analysis on the potential of future deregulation by states. In accordance with EPA’s *Guidelines for Preparing Economic Analyses*, the agencies are not forecasting potential state actions.¹

17.1.2 Tribes filling the regulatory gap

One commenter stated that the 2020 NWPR relied on the faulty assumption that the Clean Water Act allowed for limited federal jurisdiction, giving states the main regulatory powers to protect water resources. The commenter asserted that this argument fails where tribes are concerned because federal law protects tribes from the vagaries of state laws and their enforcement. The commenter further stated that limiting federal jurisdiction over off-Reservation waters under the 2020 NWPR affected the ability of tribes to protect sites considered sacred or historically or culturally important, especially in the arid West, by removing protections under federal law that enable tribes to seek protections for such sites and that are triggered by Clean Water Act jurisdiction. The commenter stated that the removal of federal jurisdiction

¹ U.S. Environmental Protection Agency. (2010). *Guidelines for Preparing Economic Analyses*. (EPA 240-R-10-001).

also places an increased economic burden on the tribes by forcing them to bear responsibility and costs of protecting water quality in water courses no longer considered federally jurisdictional.

One commenter stated that while the Navajo Nation has its own federally approved water quality standards, the geographic extent of the Tribe places great strains on the water quality program and its limited staff and affects their ability to implement the program. The commenter also stated that the bulk of permits issued on the Navajo Nation are section 404 permits, which require substantial resources to administer, as evidenced by the fact that only three states and no tribes have been approved to administer the section 404 permitting programs.

Agencies' Response: The agencies acknowledge that deficiencies in the 2020 NWPR could have led to adverse impacts to tribes. The agencies acknowledge that because the agencies generally implement Clean Water Act programs on tribal lands, a reduced scope of Clean Water Act jurisdiction will affect tribes differently than it will affect states. Currently, of the tribes that are eligible, most have not received treatment in a manner similar to a state (TAS) status to administer Clean Water Act regulatory programs. While some tribes have established tribal water programs under tribal law or have the authority to establish tribal programs under tribal law, many tribes may lack the capacity to create a tribal water program under tribal law, to administer a program, or to expand programs that currently exist. Other tribes may rely on the federal government for enforcement of water quality violations.

The agencies acknowledge the concern raised by the commenter about the Navajo Nation's ability to implement Clean Water Act regulatory programs. The agencies qualitatively discuss the costs to states and tribes to administer Clean Water Act permitting programs in Chapter II of the Economic Analysis for the Final Rule.

17.1.3 States filling the regulatory gap

Many commenters asserted that states, tribes, territories, and/or local communities are/were unable or unwilling to fill regulatory gaps left by the definition of "waters of the United States" under the 2020 NWPR. Some commenters supported an increased role of the federal government in Clean Water Act enforcement on the grounds that states lack technical or financial capacity to take on clean water enforcement and that the agencies can ensure cost-effective regulations. Some commenters cited existing regulations that prohibit or significantly limit going above and beyond the requirements of the Clean Water Act, with a few noting that 36 states have such regulations.

A commenter extensively quoted a 2017 op-ed by Cynthia Giles, a former head of EPA's Office of Enforcement and Compliance Assurance, which argued that the EPA cannot leave environmental protection to the states because (1) states often fail to enforce laws when the people harmed are in downstream states; (2) many significant violators are national companies, and state-by-state enforcement leads to inefficient and inconsistent results; (3) criminal environmental laws serve as a powerful deterrent, but many states fail to enforce them; (4) states don't always have the political will to take on companies with political clout; (5) the EPA helps to ensure a level playing field and prevent violators from obtaining an unfair competitive advantage; and (6) state enforcement will be weakened without the threat of EPA enforcement.

One commenter quoted California's comments on the 2020 NWPR, in which the State asserted that state authorities have historically worked in conjunction with Clean Water Act authorities and that ensuring the same level of protection for waters would require significant resources while producing inferior results because state water quality enforcement mechanisms are not as effective as those under the Clean Water Act. A commenter stated that even though the EPA provides significant grant funding to states to carry out regulatory programs implementing federal law, EPA's Solicitor General has admitted that state enforcement is incomplete and inconsistent, and the agency's water quality data demonstrates that many states are currently failing to adequately protect communities, waterways, and ecosystems from water pollution.

A commenter contended that the Clean Water Act provides a nationwide floor of water pollution controls necessary to protect downstream states, and thus supported the agencies' proposal not to rely on individual states to fill gaps left in federal jurisdiction. A commenter stated that under the 2020 NWPR, downstream states bore significantly higher costs due to pollutant loads or floods from upstream states following removal of federal protections. Another commenter gave examples of investments in water protection which they stated were at risk due to the 2020 NWPR's removal of protections against upstream pollution.

Another commenter emphasized the importance of a level regulatory playing field among states, especially in protecting states and communities from pollution and increased flood risks in upstream states, noting that any action to expand or contract the scope of federal protection will have direct and significant impacts on states. A commenter stated that the federal government should provide a minimum standard of water quality protection because most states rely on federal protection, which is of increasing importance given the limited supply of water for critical needs. The commenter stated that adverse impacts are borne unequally among states. The commenter further emphasized that many states rely on federal wetland protections and that fewer than half of states have their own wetland permitting program. The commenter stated that the Clean Water Act's requirements need to be strengthened and that any assumption that states and tribes will pick up the slack is beyond credulity. One commenter quoted Maryland officials' comments on the 2020 NWPR to say that narrowing the scope of federal jurisdiction would strip protection from upstream waters in other states, hampering Maryland's ability to preserve and improve the quality of Chesapeake Bay and other state waters.

A commenter stated that the trend of deregulatory actions by states that occurred during the year that the 2020 NWPR was in effect was likely to continue under the 2020 NWPR. A commenter cited a study that stated that of the 31 states that the agencies deemed likely to regulate wetlands left unprotected by the 2020 NWPR, at least 16 were unlikely to do so due to restrictive existing legal regimes. The commenter also stated that even in states that did adopt additional protections, there were efforts to limit or undo those protections and provided examples of state responses the commenter believes illustrate the fallacy that states could and would fill the gap created by the 2020 NWPR.

Some commenters focused on states in the Midwest or Great Lakes region, noting that no state there responded to the 2020 NWPR by expanding state wetland protection, which commenters stated provided evidence that states would not step in to protect wetlands that lose federal protection. The commenters gave examples of states that restrict the scope of state wetland protections, including only state or state-supported activities being regulated in Illinois, Class II wetlands in Indiana being typically unprotected, Michigan protecting only wetlands connected to traditional navigable waters or over five acres, and exemption of nonfederal wetlands in Ohio. Some commenters stated that efforts to roll back "waters of

the United States” coverage has particularly significant consequences for New Mexico since it does not have primacy to implement the National Pollutant Discharge Elimination System permitting program or the section 404 permitting program. The commenter stated that New Mexico does not have authority to fill the gap left if EPA loses its authority to comprehensively protect surface water quality.

A commenter stated that while the agencies have asserted that states and tribes have authority to implement programs that are more protective than federal programs, Louisiana is among the states that has chosen not to. One commenter noted that the State of Missouri “did not step up to the challenge” to protect waters in the State that had been removed from jurisdiction under the 2020 NWPR, stating that there are still no numeric standards protecting wetlands or smaller streams. A commenter stated that Florida is among the states that have not filled the regulatory gap.

One commenter stated that Ohio has proactively filled jurisdictional gaps to protect “waters of the State,” that state and local officials have a long history of working with landowners to improve water quality and effectively operating under the cooperative federalism structure, and that the State has had rules in place to protect isolated wetlands since 2015. A few commenters stated that the Ohio EPA issued a combined general permit for ephemeral streams and some isolated wetlands in 2020 following their removal from federal jurisdiction under the 2020 NWPR. One commenter argued that this demonstrates the State’s efforts to ensure continued oversight of the resources, while another commenter used this example to support their conclusion that State’s responses do not fill the gaps, stating that the general permit authorizes fill of wetlands and ephemeral streams under certain thresholds, and that it is not clear how the State will handle projects impacting areas above the thresholds. One commenter stated that the Ohio legislature introduced legislation deregulating certain ephemeral features in March 2021.

One commenter urged the agencies to take resource availability into consideration and establish a new rule that is protective of water features in all states and tribes, not just those that have robust regulatory systems and resources to implement them.

One commenter who argued that the Clean Water Act’s requirements need to be strengthened asserted that the proposed rule’s jurisdictional limits on tributaries, wetlands, and “other waters” will eliminate protections for many waters relative to the pre-2015 regulatory regime, and that state and tribal governments will not be able to address the resulting harms. The commenter disputed the suggestion that states and tribes would manage waters not covered by the proposed rule, contending that the agencies had acknowledged in the preamble to the proposed rule that states and tribes had not filled the regulatory gap left by the 2020 NWPR.

Agencies’ Response: The agencies agree with commenters that stated that there are a host of reasons why tribes, states, and other governing entities did not fill the regulatory gap under the 2020 NWPR. The agencies agree with commenters that there are financial and technical limits to states’ abilities to fill the gap. The agencies acknowledge that some states have legal limitations to regulating “waters of the States.” The agencies agree with the commenters who stated that many states match the protections of the Clean Water Act and do not currently have authority to enact more protective regulations, and with those commenters who noted that states and tribes did not fill the regulatory gaps left by the 2020 NWPR. See final rule preamble section IV.B.3.d.ii. The agencies also acknowledge the commenters who gave examples of states which they asserted were unwilling to fill the gap.

The agencies further agree with those commenters who stated that the national regulatory framework provided by the Clean Water Act protects downstream states. When Congress enacted the Clean Water Act, it determined that a comprehensive statutory framework was necessary to restore and maintain the chemical, physical, and biological integrity of the nation's waters and, accordingly, enacted "an all-encompassing program of water pollution regulation," *Int'l Paper Co. v. Ouelette*, 479 U.S. 481, 492–93 (1987).

The agencies acknowledge the commenter's assertion that the proposed rule should provide states with resources to perform monitoring, restoration, and enforcement and qualitatively consider such impacts to state administrative activities in the Economic Analysis for the Final Rule. The agencies acknowledge the commenters who gave examples of how some states are unable to enforce existing state regulations relating to "waters of the States."

For all of the above reasons, the agencies have decided to include all states in the benefit cost analysis for the Economic Analysis for the Final Rule. See the agencies' response to comments in Section 17.1.1 for more details.

The agencies acknowledge the commenter who stated that the deregulatory trend that was observed while the 2020 NWPR was being implemented would have continued under the 2020 NWPR if that rule had been left intact by courts. In the Economic Analysis for the Final Rule, the agencies are not forecasting how states would or would not have responded to continued implementation of the 2020 NWPR.

Regarding comments about how the State of Ohio changed regulatory practice under the 2020 NWPR, see the agencies' response to comment Section 17.1.5.

The agencies agree with the commenter who noted that, per the analysis in the proposed rule, states and tribes had not filled the regulatory gap left by the 2020 NWPR. This final rule does establish certain limits on the scope of the Clean Water Act, which are based on consideration of the text of the relevant provisions of the Clean Water Act and the statute as a whole, the scientific record, relevant Supreme Court decisions, and the agencies' experience and technical expertise after more than 45 years of implementing the longstanding pre-2015 regulations defining "waters of the United States." See Section IV.A.3 of the Preamble to the Final Rule for further discussion about the limits in the final rule. States and tribes may establish more protective standards or limits than the Clean Water Act to manage waters subject to Clean Water Act jurisdiction or waters that fall beyond the jurisdictional scope of the Act and may choose to address special concerns related to the protection of water quality and other aquatic resources within their borders. Nothing in the final rule limits or impedes any existing or future state or tribal efforts to further protect their waters.

The agencies disagree with the commenter who stated that the scope of jurisdiction under the proposed rule was not protective enough and that many waters under the pre-2015 regulatory regime would be non-jurisdictional under the proposed rule. As discussed in Final Rule Preamble Section V.A, the final rule will establish a regime that is generally comparable to current practice, and this rule will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing.

17.1.5 Other comments on supplementary material to the economic analysis

Many commenters provided details about state regulatory regimes including how they interact with federal water regulations and how they were affected by the 2020 NWPR.

One commenter stated that Indiana’s governor signed into law a bill that repealed state water and wetland protections, eliminating the requirement that industry and project developers must obtain permits for impacts to ephemeral features and the requirement that they obtain a permit or perform compensatory mitigation for impacts to isolated wetlands on agricultural lands.

One commenter requested that the agencies consider additional information in the economic analysis, including that Colorado state law precludes the discharge of pollutants to state waters without a permit and defines “waters of the State” more broadly than the “waters of the United States” definition. However, the commenter asserted the State’s ability to depend on a consistent level of federal protection is an important benefit of the proposed rule because the State relies on the Corps’ section 404 permitting program to regulate dredge and fill activity and protect critical streams and wetlands.

One commenter stated that Florida has persisted in applying the 2020 NWPR definition of “waters of the United States” in its section 404 permitting program despite the 2020 NWPR’s vacatur and clear guidance from the agencies, including in one case where it allowed an unpermitted fill of a 3-acre wetland. In contrast, another commenter stated that Florida defines “waters of the State” more broadly than any past or current federal definition, that the State is a national leader in the protection of wetlands and water resources, that its constitution and statutes prioritize water resources, and that the State has invested billions into restoration, protection, and management of those resources. The commenter provided an overview of the State’s section 404 permitting program and concluded that it is more comprehensive than the federal program. That commenter also stated that as one of three states with authority under section 404, Florida is uniquely situated and directly impacted by proposals to further revise the “waters of the United States” definition. The commenter stated that state administration of the program has resulted in better protection and, consistent with Congress’s intent for states to hold primary responsibility, the agencies should encourage more states to do the same. The commenter also provided overviews of several state initiatives to improve and restore the Everglades ecosystem, funding secured for water quality improvements, and a 2020 statute which the commenter stated carries a wide range of water quality protection provisions. Another commenter stated that Florida’s authority to regulate water quality under state law is far broader than the federal “waters of the United States” authority, as Florida statutes define “waters of the State” broadly, and that definition incorporates all “waters of the United States” by reference.

One commenter summarized Maine’s comments on the 2020 NWPR, which pointed out that under Maine law, the removal of federal protections for many wetlands meant the removal of any oversight over alteration of wetlands under 4,300 feet in area.

Two commenters stated that New York’s Freshwater Wetlands Act was designed to work in tandem with the Clean Water Act and relies on federal jurisdiction under sections 401 and 404 to protect freshwater wetlands that fall outside the scope of state regulation. A commenter stated that freshwater wetlands in New York are particularly vulnerable to filling and degradation due to state and federal regulatory gaps.

The commenter stated that a wetland must be delineated on existing freshwater wetland maps to be subject to regulation under New York state law, but that most of the maps have not been updated in over 20 years given the time-consuming and burdensome amendment process. The commenter also stated that New York can only regulate wetlands greater than 12.4 acres or those deemed to have unusual local importance, which they stated leaves hundreds of thousands of acres in high development areas unprotected, including in New York City. The commenters stated that if federal protections under the Clean Water Act are limited, then wetlands in New York are unregulated and vulnerable.

Another commenter stated that in North Carolina, wetlands that lost Clean Water Act protections under the 2020 NWPR remained protected by state regulations, but that there were no permitting mechanisms to authorize impacts. The commenter stated that the State therefore had to create new regulations to establish a permitting program.

One commenter provided a summary of water quality programs implemented by the North Dakota Department of Environmental Quality. The commenter provided data on recent enforcement actions which resulted in almost \$3 million in civil penalties and summary data on its 2017 impaired waters list, adding that the State works to protect and remediate impaired waters.

One commenter provided an overview of the activities undertaken by the North Dakota Department of Agriculture such as assisting farmers and ranchers with the use of their land, including by developing and enforcing effective uniform water quality standards and other standards to ensure compliance with the Clean Water Act and other environmental laws. The commenter stated that the Department of Agriculture protects “waters of the United States” and state waters through a water quality program, a fertilizer program, a Water Bank Program (which helps farmers and ranchers conserve water on their lands and promotes water quality by offering 10-year rental agreements for the protection of wetlands and wildlife habitat), and through pesticide regulations and programs designed to protect waters from pesticide pollution.

A commenter stated that the description of Rhode Island’s regulatory program is accurate, except that the effective date of the revised Freshwater Wetlands Rules has been delayed to July 1, 2022.

One commenter stated that the definition of “waters of the State” provided in the agencies’ supplemental material to the Economic Analysis for Oregon is used by the State’s Department of Environmental Quality to guide water quality monitoring programs, but that the Department of State Lands uses a different definition to support Oregon’s Wetlands & Waterways Regulatory (Removal-Fill) Program, which is “all natural waterways, tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and non-navigable bodies of water in this state and those portions of the ocean shore, as defined in ORS 390.605, where removal or fill activities are regulated under a state-assumed permit program as provided in 33 U.S.C. 1344(g) of the Federal Water Pollution Control Act, as amended” (ORS 196.800 (15)). The commenter also stated that Oregon has a no net loss of wetland goal in statute that requires the State to “maintain a stable resource base of wetlands,” “increase wetland resources by encouraging wetland restoration and creation,” “meet the requirements of federal law in the protection and management of wetland resources,” “promote the protection of wetland values on private lands,” and require compensation for “functions and values for the waters of the State” for permitted impacts.

A commenter stated that in Tennessee the term “waters of the State” is broader than the 2020 NWPR’s definition of “waters of the United States” because it includes ephemeral streams and isolated wetlands. The commenter stated that the decision of whether to require mitigation for impacts to these resources should be a state decision.

Agencies’ Response: The agencies acknowledge the input provided by commenters in this section as it relates to how the agencies captured the regulatory programs of given states within the Supplementary Material to the Economic Analysis for the Proposed Rule.² The agencies have updated that document for the Final Rule as deemed appropriate based on public comment. These updates included changes to program descriptions for the following states: Colorado, Maine, New York, North Carolina, Ohio, Oregon, and Rhode Island. These changes did not warrant a change in the description of these states as regulating state waters more or less broadly than “waters of the United States.” See also Chapter II and Appendix C of the Economic Analysis for the Final Rule.

The agencies acknowledge the concerns raised by the commenters about the impacts of limiting federal jurisdiction of wetlands under the Clean Water Act. The final rule does not reopen the definition of “wetlands” in the agencies’ regulations, but it does address which wetlands are “waters of the United States.” The final rule addresses adjacent wetlands differently than the 2020 NWPR, retaining the definition of “adjacent” from the 1986 regulations and adding language that reflects the relatively permanent and significant nexus standards. The agencies maintain that this definition of jurisdictional wetlands advances the objective of the Clean Water Act and is consistent with scientific information on the important effects of wetlands on the integrity of larger downstream waters.

The agencies acknowledge the commenter’s support for the 2020 NWPR’s approach to cooperative federalism but disagree with the commenter’s suggestion that no waters lost protection under this approach. In the Economic Analysis for the Proposed Rule, the agencies have found that during the year in which 2020 NWPR was in effect, the net change made by states was deregulatory in nature. The agencies have determined that under the 2020 NWPR, two states which previously protected state waters beyond the scope of “waters of the United States” removed these expansive protections, whereas no states or tribes that have previously lacked these broader protections established them. See Chapter II of the Economic Analysis for the Final Rule.

The agencies acknowledge the commenter who asserted that the decision to require mitigation for impacts to ephemeral streams and isolated wetlands should be a state decision. The Clean Water Act may require mitigation for those waters which are jurisdictional under section 404 of the Clean Water Act. See Section I.B.3 of the Economic Analysis for the Final Rule for a detailed description of the scope of jurisdiction under the Final Rule.

² U.S. Environmental Protection Agency, & U.S. Department of the Army (U.S. EPA and Army). (2022a). Supplementary Material to the Economic Analysis for the Final “Revised Definition of ‘Waters of the United States’” Rule.

17.2 Scope of Jurisdiction

17.1.4 Costs to states

Several commenters disputed the way the economic analysis for the proposed rule accounted for costs to states. Some of these commenters discussed how uncertainty has led to dedicated resources, time, and money in state governments for creating or updating existing programs with changing definitions of “waters of the United States.” Some commenters noted that there are costs to states for the implementation of other Clean Water Act programs beyond the section 404 program, such as the section 303 and section 402 programs. Some commenters stated that expanded federal jurisdiction will also lead to expanded economic impacts to states.

Many commenters noted the costs imposed on states by the 2020 NWPR. A few commenters argued that the 2020 NWPR shifted the regulatory burden to states without providing adequate resources for state authorities and overburdened state agencies. Many commenters stated that relying on states to fill gaps under the 2020 NWPR would have imposed significant administrative costs onto the states. Commenters provided specific examples of administrative costs for Arizona, California, Colorado, the District of Columbia, Massachusetts, New Mexico, New York, Oregon, Massachusetts, Wisconsin, and Virginia.

A commenter gave an example of the District of Columbia’s development of local regulations for dredge and fill activities in wetlands and streams no longer subject to Clean Water Act protection, which they stated took 2,520 hours of staff time and required the hiring of new staff to implement and enforce permitting programs. The commenter stated that New Mexico had to overhaul its regulations and create a new permitting program estimated to cost more than \$7.5 million per year. A commenter stated that 14 states and the District of Columbia commented on the 2020 NWPR that they would experience significant hardship in taking on additional water protections to “fill the gap.”

One commenter noted that in Colorado’s challenge to the 2020 NWPR, the State asserted that it would experience substantial harm from increased enforcement burdens. The commenter supported the proposed rule’s approach due to the potential decreased enforcement burdens for states. Another commenter discussing Colorado stated that the 2020 NWPR led to efforts at the state level to fill the perceived “gaps” in protection of waters through a new state permit program, which they stated would cause additional complexity and regulatory cost if implemented. One commenter stated that Colorado estimated that 25 to 50 percent of its waters would need state-level protections as long as the 2020 NWPR was in effect because the State had relied on the federal government to protect the waters previously.

A commenter noted that Oregon identified hundreds of acres of wetlands and other waters that lost federal protection under section 404 permitting. The commenter also stated that the 2020 NWPR reduced the scope of Oregon’s federal consistency review under the Coastal Zone Management Act, which they stated likely led to federally permitted activities being inconsistent with state and local enforcement policies. The commenter stated that only through pre-existing processes was the State made aware of specific waters determined to be non-jurisdictional, and that it retained authority to rely on other elements of state law to address potential impacts to state waters. The commenter concluded that the 2020 NWPR demonstrated that narrowing the definition of “waters of the United States” makes it more difficult for states to protect state waters due to the narrowing of Clean Water Act section 401 jurisdiction. The commenter added that state and federal agency relationships and coordination will be beneficial during

the implementation of this rule. One commenter stated that Virginia’s Department of Environmental Quality has limited resources to protect water quality, and that the proposed rule would ensure additional resources are available for monitoring, restoration, and enforcement (including via citizen suits). Some commenters stated that after promulgation of the 2020 NWPR, Arizona developed its own surface water protection program to ensure protection of important waters no longer deemed “waters of the United States” at a cost of \$2 million in implementation expenses.

A commenter stated that the 2020 NWPR resulted in significant confusion over regulatory boundaries in North Carolina as it departed from the familiar significant nexus standard for adjacency. The commenter stated that the 2020 NWPR also resulted in a class of waters that were protected by water quality standards but lacked a permitting mechanism for reviewing and authorizing impacts, and that the State had to move quickly and devote significant resources and time to promulgate temporary and permanent rules to address the permitting gap created by the 2020 NWPR.

One commenter cited Virginia’s comments on the 2020 NWPR to reiterate that many states cannot afford to assume responsibility for regulating fill activities in millions of acres of wetlands left unprotected, which they estimated would cost up to \$18 million upfront and \$3.4 million annually. The commenter stated that the loss of the Corps’ knowledge base was a critical cost.

A commenter stated that the 2020 NWPR failed to protect the waters in the State of Washington, shifting the regulatory burden to states, imposing significant risk of permitting delays and regulatory uncertainty, and removing the federal layer of protection for cherished resources. One commenter stated that Washington officials expressed concern about the potential need for additional staff to write permits and enforce water quality standards after the 2020 NWPR took effect and noted that the Washington Department of Ecology stated that the 2020 NWPR was a “tragic abdication of federal responsibility” that could increase the burden to state taxpayers to pay for cleanups.

A commenter stated that North Dakota already has measures to protect its land and waters, including implementation of the pesticide permitting program under the Clean Water Act. The commenter stated that the proposed rule would impose an added regulatory burden on the State to manage and enforce compliance with the ambiguous rule, emphasizing that the State has fiscally limited resources.

One commenter stated that expansion of federal jurisdiction over waters in Florida would create duplicative, cost-prohibitive, and onerous permitting requirements for cities, counties, municipalities, businesses, developers, ranchers, and farmers.

Agencies’ Response: The agencies acknowledge commenters’ concerns regarding the burdens states may face or costs they may incur under the final rule. The agencies also acknowledge commenters that pointed to potential decreased burdens for state programs under this rule. As the final rule is very similar in scope to that of pre-2015 practice, there will be *de minimis* new indirect costs associated with the implementation of the final rule. The agencies recognize the difficulty in properly analyzing potential costs and benefits related to state regulatory programs and have chosen to shift to a qualitative assessment of potential costs and benefits related to state regulatory programs in the final rule. See also the agencies’ response to comments in Section 17.1.1.

The agencies also acknowledge commenters’ concerns about the additional burden placed on states to protect state waters under the 2020 NWPR and the regulatory burden of jurisdictional determinations for states under the 2020 NWPR. The agencies have determined that the final rule will address some of the regulatory challenges the 2020 NWPR imposed. Furthermore, the final rule increases clarity and implementability by streamlining and restructuring the 1986 regulations and providing implementation guidance informed by sound science, implementation tools, and other resources. See Section 4.2 of the agencies’ response to comments for further discussion of the challenges posed by the 2020 NWPR. The agencies discuss potential impacts on state regulatory programs relative to a secondary baseline of practice under the 2020 NWPR in Chapter II of the Economic Analysis for the Final Rule.

The agencies acknowledge that changes to the definition of “waters of the United States” inevitably have a cost to states. States are obligated to respond to changing regulations, and these responses consume resources. Even if a federal regulation ultimately decreases state costs by reducing the need for state oversight of water resources, over the short term, new regulations require states to become educated on the changes, coordinate with other stakeholders, and ultimately adapt their actions to the new circumstances. The costs incurred by states in response to a new regulation vary based on differences in existing state programs, which makes them extremely difficult to estimate. Furthermore, the final rule should not place a significant burden on any state, given states’ familiarity with the pre-2015 regime. The final rule is founded on the 1986 regulations that underpin the longstanding pre-2015 regulatory regime and it builds on and is generally consistent with that regulatory regime.

The agencies recognize the commenter who asserted that the 2020 NWPR could increase costs to the states and public. The agencies qualitatively consider administrative and permitting costs as well as societal costs in the agencies’ assessment of costs and benefits in the Economic Analysis for the Final Rule.

17.2.1 Primary baseline

Some commenters stated that the agencies’ estimated “zero impact” relative to the pre-2015 regulatory regime is true only if the agencies finalized a rule that protects the same scope of waters. A few of these commenters stated that the agencies should protect waters more fully in a final rule. Other commenters stated that the agencies’ assertion of no economic impacts relative to the primary baseline is dismissive, meritless, implausible, unrealistic, indefensible, or misleading. A few commenters stated that the agencies must assess the economic impact of what the commenters perceived to be broadening jurisdiction.

One commenter stated that the proposed rule suggests that more waters would be jurisdictional relative to both the 2020 NWPR and the present-day approach, which they stated renders the economic analysis irrelevant since it starts from the premise that the proposed rule would codify the current practices.

A few commenters stated that the proposed rule significantly expands on the pre-2015 regulatory regime by establishing the “other waters” category. Some of these commenters noted that a reformulated “other

waters” category is a departure from the pre-2015 regulatory regime based on the *Rapanos* Guidance.³ One commenter noted that this will affect a “massive number of currently non-jurisdictional water features.” Another commenter stated that the findings of zero costs and benefits associated with the pre-2015 regulatory regime baseline is inaccurate because of this.

A few commenters suggested that the agencies revisit the economic impact of the proposed rule because, according to the commenters, the proposal included a broader interpretation of the significant nexus standard, which would include additional categories of waters as a “water of the United States,” such as ephemeral features and certain wetlands, ditches, and isolated features. The commenter argued that this broad interpretation would impact the costs and benefits of Clean Water Act programs, which they contended is not adequately assessed in the Economic Analysis for the Proposed Rule. A commenter requested that the agencies analyze and discuss the increased section 404 permitting requirements that will result from the assertion of jurisdiction over “other waters” as well as additional tributaries and wetlands compared to the pre-2015 regulatory regime as a result of the proposed rule’s broader interpretation of “significant nexus.” One commenter stated that structuring the analysis around an investigation of existing wetland areas fails to reflect the scope of the proposed rule, which they stated would assert jurisdiction over areas not generally associated with a wetland designation.

A few commenters also stated that the agencies’ approach to significant nexus analyses encompasses broader interpretations of terms like “similarly situated,” “in the region,” and “relevant reach” which the agencies can leverage to aggregate waters for jurisdictional determinations. These commenters stated that due to the expanded jurisdiction relative to the pre-2015 regulatory regime, the agencies’ primary baseline approach and claim of *de minimis* impacts are deficient.

Agencies’ Response: The agencies acknowledge the commenters who provided input on the proposed rule’s scope of jurisdiction as compared to the pre-2015 regulatory regime. The agencies acknowledge that there are indirect costs—both monetary and temporal—associated with implementation of the final rule. Indeed, there are indirect costs associated with implementation of all prior rules defining “waters of the United States.” As the final rule is very similar in scope to that of pre-2015 practice, the agencies find that there will be *de minimis* new indirect costs associated with the implementation of the final rule. While analyses under the relatively permanent and significant nexus standards will be slightly different under the final rule compared to pre-2015 practice, it is expected that those differences will not have substantive effects to indirect monetary or temporal costs. For example, it is expected that the number of tributaries, adjacent wetlands, and waters assessed under paragraph (a)(5) that are found to be jurisdictional under the significant nexus standard compared to pre-2015 practice will slightly increase under the final rule. However, the overall proportion of resources that this would impact is likely small. Therefore, the agencies conclude that there will not be significant costs associated with the implementation of the significant nexus standard in the final rule. See Chapter I.B of the Economic Analysis for the Final Rule for further details on the change in scope under the final rule.

³ U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States* & *Carabell v. United States* (June 5, 2007)

The agencies disagree with the commenter who stated that the Economic Analysis for the Proposed Rule singularly focused on wetlands. The agencies also disagree with this commenter’s assertion that the rule would consider areas “not generally associated with a wetland designation” as jurisdictional. See Section I.B of the Economic Analysis for the Final Rule for more details on the change in scope of jurisdiction.

17.2.2 Secondary baseline

One commenter stated that the agencies must fully consider and socialize the implementation details of the proposed rule. The commenter asserted that the proposal provided limited information about the scope of the change from the 2020 NWPR and so the analysis of costs and benefits was unclear.

One commenter expressed concern about the use of the Cowardin codes in the Corps’ ORM2 database to identify permits that would have been required under the proposed rule but not under the 2020 NWPR, stating that the codes do not align with the 2020 NWPR’s jurisdictional categories and that the ORM2 records are categorized according to “aquatic resource types” based on the agencies’ guidance from 2008. The commenter stated that the database does not track information in terms of categories relevant to the 2020 NWPR’s and proposed rule’s jurisdictional extent, and the commenter urged the agencies to provide a clear assessment of how many features will be brought under Clean Water Act jurisdiction. The commenter also stated that the ORM2 data does not capture the entire universe of jurisdictional areas under the Clean Water Act framework, since it includes only records for situations with section 404 permits, approved jurisdictional determinations, or wetland delineations, and it excludes preliminary jurisdictional determinations which represent precisely the group of waters likely to become jurisdictional under the proposed rule and account for a large number of acres. The commenter also stated that the ORM2 database does not capture all aquatic resources on the subject parcel, but rather only those impacted by the project directly being evaluated. The commenter stated that due to these deficiencies, the economic analysis significantly understates the impacts of the proposed rule. The commenter also stated that the agencies acknowledge uncertainty but do not present sensitivity analyses or adequate characterization of the impact of uncertainties. This commenter also stated that the agencies’ approach to estimating the extent of waters that may be incrementally deemed jurisdictional (compared to the 2020 NWPR) is inadequate and systematically underestimates the impact of the proposed rule.

One commenter stated that the choice to focus on section 404 permitting activity over the course of one year may introduce bias, stating that since the definition of “waters of the United States” has changed several times over the past seven years, it is impossible to speculate if the year chosen had higher or lower project costs and jurisdictional delays relative to other years.

One commenter argued that the 2020 NWPR should be the baseline for the economic analysis, which is focused on a rulemaking with the avowed purpose of revising the 2020 NWPR. The commenter asserted that even if the agencies do not defend the 2020 NWPR in litigation, the vacatur of the regulation by the District Courts of Arizona and New Mexico is only binding between the limited number of parties in those proceedings and is therefore not the status quo for the rest of the country.

Agencies’ Response: The agencies acknowledge the commenter who stated that the scope of jurisdiction under the proposed rule was not clear. The agencies sought comment on alternative options for interpreting a variety of concepts in the proposed rule. As described

Revised Definition of “Waters of the United States” – Response to Comments Document

in Final Rule Preamble Section IV.C, the agencies have considered public comments on the proposed rule and provided clarity regarding how the agencies intend to implement the final rule. See Section I.B of the Economic Analysis for the Final Rule for further details on the corresponding change in scope under the final rule.

The agencies disagree with the commenter who criticized the use of the Cowardin classification system and the ORM2 dataset for assessing the change in scope of jurisdiction between the 2020 NWPR and the proposed rule. The agencies further disagree with commenters who stated that the agencies' approach underestimated the impacts of the proposed rule. The ORM2 dataset includes many variables regarding individual aquatic resources that have been assessed for jurisdictional status and which have received permits, including categories that are relevant to the 2020 NWPR. The ORM2 dataset generally does capture all aquatic resources within determination review areas and/or within the footprint of regulated activities, and it does include preliminary jurisdictional determinations. The Cowardin classification within ORM2 has been statically used between the regulatory regimes, regardless of how "waters of the United States" is defined, and therefore it is the appropriate variable for comparing change in jurisdiction. By using the Cowardin codes, the agencies were able to apply a consistent metric to the jurisdictional data under the 2020 NWPR and the *Rapanos* Guidance utilized under pre-2015 practice to derive differences in probability of resources being jurisdictional. The results of the comparison demonstrate meaningful differences between what is jurisdictional under the two regulatory regimes.

The agencies disagree with the commenter who stated that the agencies did not provide sensitivity analyses or descriptions of the impact of uncertainties in the Economic Analysis for the Proposed Rule; rather, the agencies provided descriptions of identified uncertainty and sensitivity analyses where they were deemed appropriate. The Economic Analysis for the Final Rule includes additional sensitivity analyses.

The agencies disagree with the commenter who stated that one year of data associated with the 2020 NWPR is not appropriate for use in the secondary baseline analysis. As described in the Economic Analysis for the Final Rule, the agencies acknowledge that there are generally minor year-to-year differences in data based on external factors. However, the agencies have no reason to assume that the 2020 NWPR data is not "normal" data.

The agencies disagree with the commenter who stated that the 2020 NWPR is the appropriate primary baseline for the proposed rule. As described in the Preamble to the Final Rule, following a federal district court decision vacating the 2020 NWPR on August 30, 2021, the agencies halted implementation of the 2020 NWPR and began interpreting "waters of the United States" consistent with the pre-2015 regulatory regime. The pre-2015 regulatory regime is being implemented nationally. Though two courts have vacated the 2020 NWPR and the pre-2015 regulatory regime is currently being implemented, the agencies have chosen to provide additional information to the public with the 2020 NWPR as a secondary baseline in the Economic Analysis for the Final Rule. The findings of this analysis for the secondary baseline of the 2020 NWPR conclude that within the ranges of indirect costs and benefits considered, benefits consistently outweigh the costs. The analysis is summarized in section V.A of the Preamble to the Final Rule.

17.2.3 Other baselines

One commenter requested a table that compares the definitions among the pre-2015 regulatory regime; the *Rapanos* Guidance; the 2020 NWPR; and the proposed rule.

One commenter stated that the economic analysis is fundamentally flawed because the chosen baseline does not reasonably represent a normal level of permitting activity for the purposes of evaluating economic impacts.

One commenter stated that the agencies have failed to consider and address an important aspect of the rulemaking because the baseline should be the 1986 regulations without modification, which they stated was codified in the 2019 Repeal Rule. The commenter stated that while district courts remanded and vacated the 2020 NWPR, they did not vacate the 2019 Repeal Rule, and as such that should be the baseline.

A commenter gave an example of the analysis in the 2015 Clean Water Rule, in which the agencies randomly sampled jurisdictional determination files to evaluate the regulation's effects on streams and other waters, thereby assessing effects under the other Clean Water Act programs. While acknowledging that the 2020 NWPR was only in place for a short time, the commenter stated that such an analysis is still possible (citing some available data on jurisdictional determinations under the 2020 NWPR) and would enable a better assessment of benefits.

Another commenter stated that they support the machine learning and artificial intelligence approach described in Appendix A.2 of the Economic Analysis for the Proposed Rule. The commenter stated that they have been implementing an analysis similar to the approach described, using a model that combines tabular and imagery data. The commenter stated that they are aiming to advance scholarship and provide evidence that can be used to evaluate and plan decisions about Clean Water Act rulemaking actions.

Agencies' Response: In response to the request for a table that compares the definition of "waters of the United States" among prior rules, see tables in Sections I.B.4 and I.B.5 in the Economic Analysis for the Final Rule.

The agencies disagree with the commenter who stated that the baseline does not reasonably represent a normal level of permitting activity for the purposes of evaluating economic impacts. The data used represents section 404 permits issued under the *Rapanos* Guidance and under the 2020 NWPR. Both the primary and secondary baselines rely on 10 years of historical permit data to estimate the level of activity, which the agencies consider to be more than sufficiently representative of normal permitting activity.

The agencies disagree with the commenter who stated that the 1986 regulations without modification should be the primary baseline due to the 2019 Repeal Rule. The agencies stated in the 2019 Repeal Rule that they would implement the definition "consistent with Supreme Court decisions and longstanding practice, as informed by applicable agency guidance documents, training, and experience"; *i.e.*, consistent with the pre-2015 regulatory regime. 84 FR 56626 (October 22, 2019).

The agencies acknowledge the commenter who recommended that the change in scope be assessed via sampling prior jurisdictional determinations and carrying out desktop analyses based on implementation of the final rule. The Economic Analysis for the Proposed Rule provided the methodology and rationale for uncertainty tied to this methodology for such an exercise in Appendix A, and the agencies sought comment on this approach. The agencies have determined that such an exercise would inherently increase uncertainty in the modeling and have continued to use the Cowardin methodology explained in Chapter III of the Economic Analysis for the Final Rule.

The agencies acknowledge the commenter who provided input regarding machine learning approaches. While the agencies cannot integrate non-peer reviewed external machine learning models into the economic analysis, the agencies are interested in reviewing published results from such endeavors.

17.3 Benefits

17.3.1 General benefits comments

Some commenters stated that clean water protections are essential to the economy. Many of these commenters provided a general discussion on this topic, and some provided specific examples of the ecosystem services relevant to flood mitigation, water filtration, pollutant retention/trapping, recreation, small businesses, commercial fisheries, commercial recreation, tourism, fishing and hunting revenues, the health of specific fisheries, agriculture, natural resource-based enterprises, harmful algal blooms, and mitigation banking. Some commenters stated concerns with forgone benefits associated with the 2020 NWPR. In particular, a few commenters cited specific industry impacts due to degraded water quality such as negative economic impacts on the outdoor recreation industry, including hunting, wildlife viewing, and fishing; negative economic impacts on the agricultural industry; negative economic impacts on the mitigation banking and environmental restoration industry; and negative economic impacts on tourism due to harmful algal blooms in Florida. These commenters generally stated the importance of such services, and in some cases how the 2020 NWPR could have negatively impacted such services.

A few commenters argued that loss of protection for wetlands under the 2020 NWPR had an economic impact due to potential increase in flood damage. The commenters asserted that these wetlands provide essential flood protection and filling them could lead to increased costs to communities from flooding. Several commenters raised the issue of flooding, stating that the protection of upland wetlands and ephemeral streams are needed to protect communities from devastating flood damages. One commenter stated that the destruction or channelization of upland waterbodies that lessen flood peaks is a massive imposition on the rights of downstream property owners, which the commenter noted counters arguments that water protection regulations impose on owners of private property. The commenter stated that flooding costs the United States public billions of dollars annually and noted the 2011 flooding of the Mississippi cost more than \$2 trillion alone. The commenter also gave an example of the 1993 flood of the Mississippi which, citing studies, they stated was exacerbated by the loss of upland wetlands and stream channelization. Another commenter also emphasized the flood control benefits of wetlands, stating that the flooding damages from Hurricane Harvey were valued at \$125 billion and citing several studies in Houston and Florida that they say show a strong correlation between wetland losses and flood damages. One commenter cited studies that estimate that wetlands provided \$264 million in flood protection during

Hurricane Sandy. A commenter stated that building homes on wetlands will lead to additional costs elsewhere, since the homes will be located on flood zones, increasing the need for additional flood insurance (at an average cost of \$985 every year) and for unexpected flood repairs (at a cost of \$3.75 to \$30 per square foot). The commenter stated that developers who are trying to avoid section 404 permitting costs are failing to consider the future costs homebuyers will face while living on reclaimed wetlands. One commenter cited a study that stated that the most valuable wetlands for flood mitigation are those slightly removed from the nearest stream or river (*i.e.*, those not protected under the 2020 NWPR), and the loss of one hectare of wetlands costs society an average of \$1,900 in flood damage per year, and \$8,000 per year in developed areas.

One commenter stated that waterbodies filter pollution and provide drinking water for over 117 million Americans, and that they provide recreational opportunities for millions which powers an outdoor recreation economy valued at over \$689 billion.

One commenter cited a study that stated that more than 70 percent of small business owners believe that clean water protections help spur economic growth, that only 6 percent say protections are too burdensome, and that 67 percent believe that water pollution could hurt their business operations.

Some commenters provided illustrative and numeric examples of how clean water protections support the outdoor recreation economy including fishing, hunting, boating, swimming, and other outdoor enthusiasts; support businesses including resorts, restaurants, boat sales, and marinas; and the commercial fishing industry. One commenter provided information and references supporting their assertion that the commercial fisheries, recreational fisheries, and tourism industries are critical to the region's economy, and that they are negatively impacted by lax water quality protections. The commenter provided an example of harmful algal blooms that can lead to beach and fishery closures resulting in millions of dollars of losses in tourism, seafood, and recreation industries as well as potentially devastating impacts to wildlife. The commenter cited studies that Virginia, North Carolina, South Carolina, Georgia, Alabama, and Tennessee have a combined 12,517 miles of shoreline, and that the region has the highest freshwater biodiversity. One commenter asserted that the 2020 NWPR's impacts on national parks would result in significant economic harm, arguing that some of the most visited parks are closely connected to water and depend on water quality, while some are in arid regions where ephemeral streams play a significant hydrological role. The commenter added that park visitors provide park funding and support the local economy outside the parks.

One commenter stated that communities rely on industries such as commercial and recreational fishing, coastal tourism, and seafood that cannot thrive without clean water. Another commenter stated that revenues raised from issuance of Seneca Nation fishing and hunting licenses depend on quality of Seneca waters, giving an example of Cattaraugus Creek which is known for its population of steelhead trout and walleye which attract many fishermen to the areas. One commenter stated that healthy estuaries grow more oysters, which in turn support greater numbers of fish that sustain tourism and commercial and recreational fishers, expressing that this shows why strong clean water protections are crucial. One commenter stated that, by harming wildlife and habitat, the 2020 NWPR threatened states' economic interests, including income and jobs related to waterfowl and migratory bird hunting, bird watching, fishing, and water-dependent recreation.

One commenter stated that mitigation banking, stream and wetland restoration, and other ecological restoration activities under the Clean Water Act contribute to a healthy economy, estimating the impact at

\$25 billion and 220,000 jobs annually. The commenter also stated that the growing industry is key to increasing the number of green jobs and responsible development opportunities critical to communities. The commenter stated that the 2020 NWPR represented a rollback of Clean Water Act protections and prevented the industry from fulfilling its role by drastically increasing the number of waters found to be outside the protections of the Clean Water Act. The commenter stated that if fewer waters are found to be jurisdictional then it would result in a decrease in demand for mitigation credits, which is a primary source of income for the industry. The commenter also stated that the loss of protections and mitigation requirements would disproportionally cause wetland damages, since more wetland acreage would be lost to unpermitted development and no mitigation for the losses would be required. The commenter provided theoretical and actual examples of this outcome. The commenter emphasized that this outcome would be damaging to the industry, be in conflict with the Bush administration's "no net loss" goal, and place communities at risk by eliminating protections against rain events and flooding accompanying climate change.

Some commenters emphasized the importance of public works' provision of drinking water and wastewater treatment and stated that a new "waters of the United States" regulation that protects source waters will allow public works agencies to effectively balance environmental concerns with the need to provide clean and affordable water to communities. One commenter talked about how public works are often faced with choices between raising rates and potentially pricing members out of critical services or stretching budgets and risking noncompliance. The commenter stated that reducing impairments of waters can reduce costs for water providers and their ratepayers. One commenter argued that the 2020 NWPR exposed more waterways to potentially increased discharges and therefore the costs for local drinking water agencies and water providers to treat water could have increased, leading to potentially increased costs for water customers.

Agencies' Response: The agencies appreciate the examples that commenters provided of benefits of Clean Water Act protections as well as related numerical data and studies. Due to the nature of benefit transfer models, such as the one used in the Economic Analysis for the Final Rule, specific numbers referenced by commenters cannot be factored into the model without the potential for double counting based on peer reviewed studies. However, many of the benefits and ecosystem services referenced by commenters were included in the Economic Analysis for the Final Rule, where appropriate. See Chapter III of the Economic Analysis for the Final Rule for more information on the benefit transfer model used to analyze the benefits of the final rule. Additionally, see Figure III-2 for a summary of ecosystem services considered in the Economic Analysis for the Final Rule. The agencies also note that monetized benefit estimates require the ability to identify when the benefits occur, quantify the level of change, and place a defensible dollar value on those changes. Given the myriad ways that the definition of "waters of the United States" can affect which water features are protected from impacts from different human activities, some categories of benefits are more appropriately addressed through qualitative discussion in the Economic Analysis for the Final Rule.

17.3.2 Additional benefits categories

A commenter urged the agencies to consider the economic impact of flooding and stated that the cumulative impacts of "other waters," including geographically isolated wetlands, are significant.

A commenter stated that the proposed rule will likely have impacts to groundwater quality and recharge which should be included in the economic analysis.

A commenter stated that the economic analysis should acknowledge and consider the cost savings associated with runoff management functions provided by similarly situated but isolated wetlands. The commenter stated that the proposed rule must recognize the erosion damages associated with altered hydrology in many watersheds, and that wetland storage loss contributes to downstream infrastructure damage. The commenter stated that they have been doing research on the benefits of healthy watershed wetlands and floodplains related to building resilience and preventing flooding and infrastructure, referring to a forthcoming case study. The commenter urged the agencies to examine the relationship between upper watershed wetlands and fluvial erosion hazards to accurately document the costs/benefits of inclusion of floodplain wetland and other categories of wetlands that are geographically isolated but regionally abundant.

A few commenters urged the agencies to consider all available information in assessing the value of strong Clean Water Act protections, citing additional research assessing the value of wetlands, streams, and other waters. One commenter provided estimates of values provided by streams and wetlands for ecosystem services including flood protection, water quality enhancement, and carbon sequestration, which the commenter stated are effectively valued at zero in the agencies' analysis. The commenter cited studies that estimate that wetlands loss has cost society \$36,000 per hectare. The commenter also stated that studies have shown that the interactions among streams, wetlands, and groundwater are complex and that some of the greatest benefits of wetlands occur when they are near streams or rivers.

Agencies' Response: The agencies acknowledge that there are numerous potential categories of benefits associated with changes in the definition of "waters of the United States," including many of the categories mentioned by commentors. The agencies account for many of the benefits mentioned by commenters through the estimates of household willingness to pay for wetlands. See Figure III-2 in Section III.C.2.3 of the Economic Analysis for the Final Rule. However, monetized benefit estimates require the ability to identify when the benefits occur, quantify the level of change, and place a defensible dollar value on those changes. Given the myriad ways that the definition of "waters of the United States" can affect which water features are protected from impacts from different human activities, some categories are more appropriately addressed through qualitative discussion in the Economic Analysis for the Final Rule. See Section III.C.2.3 of the Economic Analysis for the Final Rule for further discussion. There are also many costs associated with this rulemaking that could not be captured due to a paucity of data associated with specific Clean Water Act programs or with specific indirect costs. See Section III.C.2.2 of the Economic Analysis for the Final Rule for additional discussion.

The agencies disagree with the commenter who stated that the agencies should specifically assess benefits for "other waters" (referred to as "paragraph (a)(5) waters" in the final rule). The final rule requires that waters assessed under paragraph (a)(5) meet either the relatively permanent standard or the significant nexus standard to be jurisdictional. However, the agencies do not expect that there will be a substantial change in the scope of jurisdiction over these waters for either baseline considered. See Section I.B of the Economic Analysis for the Final Rule.

17.3.3 Number of wetlands and aquatic resource benefits studies

Some commenters expressed concerns about the contingent valuation approach used in the analysis. One commenter asserted that the approach did not rely on a sufficiently large sample size, stating that 21 studies is not adequate to represent the impacts of a national regulation.

Agencies' response: The agencies disagree with the commenter who stated that the number of studies in the contingent valuation was inadequate. There is no minimum number of studies that is necessary to represent the impacts of a national regulation. Studies can vary significantly by comprehensiveness and scope; likewise, the changes that they capture can vary in terms of complexity and spatial heterogeneity. A more important factor than the number of studies is the number of observations, as some studies can provide multiple observations. In the Economic Analysis for the Final Rule, the total sample size of studies and observations has been increased to 24 studies and 52 observations.

17.3.4 Willingness to pay studies

A few commenters stated that there is usually a gap between stated willingness to pay (WTP) and actual willingness to pay, calling into question the accuracy and consistency of the contingent valuation results. One commenter cited examples of the development of recreational areas that people frequently state are “priceless” but fail to pay for. The commenter stated that at some point any effort requires funding which is critically important but not matched to what people say they are willing to pay when they are asked in a vacuum. One commenter provided an overview of the agencies’ approach and stated that contingent valuation is generally regarded as a second-best approach given the tendency of survey respondents to provide inaccurate or inconsistent answers. The commenter stated that the agencies do not discuss the shortcomings of the studies that form the basis of the benefit estimate or the resultant bias. One commenter argued that WTP is a subjective analysis tool and stated that there are many different approaches and that the concept is fraught with conflict and rife with lawsuits. One commenter stated that rather than asking questions about abstract concepts that the public cannot understand or value, the agencies should ask for input using questions that provide clear benefits or costs to the public such as “Would you close the local baseball park your kids use that is located in a seasonal floodplain, in order to obtain water that might be cleaner but might not be used?” The commenter stated that doing the analysis using this type of question would bring more balance to the discussion since it is a more relatable question.

Agencies' response: The agencies acknowledge commenters who expressed concern regarding the general methodology of willingness to pay studies; however, many of these comments were based on speculative assertions that are outside the scope of this rulemaking. The agencies acknowledge the commenters who expressed concern regarding the agencies’ quality assurance of studies used in the meta-analysis. The studies that were included in the meta-analysis were designed to estimate total household WTP. Total WTP estimates include at least in part non-market values, which, by definition, means that households do not have experience valuing monetarily and researchers do not have direct transaction data to analyze. A lack of a market does not constitute a lack of value but does increase the inherent uncertainty associated with the value estimates. The agencies carefully reviewed the stated preference studies used in the meta-analysis to ensure that they are well

designed, and the agencies have no reason to conclude that the respondents did not answer as accurately and honestly as possible.

17.3.5 Selection of wetlands and aquatic resource benefits studies

Some commenters raised concerns about the selection of studies that the agencies included in the meta-analysis for the benefits analysis. One commenter stated that the agencies should more clearly explain the approach used to determine the selection criteria for the studies used in the benefits calculation, stating that the agencies must provide well-reasoned explanations for all underlying assumptions, ideally with an empirical basis, as well as the selection criteria for the studies used. The commenter stated that the agencies have excluded some relevant studies without explanation, including recent analyses that would be helpful in refining the benefit transfer analysis. The commenter urged the agencies to conduct another literature review for relevant research prior to finalizing the proposed rule, and to explicitly explain why certain studies were included in the meta-analysis and others were excluded.

One commenter stated that it was inappropriate to include two Canadian-based studies, given that Canadian citizens likely have different preferences and constraints than American citizens. Another commenter stated that the inclusion of the Canadian studies is an improvement to the meta-analysis, helping to rectify the unreasonably low estimate for baseline acreage in each state in the economic analysis of the 2020 NWPR.

Some commenters stated that the studies included in the meta-analysis are largely irrelevant and do not provide accurate estimates of benefits for the types of wetlands likely to be incrementally protected under the proposed rule. The commenters stated that most of the studies were conducted more than a decade ago, and that the agencies have not adjusted for changes in recreational patterns and preferences for ecosystem services over time. One commenter additionally stated that some of the studies were not published in peer-reviewed journals. The same commenter stated that there was a wide variation in the per-household per-acre WTP estimated by the studies, which ranged from below \$1 to \$78. The commenter urged the agencies to more fully and transparently describe the 19 studies and carefully consider how relevant they are to the wetlands at issue. The commenter also stated that the analysis assumes that the wetlands included in the studies from the meta-analysis have identical functions and benefits as those that are relevant to the proposed rule, which they stated oversimplifies to the detriment of accuracy. The commenter gave examples of some studies that estimate values for specific types of wetland protections and stated that it is not clear that these studies are the appropriate point of comparison for the wetlands protected by the proposed rule.

Agencies' response: The agencies acknowledge the commenters who requested further explanation of how studies were selected. Additional clarifying language has been added in the Economic Analysis for the Final Rule. The agencies also acknowledge the commenters who recommended conducting an additional review of the literature. The agencies have continued to review the literature and ultimately included additional studies in the Economic Analysis for the Final Rule. The agencies have continued to use the same selection criteria for inclusion of studies in the meta-analysis.⁴

⁴ Memorandum to Todd Doley and Steve Whitlock, U.S. EPA, Office of Water, entitled "Notes on inclusion of source studies and data preparation for wetlands meta-data," (November 18, 2022; available in the docket for this rule, Docket ID Number EPA-HQ-OW-2021-0602).

The agencies disagree with the commenter who stated that it was inappropriate to include Canadian studies in the meta-analysis. The Canadian studies cover wetlands and households within close proximity to the United States and likely share many similarities. The Canadian studies meet Office of Management and Budget (OMB) Circular A4 recommendations for compatibility.⁵ The inclusion of the Canadian wetland valuation studies significantly improves the performance and reliability of the meta-regression model.

The agencies disagree with the commenter who stated that the studies used in the meta-analysis are too old to be relevant for estimating benefits. The agencies are not aware of any evidence that there have been systematic changes in household preferences for the services provided by wetlands. The agencies disagree that the types of wetlands valued within the studies in the meta-analysis are not representative of the types of wetlands potentially affected by the rulemaking. The valuation estimates are for estimated changes in mitigation, and this mitigation does not need to be on the same site as the permitted project nor does it need to be for the same type of wetland. The U.S. Army Corps of Engineers bases mitigation requirements on equivalent services provided by those wetlands that will be impacted.

The agencies acknowledge the commenter that stated that some of the studies used in the meta-analysis are not peer reviewed. While this may be the case, all studies were screened rigorously before inclusion in the underlying meta-analysis. The agencies acknowledge the commenter who referenced the wide range in valuations present in the studies used within the meta-analysis. These ranges in valuation reflect the nature of willingness to pay in different geographic areas of the United States.

With respect to the citations and references commenters provided for consideration, the agencies have responded to the substantive comments received in Sections 1-18 of the agencies' response to comments, as well as in other locations in the administrative record for this rule. In doing so, the agencies have responded to the commenters' reference or citation as it was used to support the commenters' statements. The agencies have also considered references that were provided to the agencies in response to their request for additional literature relevant to the conclusions of the Science Report that had been published since 2014 but that was not included in the agencies' analysis in the Proposed Rule Technical Support Document (*e.g.*, literature that was not cited in Appendix C1 of the Proposed Rule Technical Support Document). The agencies' response to such literature is provided in the agencies' response to comments Section 16.2.2. In addition, the agencies have reviewed reports, citations, and other documents provided by commenters and have incorporated some of these references, as relevant and appropriate, into the final economic analysis for the rule. The agencies note that some of the citations provided to them were already cited in the Proposed Rule Economic Analysis.

⁵ U.S. Office of Management and Budget. (2003). Circular A-4: Regulatory Analysis. Retrieved from https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/circulars/A4/a-4.pdf

17.3.6 Benefits transfer approach

One commenter urged the agencies to better characterize the significant uncertainties involved in the benefits transfer models, which originate from the error bounds in the original studies as well as the agencies' own analysis. The commenters stated that the range of benefits provided do not capture inherent uncertainty in the modeling approach and urged the agencies to follow standard scientific practice in reporting them.

Several commenters criticized the state-based approach to applying WTP values to households. A few commenters stated that the assumptions that a) values would accrue to all households in the same state as a given wetland acre and b) all households benefit equally regardless of distance are unjustified, illogical, or unsupported and implausible given the types of wetlands involved.

Some commenters critical of the state-based approach asserted that it leads to an underestimate of the benefits. Some commenters argued that this approach ignores benefits that do not fall neatly within state boundaries, such as recreational, cultural heritage, resources for future generations, and existence values. One commenter provided a figure showing the 2020 NWPR determinations to support their argument that many projects near wetlands impact watersheds that flow downstream to neighboring states. Citing the Department of Game and Fish, another commenter stated that a significant portion of wildlife viewing in New Mexico is conducted by out-of-state recreationalists. One commenter cited research that they say demonstrates that the ecological and recreational benefits constitute the bulk of overall benefits from water protection and stated that these benefits may reflect a wider range than considered by the agencies. The commenter stated that non-use values such as existence values do not depend on proximity to covered areas. Also criticizing the state-based approach, some commenters stated that watershed connections extend across state boundaries. One commenter gave an example of flooding mitigation benefits that can accrue as far as 50 km away.

A few commenters stated that the radius-based approach is potentially an improvement over the primary approach but expressed concern about its application. One commenter stated that the analysis would be subject to arbitrary selection of radii. The commenter urged that a sensitivity analysis for this approach should be presented more fully since it reflects the sensitivity of the results to a critical assumption. The commenter also urged the agencies to undertake a complementary analysis to inform an appropriate selection of radii. Another commenter stated that the radius-based approach, while an improvement over the main analysis, still assumes that there are no benefits outside the boundary. The commenter argued that incorporating non-use benefits outside the outer boundary would be an improvement. The commenter also argued that, in the case of recreational values, people may travel to enjoy protected resources, so the benefits would dissipate more slowly over wider distances than local use values. The commenter noted that the agencies acknowledge the subjectivity of the radius lengths and argued that they should examine the relevant economic literature to see how studies have defined local boundaries to attempt to establish an empirical basis for the boundaries. The commenter stated that the 200-mile outer boundary overlooks how ecosystem services may cover significant distances due to wetlands feeding into watersheds as well as animal migration, citing the connectivity report⁶. The commenter stated that the agencies should run a sensitivity analysis to assess whether each study's local variable interacts with other parameters such as

⁶ U.S. Environmental Protection Agency. 2015. Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (Final Report). EPA/600/R-14/475F. U.S. Environmental Protection Agency, Washington, D.C. ("Science Report").

total distance. The commenter also stated that the agencies should not assume that the appropriate distance for the local variable will necessarily be the same in each state, given variations in size, total population, density, and other differences. The commenter stated that a potential solution to the issues they highlighted with the radius-based approach would be to estimate a continuous decay function to extrapolate WTP values across space, which would ensure an empirical foundation for selection of boundaries and estimated changes in benefits as distance increases. The commenter cited several literature sources and urged the agencies to evaluate available literature to develop the best approach to the distance decay function, which would also require re-estimation of the existing approach and additional sensitivity analyses. Citing literature, the commenter (who was generally supportive of the radius-based approach) also stated that it could be problematic for large states since the 200-mile outer boundary does not encompass their land mass, which they stated could result in an underestimate of the proposed rule's benefits in those areas. The commenter suggested re-running the analysis to determine if the size of the state matters for households' WTP and adjust the analysis accordingly (ideally estimating a decay function) and reviewing relevant literature to assess whether there is a more appropriate radius distance. One commenter expressed concern about the regional nature of water valuation, stating that in some areas of the country (like California), water is a critical resource in short supply whereas in others (like New Orleans), it is a management concern that must be addressed to protect resources and infrastructure.

Agencies' response: The agencies acknowledge the commenters who expressed concerns regarding the uncertainties within the original studies used in the meta-analysis. The public can review the estimated error associated with each study by reviewing the cited studies listed in Table B-1 in Appendix B of the Economic Analysis for the Final Rule. The use of meta-analysis does not necessarily compound these errors; in fact, deriving multiple observations from independent studies is a method to reduce the influence of the errors from any one study.

The agencies agree with many of the concerns expressed by commenters regarding the state-based benefit transfer approach. For the main benefit estimates used for the Economic Analysis for the Final Rule, the agencies used a radius-based rather than a state-based approach, although results from use of the state-based approach can be found in Appendix D of the Economic Analysis. Appendix D of the Economic Analysis presents the results of numerous runs using different versions of the meta-regression model and variable settings. The meta-analysis has regional variables to help account for geographic differences in wetland services and household preferences.

The agencies acknowledge the commenter who recommended incorporating a decay function as part of the radius-based approach. The agencies address the concept that WTP may decline or decay as distance increases by utilizing the "local" variable. This variable is estimated to address the issue that some households may have a higher WTP for wetlands within a distance shorter (in this case 30 miles) than the full radius. In addition, the agencies performed a sensitivity analysis associated with the distance for the full radius to recognize that households may have WTP for non-local wetlands farther than the local 30-mile radius. However, the agencies did not include a continuous decay function in the analysis.

The agencies also acknowledge commenters who expressed concern regarding how the agencies would select radii in a defensible way. The agencies detail the methodology for selecting the radii in Section III.C of the Economic Analysis for the Final Rule.

17.4 Costs

17.4.1 General costs comments

Some commenters made general statements about the costs, benefits, or impacts of the proposed rule, including: that a large and diverse portion of the regulated community would be affected by the proposed rule; that they were concerned about an increase in resource needs by the regulated community and by state and/or federal agencies; that the proposed rule would lead to many increases in costs and delays on critical transportation improvement projects while offering no tangible environmental benefits in return; that the proposed rule would lead to costly, bureaucratic interactions with federal regulators or civil or criminal penalties; and that a lack of clarity combined with punitive penalties would result in delays and costs due to uncertainty and inconsistent application. Many commenters from the regulated community stated that complex or burdensome regulations will hinder economic growth, job creation, or businesses in the United States.

Several commenters wrote about site-specific examples of past jurisdictional determinations, mitigation requirements or discharge management requirements which they found to be expensive, time consuming, and/or labor intensive, and/or their interpretations of what would or would not be jurisdictional at a site-specific scale under the proposed rule, with associated cost estimates. Features mentioned included vernal pools, isolated wetlands, manmade lakes, ditches, ephemeral and intermittent streams, and jurisdictional wetlands.

Agencies' response: The agencies disagree with commenters that this rule will lead to a substantial increase in direct and indirect costs to the public and/or private sectors. In this action, the agencies are finalizing a definition of "waters of the United States" that is within the agencies' authority under the Act; that advances the objective of the Clean Water Act; that establishes limitations that are consistent with the statutory text, supported by the scientific record, and informed by relevant Supreme Court decisions; and that is both familiar and implementable. See Final Rule Preamble Section IV.A. The agencies disagree that the final rule generally represents an expansion beyond the pre-2015 regulatory regime; rather, the agencies expect that there will be a slight and unquantifiable increase in waters being found to be jurisdictional under the final rule in comparison to the pre-2015 regulatory regime. Indeed, as discussed in Section V.A of the Preamble to the Final Rule, this rule will establish a regime that is generally comparable to current practice and will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing. See Section 17.3 of this document for further discussion of benefits.

Comments regarding the jurisdictional status of any specific water are outside the scope of this rulemaking, including comments on determinations, permitting, and management of any specific waters. The agencies will assess jurisdiction under the final rule on a case-specific basis.

17.4.2 Permit costs

One commenter noted that the range of permit costs in the proposed rule were based on the range of per-permit costs only, with no accounting for uncertainties around the additional acreage brought under Clean Water Act jurisdiction by the proposed rule.

Some commenters stated that the distinction between individual and general permits is important for the purpose of evaluating costs and claimed the economic analysis ignores any potential changes to the distribution of individual and general permits. The commenters stated that the proposed rule may result in some projects needing individual permits that would have previously been eligible for general permits, which they stated is ignored in the economic analysis. A few commenters stated that the economic analysis also ignores the heterogeneity in impacted acreage between individual and general permits, instead calculating an average for each type of permit that provides a single estimate of project size.

Some commenters were critical of the permit costs used by the agencies. A few commenters stated that the costs used are outdated. A few commenters stated that the cost estimates used are over 20 years old and not adjusted for changes in the permit system. The commenter stated that given the time period of the analysis, this assumes no real change in permitting costs over more than four decades. The commenter also stated that the use of the Consumer Price Index (CPI) for urban consumers to adjust costs is not representative. Some commenters stated that the per-permit costs used were too low.

Some commenters provided estimates of permitting costs, with a few quoting studies (with one citing a 2002 study by Sunding and Zilberman and the other a “Review of the Agencies’ 2021 Economic Analysis” by Brattle) that estimated costs of \$3,100 to \$217,600 for general permits and \$10,900 to \$2,376,800 for individual permits.

One commenter referred to the *Rapanos v. United States*, 547 U.S. 715 (2006) (“*Rapanos*”)⁷ decision, which they stated referenced estimated individual permit costs of \$271,596 and 788 days and general permit costs of \$28,915 and 313 days; the commenter stated that these costs have undoubtedly increased significantly since then. The commenter stated that the cost of a nationwide permit could be the annual profit for a given operation and argued that the long process places farmers and ranchers in the position of either violating the Clean Water Act or allowing their structures to continue to deteriorate or become destroyed.

Agencies’ Response: The agencies acknowledge commenters who provided information regarding permit costs. As discussed in Final Rule Preamble Section V.A, the final rule will establish a regime that is generally comparable to current practice, and this rule will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing.

The agencies disagree with the commenter who stated that the agencies did not consider uncertainties relating to new acreage brought under jurisdiction by the final rule. The forecasting of future permits in the economic analysis is tied to jurisdictional determination data within ORM2. See additional discussion in Section III.C in the Economic Analysis for the Final Rule.

⁷ *Rapanos v. United States*, 547 U.S. 715 (2006) (“*Rapanos*”)

The agencies acknowledge commenters who expressed concerns regarding the age of the study that is the basis for permit costs in the economic analysis. However, this is the most up to date study carried out by the Corps to assess permit costs associated with the section 404 program.

Changes in the proportion of individual and general permits are outside the scope of the economic analysis, as such speculative forecasting would not adhere to EPA’s *Guidelines for Preparing Economic Analyses*.

In addition, in response to information from public commenters, the agencies developed an alternative cost estimate based on unit permit costs from the Sunding and Zilberman (2002) article⁸ noted in public comment. This alternative cost analysis can be found in Appendix H of the Economic Analysis for the Final Rule.

The agencies acknowledge commenters who referenced the permit costs cited in *Rapanos*; these costs are reflected in the Sunding and Zilberman (2002) article mentioned above.

17.4.3 Mitigation costs

Some commenters were critical of the mitigation costs used by the agencies in the economic analysis. A few commenters stated that they have the same concerns over the unit cost estimates as they have over permitting costs, relating to relevance and inflation, since they are drawn from the same 2000 study. The commenters also stated that the process for generating the cost estimates was not transparent or adequately supported.

One commenter stated that many conservation practices are constructed within “waters of the United States” to serve their purpose of reducing erosion and nutrient loss and providing clean water but stated that they often incur significant additional costs due to mitigation requirements.

Some commenters provided mitigation cost estimates, with one commenter stating that mitigation costs can amount to thousands of dollars per linear foot. Another commenter provided mitigation cost estimates based on the wetlands constructed via the Conservation Reserve Enhancement Program, under which typical projects require 6,000 to 11,000 credits at a cost of up to \$200 per credit, yielding costs of \$1.2 to \$2.2 million per project, which the commenter stated overwhelms the cost of \$60,000 to \$280,000 for engineering, construction, and easements for a wetland. The commenter stated that the proposed rule’s expansion of Clean Water Act jurisdiction will result in an inability to justify or afford effective wetland restorations due to exorbitant mitigation costs, disincentivizing soil and water conservation efforts. One commenter stated that vernal pool mitigation credits in California generally cost more than \$100,000, providing charts showing credit prices and trends. One commenter stated that they were concerned about the lack of discussion on impacts to mitigation banking availability.

Agencies’ Response: The agencies acknowledge commenters who expressed concerns regarding the age of the study that is the basis for mitigation costs in the economic analysis.

⁸ Sunding, D., & Zilberman, D. (2002). The economics of environmental regulation by licensing: An assessment of recent changes to the wetland permitting process. *Natural Resources Journal*, 59-90.

However, this is the most recent study carried out by the Corps to assess permit costs associated with the section 404 program. Commenters did not suggest alternative analyses the agencies should use to assess section 404 permit costs.

The agencies acknowledge the commenter who expressed concern regarding conservation projects being required to do mitigation due to impacts of “waters of the United States” occurring during restoration and conservation activities. In this rule, the agencies are exercising their authority to interpret “waters of the United States” to mean the waters defined by the familiar 1986 regulations, with amendments to reflect the agencies’ construction of limitations on the scope of the “waters of the United States” informed by the text of the relevant provisions of the Clean Water Act and the statute as a whole, the scientific record, relevant Supreme Court precedent, and the agencies’ experience and technical expertise after more than 45 years of implementing the longstanding pre-2015 regulations defining “waters of the United States.” Comments about statutory or regulatory activity-based exemptions for discharges into “waters of the United States” associated with certain activities are beyond the scope of this rulemaking.

The agencies acknowledge the commenter who stated the methodology for assessing costs was not adequately supported. The agencies have added additional language describing the methodology for generating costs.

The agencies disagree with commenters who stated that mitigation credit supply and general mitigation costs will go up as a result of this rulemaking. As discussed in Final Rule Preamble Section V.A, the final rule will establish a regime that is generally comparable to current practice, and this rule will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing. With respect to specific features mentioned by commenters, determinations regarding the jurisdictional status of any specific water are outside the scope of this rulemaking.

17.4.4 Costs associated with regulatory uncertainty

Some commenters emphasized the importance of regulatory clarity, predictability, and/or certainty as to the scope of federal regulation, and some emphasized that this was particularly important given that failure to comply can render entities vulnerable to citizen lawsuits. Some commenters stated that clarity is important for regulated industries that must obtain section 404 permits, some of which lack resources to decipher and navigate complex regulatory regimes and cannot pass associated costs through to their consumers. Some commenters stated that under the proposed rule, increased compliance costs will not be balanced with increased clarity or guidance on implementation.

Commenters from a variety of economic sectors had similar concerns that added regulatory burdens and uncertainty in permitting would hinder economic growth. Many commenters from the regulated community stated that the proposed rule may negatively impact planning and completion of development, improvement, or resilience-based projects. Some commenters noted that the costs associated with this impact would be in the form of direct increases in costs of overall site development, indirect costs associated with the availability of mined or precursor materials for production of goods, and timing and predictability for current and future market demands—all of which could in turn impact consumer prices, and overall safety, reliability, and environmental integrity of projects. One commenter stated that the

Revised Definition of “Waters of the United States” – Response to Comments Document

scope of the Clean Water Act has impacts on where they are allowed to access a natural resource, how long it takes to permit a new site or expand an existing facility, the costs of planning and site development, and the life of an operation. One commenter in the aggregate industry of Southwestern Idaho noted that the cumulative loss for that sector in that specific region could be in the tens of millions of dollars.

Several commenters stated that the proposed rule will increase the costs for and decrease the availability of mined or precursor materials needed for their goods. One commenter stated that in some cases reserves of mined or precursor materials may become economically unviable, causing the need for materials to be hauled from further away, increasing carbon emissions.

One commenter stated that the proposed rule should be crafted to permit capital-intensive industries to make investments and planning decisions without having to revise plans and reallocate funds to accommodate a fluctuating rule.

One commenter stated that as a result of this rule, taxpayers will see a cost increase for infrastructure improvements which one commenter stated will make the U.S. less competitive with other nations.

Several commenters made general statements that the proposed rule would increase costs or burdens for farmers and make it more difficult to improve farmland productivity. Some of these commenters mentioned the impact of unclear regulatory definitions that depend on case-by-case analyses and overly expansive definitions. Examples of agricultural costs which they stated would increase as a result of the rule included: normal grazing, manure applications, and additional permitting for containment areas. Commenters also mentioned that agricultural development on certain features, such as prairie potholes, and general land stewardship on other features, such as uplands and ephemeral areas, would no longer be financially feasible. One commenter from a state Attorney General's office asserted that the tens of thousands of dollars in additional permitting costs to conduct regular farming and ranching activities is well beyond the means of most family or small business farming and ranching owners. The commenter stated that waiting for permits to conduct normal activities on agricultural lands would make production of food in that state significantly more costly.

Several commenters referenced costs associated with application of manure, fertilizer, and/or pesticides and the monitoring and management of waters for invasive species and algal blooms due to what they perceive to be an ambiguous rulemaking which will require interpretation.

A commenter stated that the proposed rule's "ad-hoc" approach will result in landowners not knowing whether features on their private properties are subject to Clean Water Act jurisdiction until a federal agent uses the "highly subjective" significant nexus standard, asserting that this will have a chilling effect on the economic development of private property.

Agencies' Response: The agencies disagree with commenters who asserted that there will be a substantial increase in costs due to ambiguity, instability, and/or uncertainty in relation to this rulemaking. In this action, the agencies are finalizing a definition of "waters of the United States" that is within the agencies' authority under the Act; that advances the objective of the Clean Water Act; that establishes limitations that are consistent with the statutory text, supported by the scientific record, and informed by relevant Supreme Court decisions; and that is both familiar and implementable. See Final Rule Preamble Section

Revised Definition of "Waters of the United States" – Response to Comments Document

IV.A. The agencies disagree that the final rule generally represents an expansion beyond the pre-2015 regulatory regime; rather, the agencies expect that there will be a slight and unquantifiable increase in waters being found to be jurisdictional under the final rule in comparison to the pre-2015 regulatory regime. Indeed, as discussed in Section V.A of the Preamble to the Final Rule, this rule will establish a regime that is generally comparable to current practice and will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing.

The agencies recognize the importance of clarity for members of the regulated community. The agencies understand that landowners would like to be able to easily discern whether their property contains any “waters of the United States” such that they may need to apply for a relevant Clean Water Act permit. With this rule, the agencies strive to provide additional clarity for the public. To that end, the rule clearly excludes some waters from Clean Water Act jurisdiction, thereby narrowing the category of waters that require additional jurisdictional analysis. The rule also clearly identifies some categories of waters as jurisdictional by rule without the need for further analysis. For the small percentage of waters that are not categorically excluded from, or included in, Clean Water Act jurisdiction, and which do not meet the relatively permanent standard, the agencies have established a new regulatory provision defining the meaning of “significantly affect” to guide implementation of the significant nexus standard. This provision provides the public with a clearer picture of the functions the agencies will assess and the factors the agencies will consider in determining whether waters being analyzed “significantly affect” (*i.e.*, have a material influence on) the integrity of traditional navigable waters, the territorial seas, or interstate waters and therefore meet the rule’s definition of “waters of the United States.” Finally, recognizing the concerns of landowners, the preamble to the final rule in Section IV.C.10 provides individual landowners with the step-by-step information needed to make informed decisions.

17.4.5 Costs associated with permitting changes

Several commenters from various economic sectors expressed concern regarding what they perceive to be an expansion of the definition of “waters of the United States.” These commenters specifically expressed concern about the costs for site development (including permitting and mitigation costs) and management (including discharge management costs). A commenter expressed concern that an expanded scope of jurisdiction would lead to more stringent discharge restrictions and restrictions on the ability to use and maintain features on project sites. Some commenters also expressed concern about the scope of jurisdiction for features like ephemeral streams, ditches, stormwater management systems, and cooling ponds. One commenter stated that many state waters that have been adequately monitored, regulated, and protected for years would become federalized, imposing additional costs on public and private land use and natural resource management activities.

One commenter stated that a \$1,000 increase in the cost of a new home removes over 500,000 buyers from the market and that making more waters subject to regulations and permitting procedures will make homes more expensive and exclude families from homeownership. On the other hand, another commenter

argued that any cost savings from less permitting under a “waters of the United States” definition with a narrower scope of jurisdiction would not provide economic relief to homebuyers. The commenter stated that under the lifespan of the 2020 NWPR, the average home price rose by \$94,000, and the average profit margin for residential home builders increased by 1.4 percent and is projected to continue to rise. The commenter stated that there is no evidence to support an assumption that home developers would pass any savings from deregulation on to buyers, and argued that those opposing the expansion of the “waters of the United States” definition are seeking to increase their profits at the expense of the environment.

One commenter stated that if some or all ephemeral and intermittent features are subject to Clean Water Act jurisdictions, forest owners would need to expand implementation of state-approved best management practices, likely by establishing expanded riparian management zones. The commenter stated that this would remove acreage from forest management, cause significant hardship for forest owners, and increase fiber costs.

One commenter stated that the proposed rule would expand the scope of waters covered under the Clean Water Act, and that this would impose higher costs on convenience stores through additional permitting and regulatory requirements. The commenter emphasized the impact to fuel retailers, who they stated will need to expend resources to determine whether their activities are covered by the proposed rule; pay for the development of relevant plans, protections, permits, and other obligations; absorb or pass along to consumers the costs of the lengthy permitting process; and be subject to increased litigation risks. The commenter stated that these costs would discourage retailers from investing in new sites and services, reduce economic activity, and undermine the Biden Administration’s and Congress’s stated goals.

A commenter stated that the proposed rule would hinder activities conducted in connection with ephemeral and intermittent washes and tributaries by increasing the cost and uncertainty of compliance, thereby stifling the development of innovative approaches that generate environmentally beneficial outcomes. This commenter also stated that they do not believe the agencies will be able to acquire the expansive budget necessary to fund sufficient staff to perform the work called for by the proposed rule.

Several commenters stated that the proposed rule would result in increased permitting and/or mitigation costs due to expanded coverage of waterbodies relative to the pre-2015 regulatory regime, with one commenter stating that it will “sweep in marginal aquatic areas” and lead to increased regulation of remote and ephemeral areas.

One commenter stated that increased administrative burdens could require a significant commitment of tribal resources, citing the economic analysis of the 2015 Clean Water Rule where they stated the agencies acknowledged the increased volume of permit applications, water quality certifications, and other administrative requirements.

Some commenters expressed concern about permitting delays under the proposed rule, with one stating that jurisdictional determinations can take between six months and a year to receive, and that the cost of these delays is compounded by the cost of consultants, engineers, permit applications, and mitigation and compliance costs. The commenter stated that such delays lead to a decrease in land value of \$500 per acre or more. Another commenter expressed concern about the time and expense required to complete an approved jurisdictional determination and/or receive permitting authorizations, stating that the proposed

rule would increase costs to comply with the Clean Water Act without providing clarity and guidance for implementation.

Some commenters expressed concern about permit costs for pesticide applications, stating that it would create additional burdens for small businesses and cause communities and governments to lose access to pesticide applicators. Some commenters stated that the proposed rule would expand the areas needing National Pollutant Discharge Elimination System (NPDES) permits, which would ultimately be costly to citizens and communities. One commenter stated that the timing of treatments for the management of invasive species, harmful algal blooms, and mosquitos is critical and that the need for permit acquisitions would clearly affect the ability of managers to timely respond. One commenter stated that the proposed rule would lengthen the process for professional applicators to treat areas at high risk for mosquito transmitted diseases (*e.g.*, West Nile and Zika), creating a concern for public health and safety.

One commenter stated that the agencies cannot expect to have the states' support by downplaying the proposed rule's inevitable burden and failing to accurately frame the increased costs.

Several commenters argued that the 2020 NWPR had positive economic impacts, such as reducing permitting costs, financial burdens, and potential fines for Clean Water Act violations, as well as providing regulatory predictability that promoted efficiency. A few commenters argued that the 2020 NWPR helped the economy and promoted economic growth by accelerating and promoting the construction of important energy infrastructure, reducing agricultural costs, and fostering future business opportunities. Another commenter argued that the 2020 NWPR's clarity and consistency was beneficial for small businesses that have fewer resources to help them understand and comply with regulations.

Referencing the impact of the 2015 Clean Water Rule, one commenter expressed concern about impacts to investments in infrastructure projects on reservation land from increased cost, timing, and complexity of permitting, including section 404 permits. The commenter stated that a tribal infrastructure project requiring a section 404 permit from the Corps would also require a section 401 water quality certification from the EPA, causing unnecessary delays and costs, and detracting from the Tribe's ability to provide services to members.

Agencies' Response: The agencies disagree with commenters who stated that there will be an increase in costs due to additional or changed permitting associated with this rulemaking. In this action, the agencies are finalizing a definition of "waters of the United States" that is within the agencies' authority under the Act; that advances the objective of the Clean Water Act; that establishes limitations that are consistent with the statutory text, supported by the scientific record, and informed by relevant Supreme Court decisions; and that is both familiar and implementable. See Final Rule Preamble Section IV.A. The agencies disagree that the final rule generally represents an expansion beyond the pre-2015 regulatory regime; rather, the agencies expect that there will be a slight and unquantifiable increase in waters being found to be jurisdictional under the final rule in comparison to the pre-2015 regulatory regime. Indeed, as discussed in Section V.A of the Preamble to the Final Rule, this rule will establish a regime that is generally comparable to current practice and will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing. Furthermore, as discussed in the Final Rule Preamble Section IV.A.4, the agencies are establishing a final rule that is both familiar and implementable.

The agencies do not agree that the rule is likely to have significant economic impacts, even as compared to the secondary baseline of the 2020 NWPR. While there are approximately 50,000 permitted projects annually, the forecasted number of additional permits annually due to the rule compared to the secondary baseline is estimated to be only 7,902 permits. These additional permits are expected to be widely distributed among sectors, muting the effects in any one sector. The agencies do not consider this to create a significant increase in the overall permitting burden as compared to the secondary baseline. The agencies anticipate that permitting levels after this rule is finalized will be comparable to permitting levels from before the 2020 NWPR was finalized. As such, the final rule is highly unlikely to have any noticeable impact on overall economic activity.

17.4.6 Costs associated with Clean Water Act programs other than the section 404 program

Some commenters provided input on costs to states to implement Clean Water Act programs under the revised definition of “waters of the United States,” stating that the proposed rule will increase implementation costs under sections 303, 401, and 402. The commenters urged the agencies to estimate the associated implementation costs to states. A commenter argued that “[t]he Proposed Rule will impose a commensurate increase in unwarranted federal compliance requirements under multiple CWA programs. This action will create a significant increase in costs associated with compliance obligations under all CWA programs that rely on the definition of “waters of the United States.”⁶¹ One commenter stated that “[t]he Agencies must consider the practical impacts of the Proposed Rule on each of the major CWA programs.”

A commenter stated that benefits will accrue under section 303(c) water quality standards, section 311 oil spill prevention, section 401 water quality certification, and section 402 NPDES, urging the agencies to expand their assessment of benefits beyond the section 404 program to the extent possible and citing OMB’s Circular A-4.

A commenter stated that the agencies discuss substantial uncertainties around non-section 404 program costs (including section 303(c) water quality standards, section 311 oil spill prevention, section 401 water quality certification, and section 402 NPDES permitting), conduct only a cursory and qualitative assessment, and inappropriately conclude that impacts are likely to be minimal. The commenter stated that given the importance of jurisdictional scope to many sectors, the economic analysis should rely on more than conjecture and assumptions to evaluate these costs.

A commenter urged the agencies to undertake a more detailed and comprehensive analysis on how the changing jurisdiction will directly and indirectly affect all Clean Water Act programs. Some commenters stated that the analysis significantly underestimates potential costs and urged the agencies to work with stakeholders to compile up-to-date cost and benefit data for all Clean Water Act programs.

A commenter stated that the agencies acknowledged that states may incur some costs for increased numbers of section 401 certifications under the proposed rule, but that they ignore the costs to permittees to obtain the certification and the costs of associated delays.

One commenter stated that costs to states likely represent an unfunded mandate to states. The commenter urged the agencies to assess the costs to states, tribes, and permittees as fully as possible. The commenter

stated that the economic analysis for the 2014 proposed Clean Water Rule did account for increased costs to administer the 401 program and stated that there may be a significant increase in 401 certifications under the proposed rule due to the increase in jurisdictional waters when moving from the 2020 NWPR to the pre-2015 regulatory regime.

A commenter was critical of the agencies' approach to potential costs under the section 402 National Pollutant Discharge Elimination System permit program. The commenter stated that the agencies' assumption that changes in costs and benefits under this program would be minor is inconsistent with their assertion that the 2020 NWPR significantly reduced Clean Water Act protections, including under section 402. The commenter noted that the agencies did acknowledge multiple sources of uncertainty around section 402 costs, including which entities would be affected, the implementation of the waste treatment exclusion, the jurisdictional status of lagoons and ponds constructed to comply with other environmental statutes, and permittee responses to changes in requirements.

A commenter stated that the proposed rule will increase the number of waters to be assessed and for which total maximum daily loads (TMDLs) will need to be developed, which the commenter stated may entail significant costs for states and regulated entities. The commenter criticized the agencies' statement that they are unaware of TMDL revisions that resulted from the promulgation of the 2020 NWPR, stating that the long-term implications of a change in the definition of "waters of the United States" cannot be extrapolated from a single year of observations. The commenter stated that the agencies' claim that the development of water quality standards and TMDLs are independent of the definition of "waters of the United States" (since states and tribes can apply standards to waters that are not federally jurisdictional) is inconsistent with the proposed rule's statement that the significant reductions in protections under the 2020 NWPR "have had real world consequences."

Commenters stated that additional tributaries being jurisdictional and being listed as impaired will require the following: the development of a use attainability study; the identification of designated beneficial uses; the adoption of site-specific water quality objectives; the application of and compliance with numeric effluent limits; and the potential for a TMDL allocation.

A commenter expressed concern with the potential increased regulatory burdens under section 303 of the Clean Water Act, stemming from expanded jurisdiction due to the proposal's approach to significant nexus and "other waters."

A commenter stated that the expansion of jurisdictional waters under the proposed rule will result in a significant increase in the number of entities that could "reasonably be expected" to discharge oil to jurisdictional waters, meaning that they will be required to develop and implement an Spill Prevention, Control, and Countermeasures (SPCC) Plan and Facility Response Plan, install secondary containment, implement testing and spill response programs, and ensure compliance with all rule provisions. The commenter also stated that regulatory compliance subject to Clean Water Act strict liability provisions may entail costs not associated with voluntary measures.

A commenter was concerned with the approach to analyzing types of broad economic impacts, project-specific economic impacts, and/or impacts specific to a Clean Water Act permit type on current SPCC plans, stating that the proposed rule would greatly expand planning, compliance, and cleanup costs.

Agencies' Response: The agencies disagree with commenters who stated that impacts of this rulemaking on Clean Water Act programs would lead to increased costs and burdens. As discussed in Section V.A of the Preamble to the Final Rule, this rule will establish a regime that is generally comparable to current practice, and the rule will generate *de minimis* costs and benefits as compared to the pre-2015 regulatory regime that the agencies are currently implementing. For differences between the pre-2015 regulatory regime and the final rule, see Section VI.C of the Preamble to the Final Rule and Section 3.1 of the agencies' Response to Comments. The agencies further disagree with commenters who stated that the Economic Analysis for the Proposed Rule should have better quantified effects on Clean Water Act programs other than the section 404 program. The agencies' ability to quantify such effects is bound by the availability of national scale data. These programs do not have data at a national scale that could be used for assessing changes based on the final rule. As a part of this rulemaking, the agencies have tried to assess if there were any known impacts to these programs that occurred regionally under the 2020 NWPR in comparison to the 2019 Rule and no known impacts could be identified. The lack of available national scale data stems in part from the nature of cooperative federalism; states and tribes manage data associated with their own Clean Water Act programs and are not required to report such data to the agencies. However, the agencies also note that there is often a lack of data even at the state or tribal scale. As such, the agencies have appropriately included a qualitative discussion of effects on other Clean Water Act programs in the Economic Analysis for the Final Rule.

This action does not contain any unfunded mandate as described in the Unfunded Mandates Reform Act, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The final definition of “waters of the United States” applies broadly to Clean Water Act programs. The action imposes no enforceable duty on any state, local, or tribal governments, or the private sector.

The agencies disagree with characterizations of the proposed rule as claiming that the development of water quality standards and TMDLs are independent of the definition of “waters of the United States.” The Economic Analysis notes that, absent the application of the Clean Water Act to waters that would return to being jurisdictional under the final rule, states and tribes can still choose to impose similar state or tribal law requirements on these waters irrespective of federal mandates. However, the agencies also noted that changes in Clean Water Act jurisdiction could lead to requests for changes in TMDL waste load allocations for point sources and load allocations for nonpoint sources. The agencies also noted that the development and revision of statewide or tribal water quality standards is typically an ongoing process, so changes that the 2020 NWPR could have precipitated might not have appeared during the year that it was in effect. See Final Rule Preamble Section IV.B.3.d and the agencies' response to comments on the 2020 NWPR in Section 4 for additional discussion on the negative impacts of the 2020 NWPR.

17.4.7 Additional cost categories

Some commenters expressed concerns regarding specific types of additional costs, including avoidance and minimization costs, general indirect costs, criminal enforcement costs, and significant nexus costs.

Some commenters stated that the agencies do not attempt to quantify costs associated with avoidance measures (*i.e.*, selection of the least-damaging project type, location, and extent compatible with the purpose of the project, and analysis of appropriate and practicable alternatives to minimize the impact footprint) and minimization measures (*i.e.*, incorporation of appropriate and practicable design and risk avoidance measures) that will be undertaken by permittees. The commenter stated that such costs are likely to be significant and could dwarf other permitting costs. The commenter also stated that the agencies are obliged to estimate their extent. Another commenter similarly stated that there would be a “chilling effect on productive activity” and that farmers have had to avoid any activity on certain areas out of fear that they may accidentally disturb a feature that could be considered a “water of the United States.” They gave an example of a farmer who reported that under the 2015 Clean Water Rule, he would have had to create a 15-foot buffer around drainage ditches to avoid runoff of pesticides or fertilizers, accounting for five percent of the field. The commenter stated that this would result in a loss of revenue of approximately \$1,400 per acre. The commenter stated that these avoidance issues are particularly apparent in the Southwest where assertion of jurisdiction over ephemeral features is difficult for landowners to understand, and where civil or criminal penalties may be steep.

One commenter wrote extensively about costs and impacts to the recreational sector. Citing figures from the Bureau of Economic Analysis, the commenter stated that given the size of the industry, impacts from the proposed rule should be addressed in the economic analysis. They said that a large amount of management costs will be incurred and that some opportunities could be lost, since the commenter assumed that the proposed rule will result in review of existing recreational opportunities. The commenter said that the proposed rule will undoubtedly impose requirements on floodplain areas that would not have been considered jurisdictional before. The commenter said that many of the recreational opportunities are provided by small nonprofits or small communities who do not have resources to handle the section 404 permitting process. They said that the assumption that costs would be uniformly recovered across households in the region is untrue since most recreational costs are not covered by tax revenue but rather by outside fundraising, voluntary taxes on a small portion of users, or other taxes remote to the household concept; they also said that efforts to expand funding have been unsuccessful. They said that the impacts could be significant for communities that are reliant on recreational revenue to provide basic services to citizens. The commenter gave the example of those who recreate on frozen water like snowmobilers and skiers, saying that guidance on the proposed rule in situations like this is needed but has not been provided. The commenter said that the costs to recreational opportunities should not be overlooked, and that they should be analyzed and discussed.

One commenter stated that under the assumption that firms are profit-maximizing entities, a relocation of a project from the best available option is likely associated with some costs.

One commenter stated that the proposed rule would result in loss of value to lands that are newly considered jurisdictional due to increased regulatory burdens, uncertainties in obtaining regulatory authorization, and mitigation requirements. The commenter requested that the agencies provide a quantitative estimate of the loss of land value and increased regulatory burden that will be borne by landowners with waters that were categorically excluded under the 2020 NWPR but would be jurisdictional under the proposed rule. The commenter stated that most landowners do not have the technical expertise required to prepare a jurisdictional determination application, and that the costs to hire a qualified person can be substantial, at times approaching the value of the land. The commenter also stated that the time to obtain a determination under the pre-2015 regime sometimes exceeded one year (even on small sites), during which time the landowner was deprived of the use of their land.

One commenter stated the conclusion that there would not be any economic effects from the proposed rule is illogical. The commenters stated that the costs will be borne by someone, and it is critical to understand what the costs are and who will bear them. One commenter stated that the Economic Analysis for the Proposed Rule includes benefits and direct regulatory costs but buries or neglects the compliance costs of parties who must comply with the regulations.

A commenter stated that the proposed rule would expand jurisdiction and therefore increase opportunities for civil or criminal enforcement against citizens including North Dakota's farmers and ranchers, since the Clean Water Act authorizes citizen suits and suing for injunctive relief. The commenter stated that regardless of the outcomes of such cases, regulated entities would incur substantial costs defending themselves. The commenter discussed civil fines and criminal penalties associated with Clean Water Act violations, and the commenter stated that the stakes are so high that landowners must know ahead of time which features are or are not "waters of the United States." The commenter argued that vague definitions and case-by-case determinations do not form the basis for reasonable civil and criminal enforcement.

A few commenters questioned if the agencies considered the staff and resources that agencies and others would need to complete case-by-case analyses. One commenter expressed that while the agencies may be familiar with the processes of the significant nexus standard, there will be increased workload for federal staff due to the training requirements to consider the inclusion of non-floodplain waters and "other waters." One commenter stated that regulatory authorities will also incur costs associated with an increased number of case-by-case reviews and jurisdictional determinations, since the 2020 NWPR did not rely on the significant nexus standard. The commenter argued that the proposed rule's use of the standard and the potential for disagreements between authorities and permittees would increase costs for regulatory authorities.

Agencies' Response: In response to the additional cost categories that commenters provided, the agencies acknowledge that there are indirect costs—both monetary and temporal—associated with implementation of the final rule. Indeed, there are indirect costs associated with implementation of all prior rules defining "waters of the United States." As the final rule is very similar in scope to that of pre-2015 practice, there will be *de minimis* new indirect costs associated with the implementation of the final rule.

The agencies agree with commenters who stated that there will be different costs associated with avoidance and minimization under the final rule in comparison to the secondary baseline of the 2020 NWPR. However, the agencies do not have data associated with these costs and therefore cannot quantify the difference. As such, these costs are discussed qualitatively in the economic analysis. See Section III.C.2.2 of the Economic Analysis for the Final Rule for further discussion. Similarly, there are also myriad benefits associated with this rulemaking that could not be captured due to a paucity of data associated with specific ecosystem services. See Section III.C.2.3 of the Economic Analysis for the Final Rule for further discussion. Even with these caveats, the agencies find the Economic Analysis for the Final Rule provides a reasonable quantified estimate for the differences in expected costs and benefits associated with section 404 permitting and mitigation under the final rule as compared to the two baselines.

The agencies acknowledge the commenter who requested an estimate in loss of land values associated with the rulemaking. However, the agencies note that carrying out such an analysis would be extremely speculative, particularly at a national scale, but even at smaller spatial scales. The potential impact that a water feature may have on a property is not necessarily negative related to the land value of that property, and different land uses have different likelihoods of needing permits for activities associated with jurisdictional waters (e.g., based on the nature of Clean Water Act exemptions and regulatory exclusions).

The agencies also acknowledge commenters who stated that the significant nexus standard in particular will lead to increased costs for regulators under this rule, for example due to the agencies' application of the significant nexus standard to "other waters." However, the agencies find that this final rule increases clarity and implementability by streamlining and restructuring the 1986 regulations and providing implementation guidance informed by sound science, implementation tools, and other resources. Further, because this rule is founded upon a longstanding regulatory framework and reflects consideration of the agencies' experience and expertise, as well as updates in implementation tools and resources, the agencies find that the final rule is generally familiar to the public and implementable. See Final Rule Preamble Section IV.A.4 for further discussion of the agencies' finding that the final rule is both familiar and implementable. While analyses under the relatively permanent and significant nexus standards will be slightly different under the final rule compared to pre-2015 practice, it is expected that those differences will not have substantive effects to indirect monetary or temporal costs. The agencies have extensive experience implementing the relatively permanent standard and significant nexus standard for wetlands, streams, lakes, and ponds, which are the types of resources that are assessed under paragraph (a)(5) of this rule, and so will be able to use their experience and implementation resources to ensure efficiency and consistency of jurisdictional determinations.

The agencies acknowledge the commenter who expressed concerns over costs associated with recreation development and management. As explained in Section 17.2 above, the agencies have concluded that changes in jurisdiction in comparison to the pre-2015 regulatory practice will be *de minimis*. In terms of the impacts specific to the recreation sector in comparison to the secondary baseline of the 2020 NWPR, the economic analysis is carried out on a national scale and depends on a forecast of costs associated with permits issued under Section 404 of the Clean Water Act. Based on over a decade of permit data which would have included permits for recreational development, the costs associated with expanding recreational opportunities are captured in the total forecasted costs presented in the economic analysis. See Section III.C of the Economic Analysis for the Final Rule for details on how costs were assessed. See Chapter V and Appendix G of the Economic Analysis for the Final Rule for details on the sector impact analysis. There is no expected review of existing recreational opportunities associated with the final rule. See Section IV.C.10 of the Preamble to the Final Rule for implementation guidance for landowners and additional information on requesting a jurisdictional determination. In the benefit cost analysis presented in the economic analysis, there is no assumption that costs will be 'recovered' by any form of tax; rather, the benefits associated with the final rule would stem from ecosystem services provided by the protection of aquatic resources. See Figure

III-2 in the Economic Analysis for the Final Rule for an overview of ecosystem services considered in the economic analysis.

The agencies acknowledge commenters who expressed concerns regarding the cost of jurisdictional determinations and delays caused by jurisdictional determinations. See the agencies' response to comments in the previous paragraph. Individuals uncertain about the status of waters on their property may obtain a jurisdictional determination from the Corps. The Corps does not charge a fee for this service. See 33 CFR 325.1; Regulatory Guidance Letter 16-01 (2016), See Section IV.C.10 of the Preamble to the Final Rule for implementation guidance for landowners and additional information on requesting a jurisdictional determination.

The agencies disagree with commenters who stated that the agencies did not adequately quantify costs in the economic analysis. See the agencies' response to comments on costs in other sub-sections of Section 17.4 above; furthermore, the agencies have noted in the Economic Analysis for the Final Rule that there are additional costs and benefits that cannot be quantified. Such costs and benefits are discussed qualitatively, where appropriate.

The agencies disagree with the commenter who stated that there will be an increase in civil and criminal enforcement relating to violations of the Clean Water Act due to this rulemaking in comparison to the 2020 NWPR. The agencies are not aware of evidence of a decline in enforcement cases under the 2020 NWPR. As such, the agencies have no reason to expect increased costs associated with enforcement under the final rule in comparison to the 2020 NWPR.

17.5 Distribution of Costs and Distribution of Benefits

17.5.1 General comments on accuracy and adequacy

Many commenters from the regulated community made general statements about the economic analysis being deficient, flawed, illogical, or incomplete, stating that there is a lack of discussion and analysis to address incremental costs and benefits (with one stating that other categories of costs and benefits are deprioritized because they are challenging to estimate), that there is a lack of transparency, or that it does not include sufficient analyses of environmental justice, tribal impacts, and sectoral impacts. Some commenters stated that the agencies' claim that the unquantified costs and benefits are "not expected to negate the positive net benefits" is not justified by any analysis included in the economic analysis report. One commenter stated that explanations of calculations, assumptions, and discrepancies among different analyses are not provided, which they stated is particularly troubling given that the analysis is based on an internal Corps database that is unavailable to outside entities. The commenter stated that any errors and inconsistencies are thus overlooked.

A few commenters requested that the agencies develop a revised economic analysis, providing a more comprehensive and accurate analysis of the changes and soliciting input from states and regulated entities in the process. One commenter urged that the full range of economic impacts on local governments and tribal nations should be considered, stating that their specific county is experiencing a housing shortage

and that protecting clean water is essential to the development of communities and needed housing stock. The commenter also stated that economic impacts to farming and ranching operations must be considered, stating that these industries rely heavily on jurisdictional waters for irrigation of crops and animals. The commenter further emphasized that tourism is a large industry in the county and stated that the economic impact on outdoor recreation opportunities must be considered.

One commenter stated that the Economic Analysis for the Proposed Rule finds that the benefits of the proposed rule's expanded jurisdictional scope exceed the cost; however, the commenter noted that the economic analysis of the 2020 NWPR found the avoided costs of a narrower jurisdictional scope exceeded the forgone benefits. The commenter stated that there is a significant discrepancy and requested that the agencies explain the differences between the two analyses fully and transparently, providing justification and impact estimates for changes to technical approaches, input values, and assumptions.

One commenter stated that the economic analysis makes numerous references to section III.C.6 for a discussion of how uncertainty was addressed, but that this section does not exist, making discussion of analytical uncertainty and assumptions impossible.

Agencies' Response: The agencies acknowledge general comments on the accuracy and adequacy of the Economic Analysis for the Proposed Rule. The agencies have attempted to be as transparent and complete with a national economic analysis as the underlying data allows. The agencies have also attempted to improve on their analysis after considering public comments on the analysis accompanying the proposed rule. For example, on the cost side, the agencies have added a sensitivity analysis based on Sunding and Zilberman (2002). On the benefits side, the agencies present a range of radii approaches alongside a state approach to capture total willingness to pay.

The agencies disagree with commenters who suggested that the agencies should revise the economic analysis and solicit additional input from states and regulated entities. Prior to issuing this final rule, the agencies embarked on an extensive stakeholder outreach process, including public meetings and federalism and tribal consultations. See Final Rule Preamble Section III.C. The agencies received over 32,000 recommendation letters from the public during pre-proposal outreach and over 114,000 comments on the proposed rule during the public comment period. The agencies understand that the scope of Clean Water Act jurisdiction is an issue of great national importance and appreciate feedback and engagement from all stakeholders. The agencies engaged state and local governments over a 60-day federalism consultation period during development of this rule, beginning with an initial federalism consultation meeting on August 5, 2021, and concluding on October 4, 2021. During the input period, the agencies convened several meetings with intergovernmental associations and their state or local government members to solicit feedback on the effort to revise the definition of "waters of the United States." The agencies also engaged with state and local governments during the public comment period, including through two virtual roundtables in January 2022. A summary report on the agencies' consultation efforts with state and local governments is available in the docket for this action. For more information on the agencies' federalism consultation for this rulemaking, see Final Rule Preamble Section VI.E and the agencies' response to comments in Section 5.5. EPA and the Army consulted with tribal officials under the *EPA Policy on Consultation and Coordination with Indian Tribes* and the *Department of the Army American Indian and*

Alaska Native Policy early in the process of developing this regulation to permit them to have meaningful and timely input into this development. The tribal consultation period extended from July 30, 2021, to October 4, 2021. During the input period, the agencies convened several meetings with tribes, intertribal associations, and their members to solicit feedback on the effort to revise the definition of “waters of the United States.” The agencies also met with individual tribes requesting consultation at a staff-level or leader-to-leader level, consistent with their requests. A summary report on the agencies’ consultation and engagement efforts with tribes is available in the rulemaking docket. For more information on the agencies’ federalism consultation for this rulemaking, see Final Rule Preamble Section VI.F and the agencies’ response to comments in Section 5.6.

The agencies acknowledge commenters who discussed housing and water availability matters at the county level; however, these matters are outside the scope of this rulemaking.

The agencies also acknowledge commenters who referenced impacts to the agriculture and recreation sectors. See Chapter VI of the Economic Analysis for the Final Rule for more information on the sector analysis.

The agencies acknowledge the commenter who stated that the Economic Analysis for the 2020 NWPR included a different ratio of costs to benefits than the economic analysis for this rulemaking. The agencies note that there are many differences between the two economic analyses. The key difference is that the economic analysis for this rulemaking used the Cowardin classification in assessing the change in scope of jurisdiction between the 2020 NWPR and the pre-2015 regulatory regime. Using one year of data available on jurisdictional determinations and permits issued under the 2020 NWPR, the agencies assessed the proportion of resources that required permits and mitigation under the 2020 NWPR compared to the pre-2015 regulatory regime. This proportion was also broken down by resource type based on the Cowardin codes used for individual aquatic resources. Additionally, the economic analysis for this rulemaking includes more studies within its meta-analysis which assisted in assessing willingness to pay values at larger spatial scales. Much of the analysis and information within the Economic Analysis for the Final Rule builds on analyses from previous rulemakings that are already available to public. Analyses are based on the most relevant factors and the best available data. Data that informed the Economic Analysis for the Final Rule are available for review by the public in the docket for the final rule (Docket ID No. EPA-HQ-OW-2021-0602).

The agencies appreciate the comment identifying the typographic error regarding Section III.C.6 in the Economic Analysis for the Proposed Rule. Uncertainty is discussed in Section III.C.3 of the Economic Analysis for the Proposed Rule and the Economic Analysis for the Final Rule.

17.5.2 Interstate and transboundary benefits

Some commenters stated that the agencies underestimated interstate benefits or excluded them from the main analysis, stating that since many wetlands and watersheds cross state boundaries, the agencies should more fully consider the interstate benefits of federal protections. Another commenter stated that the agencies undervalued the interstate benefits of the proposed rule by not recognizing that states with

Revised Definition of “Waters of the United States” – Response to Comments Document

inclusive definitions of state waters could still suffer harms from neighboring states with weaker definitions. The commenter stated that upstream states have strong incentives to prioritize industry over water protections and cited their mapping exercise of approved jurisdictional determinations made under the 2020 NWPR to illustrate the prevalence of this predicament.

Agencies’ Response: The agencies acknowledge the importance of interstate and transboundary benefits, and the agencies agree with the commenter who asserted that states with broader definitions of state waters could suffer harms from neighboring states. The radius approach to calculating benefits, presented in Appendix H of the Economic Analysis for the Proposed Rule, takes interstate benefits into consideration. The radius approach has been integrated into the main Economic Analysis for the Final Rule. Furthermore, the agencies have included 48 states in the modeling of costs and benefits in the Economic Analysis for the Final Rule.

17.5.3 Case studies

A commenter requested that the agencies revisit the case study locations used in the 2020 NWPR analysis to conduct a more robust and comparable analysis, stating that the case studies provided a more robust assessment due to data availability.

Agencies’ Response: The agencies have decided not to include case studies in the Economic Analysis for the Final Rule. The agencies conclude that the quantitative and qualitative assessments provided in the Economic Analysis for the Final Rule are sufficient to inform the public regarding the impacts of this rulemaking.

17.6 Environmental Justice Implications

17.6.1 Use of the primary baseline related to environmental justice concerns

One commenter asserted that the use of the 2020 NWPR as a baseline for proposed rule’s economic analysis failed to “consider a more meaningful, longer-term baseline for determining historical environmental injustices.”

Some commenters contended that in the proposed rule the agencies “try to sidestep their environmental justice obligations by disclaiming any adverse impacts on environmental justice communities.” The commenters asserted that the agencies are using the pre-2015 regulatory regime as the baseline scenario to determine that returning to that baseline regime under the proposed rule creates no additional impact on environmental justice communities. The commenters indicated a thorough analysis of the impacts of the pre-2015 regulatory regime on environmental justice communities is “critical” because “tribes and environmental justice communities have suffered under that very regime.” The commenter pointed to studies that show that some tribes have reported a loss of 20 percent of wetlands over the last 25 years under the pre-2015 regulatory regime and that low-income, minority, and/or Indigenous communities have been impacted by inadequate protection of drinking water and disproportionately impacted by high water treatment costs.

Agencies' Response: The agencies recognize that the burdens of environmental pollution and climate change often fall disproportionately on communities with environmental justice concerns (*e.g.*, Indigenous peoples, people of color, and low-income populations), and have qualitatively assessed impacts to these groups in the Economic Analysis for the Final Rule. While the agencies recognize this concern and the commenters' desire for an analysis on the impacts of the pre-2015 regulatory regime on communities with environmental justice concerns, the agencies find that use of the pre-2015 regulatory regime as the primary baseline and the 2020 NWPR as the secondary baseline for the economic analysis is appropriate. The agencies use the pre-2015 regulatory regime as the primary baseline in the analysis as two courts have now vacated the 2020 NWPR and the agencies are currently implementing the definition of "waters of the United States" consistent with the pre-2015 regulatory regime. The agencies prepared the economic analysis pursuant to the requirements of Executive Orders 12866 and 13563 to provide information to the public.

The agencies also recognize that the baseline (pre-2015 regulatory regime) could have pre-existing impacts for communities with environmental justice concerns, but the analysis focuses on the impacts of changes due to the final rule. For this rule, consistent with Executive Order 12898 (59 FR 7629, February 16, 1994) and Executive Order 14008 on "Tackling the Climate Crisis at Home and Abroad" (86 FR 7619; January 27, 2021), the agencies examined whether the change in benefits due to this rule may be differentially distributed among communities with environmental justice concerns in the affected areas when compared to both baselines. Regardless of baseline, for most of the wetlands and affected waters impacted by this rule at a hydrologic unit code (HUC) 12 watershed level,⁹ there was no evidence of potential environmental justice impacts warranting further analysis. It is expected that where there were environmental justice impacts at the HUC 12 scale as compared to the secondary baseline of the 2020 NWPR, those impacts would be beneficial to communities with environmental justice concerns because this rule will result in more waters being jurisdictional than would be under the 2020 NWPR.

The agencies also note that Executive Orders 12866, 13563, and 12898 do not require the agencies to examine historic environmental injustices. Executive Order 12898 directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations (Indigenous peoples and/or people of color) and low-income populations. This Executive Order does not override the agencies' authorities under the Clean Water Act, which are discussed in the preamble to the final rule in Section IV.A.1. Moreover, because the final rule is a definitional rule, it does not impose any direct impacts on environmental or public health for communities at large. Therefore, this action does not have disproportionately high and adverse human health or environmental effects on Indigenous peoples, people of color, and/or low-income populations. The documentation for this decision is contained in the Economic Analysis for the Final Rule, which can be found in the docket for this action.

⁹ HUC boundaries are established by USGS and NRCS. These boundaries are numbered using nested codes to represent the scale of the watershed size. For example, HUC 12 watersheds are smaller than HUC 4 watersheds.

See also the agencies' response to comments in Section 17.1 and Chapters IV and V and Appendix F of the Economic Analysis for the Final Rule.

17.6.2 Comprehensiveness of the environmental justice analysis

Numerous commenters argued for a more comprehensive environmental justice analysis. A commenter asserted that the agencies need to conduct a more comprehensive impacts analysis that looks at past, current, and future potential impacts on water quality and involves public outreach and consideration of comments and recommendations from communities with environmental justice concerns. One commenter claimed a more comprehensive analysis of environmental justice impacts is necessary for alignment with E.O. 13990, which the commenter stated aims to “[hold] polluters accountable, including those who disproportionately harm communities of color and low-income communities.”

Agencies' Response: While the agencies recognize that some commenters advocated for the agencies to perform a more comprehensive environmental justice analysis, the agencies conclude that they have fulfilled their duties under Executive Orders 12898 and 13990. The agencies disagree with the commenter who asserted that the environmental justice analysis should consider past, current, and future potential impacts on water quality. The agencies' environmental justice analysis compares the final rule to the secondary baseline of the 2020 NWPR, as the effects compared to the primary baseline of the pre-2015 regulatory regime are expected to be *de minimis*. See Section IV and Appendix F of the Economic Analysis for the Final Rule.

This rule establishing the definition of “waters of the United States” does not by itself impose costs or benefits. Potential costs and benefits would only be incurred as a result of actions taken under existing Clean Water Act programs relying on the definition of “waters of the United States” (*i.e.*, sections 303, 311, 401, 402, and 404) that are not otherwise modified by this rule. The definition itself imposes no direct impacts on environmental or public health for communities at large; therefore, it will have no increased impact on communities with environmental justice concerns. See Section V.A of the preamble to the final rule.

In addition, the agencies disagree with the commenter who stated that additional outreach was needed. Meaningful involvement from communities with environmental justice concerns, as well as other stakeholders and co-regulators, has been a cornerstone of development of the final rule. The agencies have conducted tribal and federalism consultations and extensive public outreach with a wide range of stakeholders, including with environmental justice organizations. In developing this rule, the agencies have also reviewed and considered approximately 114,000 timely comments received on the proposed rule from a broad spectrum of interested parties. The agencies have provided many opportunities, both pre-proposal and during the public comment period, for stakeholders, including environmental justice organizations, to provide feedback and input to the agencies. See also Section III.C of the final rule preamble.

17.6.3 Ecosystem services in the environmental justice analysis

Numerous commenters specifically mentioned the need for greater consideration of ecosystem services in the agencies' environmental justice analysis. A couple of commenters observed that the loss of wetlands has resulted in loss of ecosystem services in densely populated areas. The commenters stated that this loss of ecosystem services has had disproportionate impacts on communities with environmental justice concerns. As a result, the commenters recommended an increased emphasis on ecosystem services through significant nexus analysis and consideration of historical instances of environmental injustice. One commenter pointed to the need for the agencies to move beyond consideration of the "physical, chemical, and biological impacts" on water quality to consider the value of ecosystem services of wetlands, such as the potential for wetlands to reduce urban heat island effects, improve air and water quality, provide opportunities for hunting and fishing in a more comprehensive environmental justice analysis.

Some commenters suggested that the proposed rule should more adequately address the value of ecosystem services and environmental justice issues. One commenter asserted the importance of protecting wetlands and streams because of their ability to ensure residents have clean water for drinking, bathing, swimming, and recreation. A commenter indicated their support for emphasis in the proposed rule on protection and restoration of ecosystem services in areas that have experienced historical losses and have greater current needs, particularly in low-income communities and communities of color.

Agencies' Response: The agencies acknowledge the commenters' assertions that the agencies should give more consideration to ecosystem services impacts in the environmental justice analysis. While the environmental justice analysis does not specifically address ecosystem services, the monetized benefits from the Economic Analysis for the Final Rule focuses on the value of ecosystem services provided by wetland areas protected due to mitigation requirements. The agencies have added additional discussion of ecosystem services in Section III.C.2.3 of the Economic Analysis for the Final Rule, including Figure III-2, which provides a conceptual value diagram of how increased mitigation requirements resulting from the final rule can generate public ecosystem service benefits.

However, the agencies conclude that they can only evaluate ecosystem services to the extent that they are related to restoring and maintaining the chemical, physical, or biological integrity of the nation's waters. For example, a significant nexus analysis is limited to an assessment of only those functions identified in the final rule that have a nexus to the chemical, physical, or biological integrity of paragraph (a)(1) waters. Thus, there are some important functions provided by wetlands, tributaries, and waters evaluated under paragraph (a)(5) that will not be assessed by the agencies when making jurisdictional decisions under this rule. For example, for purposes of a jurisdictional analysis under the significant nexus standard, the agencies will not be taking into account the carbon sequestration benefits that aquatic resources like wetlands provide.

17.6.4 Cumulative risk and environmental justice analysis

Several commenters pointed out the agencies themselves identified the limitations of their own analysis, noting the need to expand consideration of cumulative environmental risks caused by exposure to air pollution and proximity to hazardous waste management facilities.

Several commenters from conservation organizations and tribes also asserted the need to consider the cumulative impacts of climate change, which often fall disproportionately on communities with environmental justice concerns. The commenters provided specific examples of the potential impacts on tribes, including streams becoming intermittent or ephemeral, the effect of warming stream waters on salmon populations, and increased precipitation levels in the Northeast and Midwest.

Agencies' Response: In the Economic Analysis for the Proposed Rule, the agencies acknowledged the limitations of their environmental justice analysis and stated that they planned to broaden consideration of cumulative environmental risk by including exposure to air pollution (*e.g.*, particulate matter and ozone) and proximity to hazardous waste management facilities in the analysis for the final rule. The agencies have accordingly utilized additional environmental indicators included in the EJSCREEN tool in the environmental justice analysis for the final rule, including lifetime cancer risk from inhalation of air toxics; the air toxics respiratory hazard index, which is a ratio of exposure concentration to a health-based reference concentration; diesel particulate matter level in air, $\mu\text{g}/\text{m}^3$; 2016 average annual PM_{2.5} levels in air, $\mu\text{g}/\text{m}^3$; 2016 summer seasonal average of daily maximum eight-hour ozone concentration in air, parts per billion; the count of vehicles at major roads within 500 meters, divided by distance in meters; the percent of housing units built pre-1960, as an indicator of potential lead paint exposure; the count of hazardous waste management facilities within five kilometers (or the nearest neighbor outside of five kilometers), divided by distance to the facilities; and the count of proposed and listed National Priorities List sites within five kilometers (or the nearest neighbor outside of five kilometers), divided by distance to the sites. The agencies find that this allows communities with environmental justice concerns to not only be defined by socioeconomic and demographic information but also their cumulative exposure to environmental hazards beyond those in the scope of the final rule. See Section IV of the Economic Analysis.

The agencies acknowledge the commenters' assertion that the agencies should consider the cumulative impacts of climate change in the environmental justice analysis. The agencies acknowledge that future shifts in climate will have an effect on the characteristics and frequency of projects requiring Clean Water Act permits. Due in part to the inherent difficulty in predicting these future effects to Clean Water Act section 404 permitting, the agencies are unable to consider the cumulative impacts of climate change in the analysis.

17.6.5 Environmental justice concerns from implementation of the 2020 NWPR

A couple of commenters asserted the previous regulations defining “waters of the United States” have resulted in environmental injustices and provided numerous examples of such impacts. One commenter characterized the 2020 NWPR as including “weak clean water protections” and argued that the agencies’ own economic analysis of the proposed rule suggested that weakening of protections for wetlands under

the 2020 NWPR occurred in areas with greater proportions of communities with environmental justice concerns than the national average. This same commenter identified 10 communities in which the Corps made approved jurisdictional determinations that the commenter stated removed protections from critical waters in potential communities with environmental justice concerns using the EPA’s screening tool EJSCREEN. According to this commenter, the projects impacting communities with environmental justice concerns include:

- Hardeeville, South Carolina – a 6,000-acre mixed-use development project located near the Savannah National Wildlife Refuge in an area that the commenter noted was already burdened with significant industrial pollution (70 percent of residents are people of color; 35 percent of residents are low-income);
- Weyerhaeuser Site, Winnsboro, South Carolina – an area identified for redevelopment in which 3,000 linear feet of ephemeral streams were determined by the Corps to be non-jurisdictional under the 2020 NWPR (62 percent of residents are people of color; 40 percent of residents are low-income);
- Saxe Gotha Industrial Park, Cayce, South Carolina – an industrial park with ~28 acres of wetlands and ~3 acres of pond that the Corps declared non-jurisdictional under the 2020 NWPR, which the commenter claimed already had high levels of wastewater discharge and a Superfund site;
- Burke Business Park, Waynesboro, Georgia – a ~500-acre industrial park adjacent to 13 wetlands covering 30 acres (69 percent of residents are people of color and 49 percent residents are low-income);
- Brantley County Development, Waynesville, Georgia – a proposed project site that would include an industrial park and landfill that is an ongoing subject of litigation due to resident opposition for which the Corps determined had 34.5 acres of non-jurisdictional wetlands under the 2020 NWPR;
- Cocoa Apartment Complex, Cocoa, Florida – a 268-unit apartment complex for which the Corps determined contained 54.37 acres of non-jurisdictional wetlands (74 percent of residents are people of color and 70 percent of residents are low-income);
- White Mesa Mine, New Mexico (near the Pueblo of Zia) – expansion of the White Mesa open-pit gypsum mine for which the Corps determined contained 5,000 linear feet of non-jurisdictional ephemeral streams under the 2020 NWPR just outside the Pueblo of Zia reservation (100 percent of residents are people of color and 65 percent are low-income);
- Houston Fuel Oil Terminal Company, Harris County, Texas – the Corps determined operation of Houston Fuel Oil Terminal Company fuel and crude oil storage and transportation in an area that the commenter identified had other existing environmental issues, including increased risk of childhood cancer, above-normal air levels of formaldehyde, high levels of wastewater discharge, and elevated risks of cancer due to high levels of air toxics;
- Robert Brothers Farm, Wallace, Louisiana – the Corps determined that 23.5 acres of wetlands and 44,580 feet of ditches were non-jurisdictional in an area that the commenter stated had high levels of industrial pollution, high levels of cancer risk, and high levels of wastewater discharge with the known nickname of “Cancer Alley”; and
- Former Hollybrook Plantation, East Carroll Parish, Louisiana – the Corps determined that 157 acres of prior converted cropland were non-jurisdictional that the commenter stated was in an area with substantial flooding and existing degradation due to agricultural, municipal, and industrial usage (in the immediate project area, 70 percent of residents are people of color and 51 percent of residents are low-income).

One commenter expressed particular concern about protection of the Cahaba River drinking water source in Alabama, which the commenter stated originates from small upland drainages, and noted that costs of drinking water treatment for this drinking water source disproportionately impact low-income individuals. This commenter provided the specific example of how wastewater from the Cahaba River basin is exported to the Valley Creek wastewater treatment plant because Valley Creek (located near predominantly communities with environmental justice concerns) is designated as a “Limited Wastewater Fishery” that allows higher pollutant loads from wastewater discharge. The commenter urged that “that no other river should be a sacrifice zone for the water quality of streams in wealthier communities that are majority white.”

Agencies’ Response: While impacts on communities with environmental justice concerns are not a basis for determining the scope of the definition of “waters of the United States,” the agencies recognize that the burdens of environmental pollution and climate change often fall disproportionately on communities with environmental justice concerns. The agencies acknowledge the commenters’ assertions that the 2020 NWPR provided less protection for aquatic resources than the pre-2015 regulatory regime. See Final Rule Preamble Section III.B.5. The agencies agree with the commenter’s assertion that the agency found in the environmental justice analysis in the Economic Analysis for the Proposed Rule that changes in wetland area did occur in potential communities with environmental justice concerns than the national average, but the agencies found that this occurred only in a small proportion of wetlands that have area changes greater than 50 acres. The agencies have updated the analysis for the Economic Analysis for the Final Rule. See Chapter IV of the Economic Analysis for the Final Rule.

17.6.6 Environmental justice issues associated with changes from the pre-2015 regulatory text and the pre-2015 regulatory regime

Numerous commenters asserted the proposed rule would decrease protections for waters compared to the regulatory text of the pre-2015 definition and expressed concerns regarding what the commenters perceived to be a lack of an environmental justice analysis conducted. Several commenters indicated the proposed rule rolls back categorical protections for tributaries and wetlands adjacent to other waters that were in the pre-2015 regulatory text and asserted the agencies have failed to provide analysis of the environmental justice impacts of this change. These same commenters claimed the agencies’ economic analysis for the proposed rule continues to falsely assume that limiting the scope of jurisdictional waters under the Clean Water Act will not impact regulation of activities covered by sections 311 and 402 of the Clean Water Act. The commenters observed that most tribal lands rely upon the agencies and their permitting systems to protect tribal waters and narrowing the definition of jurisdictional waters will have a disproportionate impact on tribes. A commenter expressed concerns that an overly restrictive definition of “waters of the United States” could cause harm to environmental justice communities. Meanwhile, a commenter expressed concerns regarding the “mine field of jurisdiction created by the 1986 rules” and the impact of “unclear rules” on minority farm producers.

Agencies’ Response: The agencies recognize the commenters’ concerns that the proposed rule reduces protections for tributaries and adjacent wetlands compared to the pre-2015 regulatory text. The final rule seeks to return generally to the longstanding regulatory framework that existed prior to the 2015 Clean Water Rule, but also restores those

regulations with necessary limitations to ensure the definition of “waters of the United States” reflects consideration of the agencies’ statutory authority under the Clean Water Act and relevant Supreme Court decisions. In developing the final rule, the agencies thoroughly considered alternatives to this rule, including the pre-2015 regulations, and have concluded that this final rule best accomplishes the agencies’ goals to promulgate a rule that advances the objective of the Clean Water Act, is consistent with Supreme Court decisions, is informed by the best available science, and promptly and durably restores vital protections to the nation’s waters. See, e.g., Section IV.B.2 of the Preamble to the Final Rule for further discussion of the agencies’ grounds for concluding that the pre-2015 regulatory definition, which was recodified in the 2019 Repeal Rule, is not a suitable alternative to the final rule.

The agencies’ environmental analysis does not look at a change from the pre-2015 regulatory text to the final rule. This is because the pre-2015 regulatory text is not a baseline for the final rule. The agencies are not currently implementing just the regulatory text from the pre-2015 definition of “waters of the United States”; the agencies are implementing those regulations consistent with relevant case law and as informed by applicable guidance. Thus, in this rulemaking effort, “pre-2015 regulatory regime” refers to the agencies’ pre-2015 definition of “waters of the United States,” implemented consistent with relevant case law and longstanding practice, as informed by applicable guidance, training, and experience. Because the agencies conclude that this final rule represents *de minimis* indirect costs and benefits compared to the pre-2015 regulatory regime, the agencies used the secondary baseline of the 2020 NWPR for the environmental justice analysis.

The agencies acknowledge the commenters’ concerns regarding disproportionate impacts to communities with environmental justice concerns and to tribes from a narrowing of the definition of “waters of the United States.” While impacts on communities with environmental justice concerns are not a basis for determining the scope of the definition of “waters of the United States,” the agencies recognize that the burdens of environmental pollution and climate change often fall disproportionately on communities with environmental justice concerns. The final rule will result in more waters being found to be “waters of the United States” compared to the 2020 NWPR. The agencies also expect that there will be a slight and unquantifiable increase in waters being found to be jurisdictional under the final rule in comparison to the pre-2015 regulatory regime.

The agencies disagree with the commenters who asserted that the agencies have claimed that Clean Water Act sections 311 and 402 are not impacted by revisions to the definition of “waters of the United States.” While any impacts are indirect, the agencies clearly list Clean Water Act sections 311 and 402 amongst the list of programs that use the definition of “navigable waters” in Section III.A.1 of the final rule preamble and explain in that Section how those programs are impacted by the definition of “waters of the United States.” The final rule does not by itself impose costs or benefits. Potential costs and benefits would only be incurred as a result of actions taken under existing Clean Water Act programs relying on the definition of “waters of the United States” (i.e., sections 303, 311, 401, 402, and 404) that are not otherwise modified by this rule. Entities currently are, and will continue to be, regulated under these programs that protect “waters of the United States” from pollution

and destruction. Each of these programs may subsequently impose costs as a result of implementation of their specific regulations. While the agencies are unable to quantify indirect costs and benefits arising from the final rule to the Clean Water Act section 311 and section 402 programs, the Economic Analysis does provide qualitative assessments for these programs. The qualitative assessments for the Clean Water Act section 311 and 402 programs provide a national assessment of the potential effects of this rule in cases where the agencies currently lack the datasets to quantitatively assess the effects. See Sections III.A and III.B of the Economic Analysis.

17.6.7 Distributional and other considerations in the environmental justice analysis

One commenter called for the agencies to “act quickly to restore robust clean water protections and defend clean water for the nation’s most vulnerable populations” and urged agencies to acknowledge, identify, and address the inequitable and disproportionate impacts of water pollution on communities with environmental justice concerns. One commenter observed the proposed rule needs to “do more to address environmental justice issues.” Other commenters expressed the importance for the agencies to consider environmental justice impacts within the proposed rule, particularly with regards to wetlands loss and flooding potential due to climate change.

Several commenters provided advice on addressing environmental justice issues. One commenter expressed that any new rule defining “waters of the United States” should consider inequities caused by environmental damage and “must identify and prevent the disproportionate harm to the most vulnerable communities and be applied equitably.”

One commenter described ways in which the agencies could ensure that the final rule might advance environmental justice, including by recognizing how wetlands mitigate flooding risks, filter toxins, and support migratory birds; focusing efforts on the impacts of communities with environmental justice concerns in 100-year floodplains; and accounting for different sources of environmental pollution that impact communities with environmental justice concerns.

Agencies’ Response: The agencies acknowledge the commenters’ concerns about the extent to which environmental justice issues were addressed in the proposed rule. While impacts on communities with environmental justice concerns are not a basis for determining the scope of the definition of “waters of the United States,” the agencies recognize that the burdens of environmental pollution and climate change often fall disproportionately on communities with environmental justice concerns. The agencies agree with the commenter’s assertion that a rule to redefine “waters of the United States” should consider distributional inequities caused by potential environmental impacts, pursuant to E.O. 12898, and have done so in the Environmental Justice Analysis. See Chapter IV of the Economic Analysis for the Final Rule.

17.6.8 Disproportionate impacts related to water

Several commenters provided insights into the disproportionate impacts of inadequate water protections and pollution on communities with environmental justice concerns. One commenter asserted “it is well established that the burdens of environmental contamination and industrial pollution fall

disproportionately on low-income communities and communities of color,” and observed that water pollution is “no exception” to this general rule. Several commenters asserted that communities with environmental justice concerns are more likely to live near areas prone to flooding because such land has been historically less expensive to build on and sometimes because of the historical existence of redlining policies. One commenter claimed these vulnerable populations are less likely to have the resources needed to recover from flood damage. Another commenter asserted that once wetlands are disturbed in communities with environmental justice concerns, mitigation projects are less likely to be placed in these areas compared to predominantly white communities. A few commenters also claimed that flooding and its associated effects are expected to worsen due to climate change impacts. A few commenters cited studies that estimate that communities with at least 20 percent Black population will see a 40 percent increase in flood risk by 2050, nearly double the increase in flooding risk compared to communities with proportionately smaller Black populations.

Other commenters asserted that communities with environmental justice concerns are more likely to live in areas with water pollution. Commenters also asserted that degraded water quality from industrial pollution and agricultural runoff are more likely to exist in communities with higher percentages of people of color. A few commenters asserted that low-income minority populations and tribal communities, which tend to rely more on fish and aquatic life for food, are disproportionately impacted by water pollution and fish contamination. One commenter claimed that water pollution, loss of fish habitat, and changing water temperatures and flows threaten food sources and access to means of social interaction for people of color. Other commenters asserted the particular importance of water to the “beliefs, cultural practices, and daily activities” of tribes. A commenter asserted the importance of water to the local tribes and expressed concerns regarding water quality that result from confusion over jurisdiction of the Clean Water Act. A couple of commenters also observed that vulnerable populations are also most likely to live in areas with inadequate water infrastructure. One of these commenters observed that greater rates of violations of water regulation tend to be observed in counties with significant vulnerable populations. A few commenters also asserted challenges with clean water access and drinking water contamination.

Another commenter stated that they provide water and wastewater services to a population that the commenter characterized as disadvantaged or severely disadvantaged and struggling to afford basic services. The commenter requested that the agencies consider not increasing the costs of regulatory compliance through this rule because it could affect water and wastewater affordability, “with an unintended impact on our most vulnerable customers” who ultimately shoulder compliance costs.

Agencies’ Response: The agencies acknowledge the information provided by the commenters about potential disproportionate impacts to communities with environmental justice concerns from water pollution and flooding. While impacts on communities with environmental justice concerns are not a basis for determining the scope of the definition of “waters of the United States,” the agencies recognize that the burdens of environmental pollution and climate change often fall disproportionately on communities with environmental justice concerns.

In regard to the final rule’s impact on the cost of regulatory compliance, the final rule does not by itself impose costs or benefits. Potential costs and benefits would only be incurred as a result of actions taken under existing Clean Water Act programs relying on the definition of “waters of the United States” (i.e., sections 303, 311, 401, 402, and 404) that are not

otherwise modified by this rule. Entities currently are, and will continue to be, regulated under these programs that protect “waters of the United States” from pollution and destruction. Each of these programs may subsequently impose costs as a result of implementation of their specific regulations. The agencies qualitatively discuss the indirect costs and benefits to the Clean Water Act section 402 program in Section III.B of the Economic Analysis for the Final Rule.

17.6.9 Relationship of race to other factors

One commenter stated that it “would be helpful to include economic facts showing that minority communities would not struggle with increased housing or land prices that would increase this group’s level of poverty or lack of clean water.” The commenter contended that studies demonstrate that race is one of the most important determinants of consistent access to clean water in the United States, and that addressing minorities that may have apprehension about a rule change helps the agencies build trust.

Agencies’ Response: The agencies acknowledge the commenter’s statement that incorporating an analysis of the economic impacts of the final rule on communities with environmental justice concerns would be helpful and have evaluated in the environmental justice analysis if these communities are potentially disproportionately impacted by the final rule as compared to the secondary baseline of the 2020 NWPR. The agencies recognize the commenter’s assertion that race is an important determining factor for access to clean water. The agencies have included a variety of demographic information, including race, as part of their environmental justice analysis. In the analysis, areas that will experience wetland changes due to the final rule have higher percentages of people of color regardless of the magnitude of the change. See Chapter IV of the Economic Analysis for the Final Rule. However, any costs associated with housing or land prices are indirect, outside the scope of this rulemaking, and are not assessed in the environmental justice analysis. The final rule is definitional in nature. The regulations established in the final rule are founded on the familiar framework of the 1986 regulations and are generally consistent with the pre-2015 regulatory regime.

17.7 Sector Impact Analysis

One commenter stated, “The Agencies also failed to adequately analyze the implications of the Proposed Rule’s changes across CWA programs and its impacts on the public, including small entities in particular.” One commenter stated that the proposed rule would have significant economic impacts on small entities, stating that the agencies estimated that the Clean Water Act section 404 permit costs would increase between \$108.6 million to \$275.9 million for projects in 26 states transitioning from the 2020 NWPR to the proposed rule. The commenter stated that these costs do not reflect costs for section 404 projects in remaining states and other jurisdictions, and do not reflect costs associated with other Clean Water Act programs such as section 402 and section 311.

One commenter requested that the “Energy Generation” category for the sector analysis be further divided and analyzed according to project description (*e.g.*, coal, co-gen, geothermal, hydropower, natural gas, nuclear, oil, solar, and wind).

Agencies' Response: The agencies disagree with commenters who stated that the agencies did not consider the implications of this rulemaking on small entities. This rule codifies a regulatory regime very similar to the one currently being implemented nationwide due to the vacatur of the 2020 definition of “waters of the United States.” Additionally, the final rule does not “subject” any entities of any size to any specific regulatory burden. It is designed to clarify the statutory term “navigable waters,” defined as “waters of the United States,” which defines the scope of Clean Water Act jurisdiction 33 U.S.C. 1362(7). The final rule does not by itself impose costs or benefits. Potential costs and benefits would only be incurred as a result of actions taken under existing Clean Water Act programs relying on the definition of “waters of the United States” that are not otherwise modified by this rule. The scope of Clean Water Act jurisdiction is informed by the text, structure, and history of the Clean Water Act and Supreme Court case law, including the geographical and hydrological factors identified in *Rapanos*. See Final Rule Preamble Section III.C for a summary of the agencies’ engagement with co-regulators and stakeholders, including engagement with small entities.

See section 17.4.6 of this document for the agencies’ response to comments regarding costs associated with other Clean Water Act Programs.

The agencies acknowledge the commenter who provided recommendations for analyzing the “Energy Generation” category as part of the sector analysis. The agencies use the North American Industry Classification System (NAICS) as a consistent framework for describing the potentially affected sectors. The Electric Power Generation sector is a 5-digit NAICS category, with 8 subsectors at the 6-digit level, some of which match the more detailed project types noted in the Appendix G of the Economic Analysis for the Final Rule and in the comment, and some of which do not. As such, the agencies could not consistently report at the 6-digit NAICS level.