Revised Definition of "Waters of the United States"
Response to Comments Document
SECTION 10 – WETLANDS AND ADJACENCY

See the Introduction to this Response to Comments Document for a discussion of the U.S. Environmental Protection Agency and the U.S. Department of the Army's (hereinafter, the agencies') comment response process and organization of the eighteen sections.

10.0 WETLANDS AND ADJACENCY–GENERAL

A few commenters generally critiqued the proposed rule's criteria for establishing if a wetland is "adjacent" as "overly-broad and ambiguous." One commenter discussed the importance of a more specific and clearer definition of wetlands for transportation project funding, planning, scheduling, permitting, construction, and costs, and also warned of negative impacts (*e.g.*, delays) from the concept of adjacency as defined. Some of the commenters critiqued the approach to wetlands and adjacency in the proposed rule claiming it was unclear and/or regulatory over-reach.

Several commenters presented their own suggested approaches to defining adjacency. A few commenters recommended that the agencies use the best available science that addresses the physical, chemical, and biological connections of wetlands to "waters of the United States" in finalizing a rule, guidance, and/or financial assistance at local levels for jurisdictional determinations.

One commenter said the agencies' definition of "adjacent wetlands" is not identical to the pre-2015 regulatory regime, as the agencies indicated, which the commenter stated unravels the long-held understanding of adjacency.

> **Agencies' Response: The agencies disagree with the commentors that regard the approach to adjacency as "overly-broad and ambiguous," unclear, or over-reach. Under the final rule, the agencies have made no changes to the longstanding definition of "adjacent" as bordering, contiguous, or neighboring, and includes waters separated from other "waters of the United States" by constructed dikes or barriers, natural river berms, beach dunes and the like as "adjacent wetlands." The agencies are not including all adjacent wetlands as jurisdictional waters. Rather, the agencies conclude that jurisdiction over this longstanding, familiar category of waters when they meet either the relatively permanent standard or the significant nexus standard is consistent with the statute, informed by relevant Supreme Court decisions, and reflects the record before the agencies, including consideration of the best available science, as well as the agencies' expertise and experience implementing the pre-2015 regulatory regime. See Technical Support Document (TSD) Section III.B for the scientific support of wetlands and adjacency; Final Rule Preamble Sections IV.C.5 and IV.C.10 for additional information. The agencies have not established a specific distance limitation in the rule beyond which wetlands are never adjacent because whether a wetland is reasonably close such that the wetland and the jurisdictional water are part of the same aquatic ecosystem depends on regional variations in climate, landscape, and geomorphology. But the agencies can state based on nearly 45 years of implementation of this definition that in a substantial number of cases, adjacent wetlands abut (touch) a jurisdictional water. And, on the whole, nationwide, adjacent wetlands are within a few hundred feet from jurisdictional waters (and in the instances where the distance is greater than a few hundred feet, adjacency is likely supported by a pipe, non-jurisdictional ditch, karst geology, or some other feature that connects the wetland directly to the jurisdictional water). While bright-line rules (for example, wetlands that are a specific number of feet from a jurisdictional water are not "adjacent") are easiest to understand and implement, convenience is not the only goal the agencies must consider in administering the Clean Water Act. Because the relationship between a wetland and a proximate jurisdictional water can depend upon a number of site-specific factors, like climate, geomorphology, landscapes, hydrology, and size of the jurisdictional water (*e.g.*, the ocean compared to a**

headwater stream), and because the central purpose of the Act is to protect the integrity of our nation's waters, a more nuanced analysis is required. See Final Rule Preamble Section IV.C.5 for additional discussion.

The agencies disagree that the proposed definition will contribute significantly to costs for jurisdiction determinations. 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. See also the agencies' response to comments in Section 17 on the Economic Analysis. As discussed in Final Rule Preamble Section IV.A, 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.

The agencies recognize commenters who recommended changes to the proposed approach to wetlands and adjacency, including use of the best available science. The definition of "adjacent" is a longstanding and familiar definition that is supported by the text of the statute, Supreme Court case law, and science. *See, e.g., Riverside Bayview*[1], 474 U.S. at 134 ("[T]he Corps' ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act."). Thus, the longstanding definition of "adjacent" reasonably advances the objective of the Clean Water Act. In this final 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' determination of the statutory limits 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." Through this rulemaking process, the agencies have considered all timely public comments on the proposed rule, including changes that improve the clarity, implementability, and durability of the definition. The regulations established in this rule are founded on the familiar framework of the 1986 regulations and are generally consistent with the pre-2015 regulatory regime. 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.

[1] *United States v. Riverside Bayview Homes*, 474 U.S. 121, 131-35 (1985)

The agencies agree with the need for consistency in the rule's approach to wetlands and adjacency with Supreme Court precedents. The agencies have included the relatively permanent and significant nexus standards in the final rule based on their conclusion that together those standards are consistent with the statutory text, advance the objective and policies of the Clean Water Act, and are supported by the scientific record. See the agencies' response to comments in Section 2.3.5 regarding the agencies' legal authority over adjacent wetlands, including consistency with the Constitution, the Clean Water Act, and case law.

The agencies disagree that the final rule unravels the long-held understanding of adjacency. In fact, the agencies have made no changes to the longstanding definition of "adjacent." Final Rule Preamble Section IV.C.5 explains how the agencies will implement the definition of "adjacent" consistent with longstanding practice. The regulations established in this rule are founded on the familiar framework of the 1986 regulations and are generally consistent with the pre-2015 regulatory regime. They are fully consistent with the statute, informed by relevant Supreme Court decisions, and reflect a reasonable interpretation based on the record before the agencies, including the best available science, as well as the agencies' expertise and experience implementing the pre-2015 regulatory regime. See Final Rule Preamble Section IV.A.4 for further discussion of the agencies' finding that the final rule is both familiar and implementable.

10.1 Wetlands–Science/Functions

10.1.1 Additional wetlands protections

Many commenters argued that wetlands can have physical, chemical, and biological connections to other waters and called for greater jurisdictional protections. Many commenters explicitly connected their discussions of the science and functions of wetlands with calls for additional protections for wetlands. Most of these calls for additional protections were set in contrast to the 2020 Navigable Waters Protection Rule (2020 NWPR) or to the proposed rule. A couple of commenters voiced support for the concept of "no net loss" of wetlands. One of those commenters encouraged "a management approach that first avoids the destruction of wetlands, then minimizes wetland loss, and mitigates any loss as the final alternative." A number of commenters discussed harmful impacts to wetlands including, for example, wetland losses from development resulting from the 2020 NWPR. A few commenters specifically mentioned negative impacts to wetlands, including adjacent and/or isolated wetlands, from climate change. One of those commenters highlighted that the "dynamic interplay between wetlands and climate is extremely complicated and a primary recommendation by scientists across the globe for addressing climate change is to avoid disturbing wetlands." Another commenter explained that "wetlands are being substantially affected by even the smallest changes in climate, including changes in hydrologic regimes due to sea level rise and decreased surface and ground water levels, air temperature changes, and soil temperature changes. Reduced precipitation levels are likely to decrease surface water levels and flow, which will impact the adjacency parameters for their neighboring wetlands, resulting in an increase in isolated wetlands (*e.g.*, ephemeral wetlands)."

A few commenters discussed local policies and implementation approaches and the associated impacts to the function of wetlands. One commenter stated, "New York State has developed a regulatory framework

of planning and guidance to communities throughout the years to reduce or eliminate development in environmentally sensitive areas to preserve the natural functions and ecosystem benefits that wetlands and other waters provide," noting several of the functions of wetlands, and recognizing state authorities verses federal regulatory authority. A number of commenters cited scientific studies to support broader jurisdiction over wetlands, including regulating subsurface flows. Commenters also cited these studies in critiques of the 2020 NWPR and associated distance parameters.

One commenter connected arguments about the need for stronger protections for wetlands to the Infrastructure Investment and Jobs Act, stating, "wetlands naturally provide many of the functions pursued as water quality improvement and climate resilience measures in the infrastructure law." The commenter argued that failing to adopt additional protections would undercut infrastructure investments.

A few other commenters argued for stronger wetlands protections based in part on decisions of the Supreme Court. One commenter stated, "the proposed definition of adjacent wetlands offers better protection than the [2020] NWPR and is consistent with Supreme Court decisions. However, the proposed definition is not currently strong enough to include known types of biological, chemical, and physical connections, as supported by the U.S. Environmental Protection Agency, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (2015) ("Science Report")[2] and the best available science." One commenter suggested following the 2015 Clean Water Rule approach to adjacency, stating:

> "As the discussion in the agencies' Technical Support Document demonstrates, [see Proposed Rule Technical Support Document (TSD) at 173-196] the scientific record shows conclusively that floodplain wetlands have multiple significant effects on downstream waters. Accordingly, such wetlands should be protected categorically in recognition of the significant nexus they have to traditional navigable waters, interstate waters, and the territorial seas … At a minimum, the agencies must protect those adjacent waters—ones that are "adjacent" as defined in the 2015 Clean Water Rule—that the agencies previously determined to have a significant nexus."

Another commenter expressed concerns based on major wetland losses in the greater Houston region while the *Rapanos* Guidance[3] framework was in place. That commenter explained that the Galveston Army Corps District interprets *SWANCC*[4] and Justice Kennedy's opinion in *Rapanos*[5] incorrectly to exempt from regulatory jurisdiction almost all regional wetlands outside of FEMA's 100-year floodplain—an approach which differs from that taken by other Army Corps district offices both in and out of Texas.

A commenter stated that all adjacent wetlands that significantly affect "downstream waters" must be protected under the Act.

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[2] U.S. Environmental Protection Agency, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (Final Report), EPA/600/R-14/475F (2015), *available at* https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=296414.

[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)

[4] *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) ("*SWANCC*")

[5] *Rapanos v. United States*, 547 U.S. 715 (2006) ("*Rapanos*")

Agencies' Response: The agencies agree with commenters that the scientific literature unequivocally demonstrates that wetlands and open waters in riparian areas and floodplains are chemically, physically, and biologically integrated with rivers via functions that improve water quality in paragraph (a)(1) waters. Such functions include: the temporary storage and deposition of channel-forming sediment and woody debris; temporary storage of local groundwater that supports baseflow in rivers; transformation and transport of stored organic matter; assimilation, transformation, or sequestration of pollutants; providing nursery habitat for breeding fish and amphibians; colonization opportunities for stream invertebrates and maturation habitat for stream insects; desynchronization of flood waters; and sequestration of pollutants. See TSD Sections I and III.B. The rule provides for jurisdiction for wetlands adjacent to waters that are not paragraph (a)(1) waters that meet the relatively permanent standard or the significant nexus standard, so adjacent wetlands, alone or in combination with similarly situated waters in the region, that significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters are protected by the Clean Water Act.

Several commenters articulated the linkage of the health of the nation's waters and climate impacts. The agencies recognize and agree that climate change will impact "waters of the United States." See Section II.C of the TSD. When the agencies assess whether or not a water is a "water of the United States," consistent with longstanding practice, they do not assess future conditions based on potential climatic changes. See also Final Rule Preamble Section IV.C.9.c.ii for a discussion of how the agencies can consider a changing climate under the significant nexus standard consistent with the best available science. The agencies also agree that the protection of wetlands needs to be undertaken at all levels of government to assure protection of the important functions of these waters on multiple geographic levels.

The agencies agree that protecting wetlands is an essential part of protecting our nation's infrastructure and helps to further the objectives of the Infrastructure Investment and Jobs Act. The agencies are committed to assuring that the rule is implemented consistently throughout the nation. The final rule does not categorically exclude wetlands outside of FEMA's 100-year floodplain.

Determinations regarding the jurisdictional status of any specific water are outside the scope of this rulemaking. The agencies will assess jurisdiction under the final rule on a case-specific basis.

See Preamble Sections IV.A, IV.C.5.a, and the agencies' response to comments in Section 2.3.5 regarding the agencies' legal authority over wetlands, including consistency with case law.

10.1.2 Wetland functions

Many commenters discussed the science and beneficial functions of wetlands, noting that wetlands can improve water quality by filtering out algal blooms, pollution, and sediment. In discussing wetland protections in the context of science and functions, one commenter called for "additional federal funding and technical assistance."

Many commenters also discussed other wetland functions and benefits, including:

- Benefits to wildlife (*e.g.*, birds, fish) and/or habitats, including endangered species;
- Mitigating floods, storms, and/or related climate change impacts, with some commenters particularly discussing floodplain wetlands;
- Carbon storage;
- Mitigating droughts and/or low flows;
- Supporting clean drinking water and/or drinking water supplies; and
- Social benefits such as health, safety, and economy (*e.g.*, recreation, tourism, fisheries).

A few commenters explained that wetlands "retain large volumes of stormwater, floodwater, and contaminated runoff that would otherwise harm river quality. [Proposed Rule TSD at 30.]." A commenter shared that "filtering stormwater runoff through the soil profile reduces phosphorus and turbidity dramatically." Another commenter discussed that "the promotion of subsurface water management increases production on current farmland, allowing non-cropland to be reserved for other uses, such as hunting and recreation." The same commenter expressed support for "reasonable, subsurface management of water on cropland in order to increase the storage of floodwaters in the soil profile, thereby reducing surface run-off, soil erosion, sediment transfer, and reducing peak-flow discharges downstream."

One commenter stated that floodplain wetlands have the following functional connections to other jurisdictional waters.:

- Surface water flows/exchange;
- Groundwater flows/exchange;
- Sediment source;
- Flood control;
- Pollutant filtration/retention/sequestration; and
- Wildlife habitat.

Many commenters voiced support for the 2015 Clean Water Rule and its approach to adjacency. Several commenters cited Supreme Court precedent as recognizing the functions of wetlands, including Justice Kennedy's statement in the *Rapanos* case that "it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme." Commenters noted that wetlands play a key role in achieving the Clean Water Act's objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

> **<u>Agencies' Response</u>: The agencies agree wetlands play a key role in achieving the Clean Water Act's objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Consistent with the proposal, this rule retains the adjacent wetlands provision of the 1986 regulations, with amendments to reflect the agencies' interpretation of the statutory limits on the scope of the "waters of the United States" informed by the law, the science, and agency expertise.**
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> **The agencies agree that wetlands serve valuable functions for receiving waters. As mentioned in Section 10.1.1, the scientific literature unequivocally demonstrates that wetlands and open waters in riparian areas and floodplains are chemically, physically, and biologically integrated with rivers via functions that improve water quality in paragraph (a)(1) waters. The agencies agree with the commenters who linked the functions provided**

by wetlands to water quality benefits realized by receiving waters. Most of the biogeochemical functions described by commenters are reflected in the list of key functions to be assessed and factors to be considered in the significantly affect definition described in the Final Rule Preamble Section IV.C.9. and the agencies' response to comments in Section 12 on the significant nexus standard. The agencies have modified the factors in response to public comments and to increase clarity in the final rule. The factors in the final rule influence the types and strength of chemical, physical, or biological connections and associated effects that streams, wetlands, and open waters have on paragraph (a)(1) waters. The functions in the final rule are indicators that are tied to the chemical, physical, or biological integrity of paragraph (a)(1) waters.

Specific allocations of federal funding and technical assistance are beyond the scope of this rule.

10.1.3 Protection of specific wetland types/geographic areas

Many commenters connected the science and functions of wetlands either generally or specifically to their support for protecting specific wetland types, specific wetlands, or wetlands in specific geographic areas, and to the importance of wetlands to watershed protection. Several commenters called for protections for particular wetland types (*e.g*., isolated, adjacent, riparian, floodplain, physically separated). A few commenters expressed concern over cumulative wetland losses in specific geographic regions, states, or local areas. A commenter highlighted there has been substantive wetland losses in specific geographic areas, including that "twenty-two states have lost more than 50% of their wetland acreage, ten states in the Midwest and coastal areas have lost more than 70%, and California has lost 91%."

A number of commenters identified wetlands in particular geographic areas that warrant protection, including:

- The Southeast, especially those that mitigate flooding or serve to filter drinking water;
- California;
- Illinois, Mississippi, and Ohio Rivers and the Gulf of Mexico;
- Florida, including headwaters;
- Missouri;
- New York State;
- North Carolina, particularly pocosins, as well as other coastal and mountain wetlands (*e.g.*, headwaters);
- Texas, particularly coastal (including coastal prairie) wetlands, for example in Harris County, Montgomery County, Houston, Galveston Bay, Matagorda Bay;
- The Chesapeake Bay watershed;
- The Navajo Nation, including the Chaco River, the Puerco River, and the Chinle Wash; and
- Los Alamos National Laboratory, including the Rio Grande and Colorado River.

In addition to wetland types and geographic areas, commenters raised concerns about inconsistent jurisdictional decisions. A few commenters were concerned that wetland complexes were vulnerable to inconsistent decisions and historic disconnections caused by development, and recommended assessing these in the aggregate as wetland complexes that are functionally integrated through surface, subsurface, and groundwater connections. One commenter explained that despite scientific research quantitatively

measuring the hydrological connectivity of Texas coastal prairie wetland complexes to "waters of the United States," "the Galveston District has categorically excluded most Texas coastal prairie wetlands from the Clean Water Act's protections."

A few commenters called for consideration of regional differences in wetland jurisdictional approaches related to adjacency, some citing the Science Report in support of their comments. Another commenter discussed the importance of wetlands' functions in meeting the goals of the 2014 Chesapeake Watershed Agreement.

> **Agencies' Response: The agencies recognize the ecosystem and societal services that particular wetland types provide, as described in the Science Report and TSD Sections III.B, III.D.i, and III.G. In the Final Rule Preamble Section IV.A and the TSD Section III.B, the agencies acknowledge that the best available science supports that the functions provided by adjacent wetlands to paragraph (a)(1) waters include valuable flood control and water quality functions such as interruption and delay of the transport of water-borne contaminants over long distances, retention of sediment, prevention and mitigation of drinking water contamination, and assurance of drinking water supply.**
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> **The agencies agree that wetlands adjacent to paragraph (a)(1) waters, including lakes, provide important functions to those waters. Further, the agencies agree wetlands that meet the definition of "wetland" in the final rule are considered adjacent wetlands if they meet one of three criteria. First, there is an unbroken surface or shallow subsurface connection to jurisdictional waters. Second, they are physically separated from jurisdictional waters by human-made dikes or barriers, or natural breaks (*e.g.*, river berms, beach dunes). Or third, their proximity to a jurisdictional water is reasonably close. Wetlands that meet one of these three criteria are considered bordering, contiguous, or neighboring in the final rule. For more details regarding lakes used for waterborne commerce, see the Final Rule Preamble Section IV.C.2 and response to comments Section 6. For more details about smaller lakes and ponds, see the Final Rule Preamble IV.C.4 and IV.C.6 and the agencies' response to comments in Sections 9 and 11.**
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> **The agencies' approach to adjacent wetlands in this rule reflects consideration of regional differences and is intended to be flexible enough to accommodate these differences, while not specifically identifying wetlands warranting protections in particular parts of the country. See the Final Preamble Section IV.C.5.**
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> **If the wetland in question does not meet the criteria for an adjacent wetland, then the agencies will evaluate the wetland under paragraph (a)(5). See Final Rule Preamble Section IV.C.6.c and agencies' response to comments Subject 11. Because some wetlands identified by commenters may be jurisdictional under paragraph (a)(1), see also the agencies' response to comments in Section 6 and the Final Rule Preamble Section IV.C.5.a.**
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> **Most of the biogeochemical functions described by commenters are reflected in the list of key functions to be assessed and factors to be considered in the significantly affect definition described in the Final Rule Preamble Section IV.C.9. The agencies have modified the factors in response to public comments and to increase clarity in the final rule. The factors in the final rule are readily understood criteria that influence the types and strength of chemical, physical, or biological connections and associated effects on paragraph (a)(1)**

waters. The functions in the final rule are indicators that are tied to the chemical, physical, or biological integrity of paragraph (a)(1) waters.

The scientific literature unequivocally demonstrates that wetlands and open waters in non-floodplain landscape settings (hereafter called "non-floodplain wetlands") can provide numerous functions that benefit the chemical, physical, and biological integrity of larger downstream waters, including the paragraph (a)(1) waters, particularly when analyzed in the aggregate. These functions include: storage of floodwater; recharge of groundwater that sustains river baseflow; retention and transformation of nutrients, metals, and pesticides; export of organisms or reproductive propagules (*e.g.*, seeds, eggs, spores) to downstream waters; and habitats needed for stream species. This diverse group of wetlands (*e.g.*, many prairie potholes, vernal pools, playa lakes) can be connected to downstream waters through surface water, shallow subsurface water, and groundwater flows and through biological and chemical connections. Some effects of non-floodplain wetlands on larger downstream waters are due to their relative isolation, rather than their connectivity. Where the wetland intercepts materials that otherwise would reach downstream water, wetland "sink" functions trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage). See TSD Sections I, III.B, and III.D.

The importance of retaining functions of wetlands in specific geographic areas is part of the agencies' analysis of the significant nexus definition factors and functions. In the TSD, the agencies note the functions of remaining wetlands in formerly dense wetland landscapes could become more important. Under the significant nexus standard for adjacent wetlands, the agencies will determine whether the wetlands, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters. Further details are provided in the Final Rule Preamble Section IV.C.5. However, unlike the 2015 Clean Water Rule, the agencies are not establishing a category for certain wetland types in specific geographic areas that can be considered similarly situated and assessed together on a watershed-basis in a case-specific significant nexus analysis. In developing the final rule, the agencies thoroughly considered alternatives to this rule, including the 2015 Clean Water Rule, 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 Section IV.B.1 of the Preamble to the Final Rule for further discussion of the agencies' grounds for concluding that the 2015 Clean Water Rule is not a suitable alternative to the final rule.

The agencies have defined "significantly effect" and "material influence" to promote clarity and implementation consistency. In Final Rule Preamble Section IV.C.9.b, the agencies clarify the significant nexus standard considers whether wetlands demonstrate a "material influence" on the chemical, physical, or biological integrity of downstream waters.

The agencies agree that where wetlands in a complex of wetlands have a continuous physical surface connection to one another such that upland boundaries or dikes, barriers, or other structures cannot distinguish or delineate them as physically separated, the entire area is viewed as one wetland for consideration as to whether the wetland meets the terms of adjacency. See additional clarification in the Final Rule Preamble Section IV.C.5.c.i.

The agencies also recognize there were some important functions identified by commenters that could not be taken into account in the final rule because the 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. There are a wide variety of functions that streams, wetlands, and open waters provide that translate into ecosystem services that benefit society that would not be considered in a significant nexus analysis under the final rule. These include provision of areas for personal enjoyment (*e.g.*, fishing, hunting, boating, and birdwatching areas); ceremonial or religious uses; production of fuel, forage, and fibers; extraction of materials (*e.g.*, biofuels, food, such as shellfish, vegetables, seeds, nuts, rice); plants for clothes and other materials; and medical compounds from wetland and aquatic plants or animals. While these ecosystem services can contribute to the economy, they are not relevant to the chemical, physical, or biological integrity of paragraph (a)(1) waters and would not be considered in a significant nexus analysis under the final rule. See the agencies' response to comments Section 12 on the significant nexus standard.

10.2 Adjacent Wetlands – General Implementation

In writing about adjacency, several commenters argued that local governments and Tribal governments are best suited to assess appropriate protections for waters on their land. A few other commenters suggested stakeholder involvement or coordination in defining and assessing adjacency.

Many commenters argued that wetlands should only be jurisdictional if they have a direct connection to and/or abut traditional navigable waters, while other commenters stated that wetlands should only be jurisdictional if they have a direct connection to and/or directly abut "waters of the United States."

Some commenters asked the agencies to clarify application of the significant nexus standard for adjacent wetlands. One commenter stated that, "the rule must protect all adjacent and floodplain wetlands as having a significant nexus."

A few commenters made arguments or recommendations in the context of a final or second rulemaking. One of these commenters "recommend[ed] that the final Rule 1 preamble and TSD discussion include a discussion of scientific literature regarding both wetlands and open waters when discussing the concept of adjacency, providing a strong foundation for proposing "adjacent waters" in Rule 2. Such an approach would closely reflect peer-reviewed aquatic resource science as well as the goals of the CWA and thus support the Agencies' goal of creating a 'durable' final rule." The commenter recommended such a discussion include terms such as "neighboring" and asked the agencies to wait until a second rulemaking to revise the definition of "adjacent." The commenter went on to suggest the agencies reinforce principles such as "functional relationships" and "regional variations" in redefining adjacency in the second rulemaking. Lastly, that commenter argued, "if the agencies conclude adjacent wetlands are not appropriate as a per se categorical WOTUS in a final Rule 1,… they should be considered during Rule 2 development."

Another commenter "recommend[ed] that quantitative criterion be addressed regionally through guidance or in the second proposed rulemaking," and another commenter argued for distance considerations for adjacency in the second proposed rulemaking.

One commenter expressed concern that the agencies will assert jurisdiction over wetlands with only intermittent, physically remote hydrologic connections, such as asserting jurisdiction based on shallow subsurface connections or based on "reasonably close" proximity and an inference of ecological interconnection. The commenter stated that a continuous surface connection must be to a relatively permanent water connected to a traditional interstate navigable water. The commenter stated that the agencies have improperly converted the "continuous surface connection" requirement into a "physical connection or ecological connection" test. The commentor also stated that it is improper to assert jurisdiction over wetlands adjacent to relatively permanent impoundments if such impoundments are not themselves connected to a traditional interstate navigable water.

A commenter stated that the scientific knowledge of the benefits of wetlands to downstream waters has advanced since the *Rapanos* Guidance, which the commenter suggested should allow for greater wetland protection under the significant nexus standard.

> **<u>Agencies' Response</u>: The agencies agree with commenters that local governments and tribal governments have in depth knowledge of waters within their jurisdiction. 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.**
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> **The agencies also agree with the commenters that stakeholder input is critical to defining adjacency. On June 9, 2021, the agencies announced their intention to revise or replace the 2020 NWPR. The agencies subsequently 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 also held a public hearing and listening sessions with state, tribal, and local governments during the public comment period to listen to feedback on the proposed rule from co-regulators and a variety of stakeholders. 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. See Final Rule Preamble Section II.C for a summary of stakeholder outreach conducted for this rulemaking.**
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> **The Clean Water Act sets a baseline of federal protection for waters that meet the definition of "waters of the United States" and authorizes States to be more protective than the Act while also leaving substantial responsibility and autonomy to the States over those waters that do not have a significant nexus to the core waters covered by the Act. The agencies agree that partnerships with Tribes, States, and local governments are important to meet the objective of the Act and have worked with these entities to ensure they had opportunities to provide input on the rule and will continue to work with Tribes and States to implement the final rule. To the extent commenters suggest delegating the authority to define the term "waters of the United States" to States, Tribes, or stakeholders, the agencies conclude that would not be consistent with Congress' intent in enacting the Clean Water Act.**

The agencies disagree with commenters that state there needs to be a direct connection (or abutment) between adjacent wetlands and traditional navigable waters or other "waters of the United States." Wetlands that are adjacent to traditional navigable waters, as that term is defined in the rule, are *per se* jurisdictional. However, the definition of "adjacent" is not limited to direct connections or abutting landscape positions for the reasons discussed in Final Rule Preamble Section IV.A.2.b.ii.

The agencies have provided additional clarification regarding implementation of the significant nexus standard for adjacent wetlands in the final rule. The agencies have not made a categorical significant nexus determination for all floodplain and adjacent wetlands in the rule. As discussed in Final Rule Preamble Section IV.A, 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. As the agencies charged with construing the statute, EPA and the Corps must develop the outer bounds of the scope of the Clean Water Act. The agencies agree with commenters who stated that science alone cannot dictate where to draw the line defining "waters of the United States." But science is critical to understanding what scope of jurisdiction furthers Congress's objective to restore and maintain the chemical, physical, and biological integrity of the nation's waters and properly determining which waters are the subject of federal jurisdiction due to their effects on paragraph (a)(1) waters. Wetlands are also adjacent when their proximity to a jurisdictional water is reasonably close. Also, see Section III.B.ii of the TSD for scientific support for the agencies' rationale.

In the preamble to the proposed rule, the agencies stated that they would consider changes through a second rulemaking that they anticipated proposing in the future, which would build upon the foundation of this rule. The agencies have concluded that this rule is durable and implementable because it is founded on the familiar framework of the 1986 regulations, fully consistent with the statute, informed by relevant Supreme Court decisions, and reflects the record before the agencies, including consideration of the best available science, as well as the agencies' expertise and experience implementing the pre-2015 regulatory regime. The agencies may consider further refinements in a future rule to address implementation or other issues that may arise.

The agencies are retaining their longstanding definition of "adjacent" unchanged from the 1986 regulations and are not establishing quantitative criteria or numeric standards to interpret this term, or the term "neighboring." The agencies tie the concept of adjacency to wetlands in Preamble Section IV.C.5, and this is supported by scientific literature as reviewed in Section III.B.ii of the TSD and in Chapter 4 of the Science Report. The agencies discuss how implementation under the final rule of the definition of "adjacent" at paragraph (a)(4) is consistent with pre-2015 regulatory practice in Preamble Sections IV.C.5; see also Section III.B of the TSD. Functions are discussed in terms of "significantly affect" in the regulatory text at paragraph (c)(6) and in Preamble Section IV.C.5. Regional variations are discussed in Preamble IV.C.5, and further details on this subject can be found in the agencies' response to comments in Section 18.3.

The agencies in this rule are interpreting "waters of the United States" to mean the waters defined by the familiar 1986 regulations, with amendments to reflect the agencies' determination of the statutory limits on the scope of "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." It also reflects consideration of extensive public comment. Final Rule Preamble Section IV.A.3 explains the agencies' conclusion that utilization of both the relatively permanent standard and the significant nexus standard gives effect to the Clean Water Act's text, including its objective as well as its limitations. The significant nexus standard is consistent with the text, objective, and legislative history of the Clean Water Act, as well as relevant Supreme Court case law and the best available science. The relatively permanent standard is administratively useful as it more readily identifies a subset of waters that will nearly always significantly affect paragraph (a)(1) waters but standing alone is insufficient to meet the objective of the Clean Water Act. See Final Rule Preamble Section IV.C.5.c for a description of how the standards will be implemented in determining the jurisdiction adjacent wetlands in the final rule.

The agencies disagree with the commenter who expressed concern that the agencies will assert jurisdiction over wetlands with only intermittent, physically remote hydrologic connections. The longstanding definition of "adjacent," by its terms, does not require flow from the wetland to the jurisdictional water or from the jurisdictional water to the wetland (although such flow in either direction can be relevant to the determination of adjacency). Furthermore, while under this rule the agencies are not establishing distance limits for adjacency, the agencies recognize that as the distance between the wetland and jurisdictional water increases, the reasonableness of the connection between the waters will generally decrease, particularly in the absence of surface or shallow subsurface connections, and a finding of adjacency is less likely. The distance between a jurisdictional water and its adjacent wetlands may vary by region, as well as based on site-specific factors within regions. In practice, under this criterion, the agencies have found that adjacent wetlands are on the whole, nationwide, within a few hundred feet of jurisdictional waters. This can vary based on site-specific and regional factors. See Final Rule Preamble Section IV.C.5.c for additional discussion.

The agencies disagree with the commenter who stated that the continuous surface connection standard only applies to wetlands connected to relatively permanent waters connected to traditional interstate navigable waters; the agencies interpret this standard as applicable to wetlands connected to any relatively permanent waters, which are jurisdictional by virtue of their connection to any paragraph (a)(1) waters. See Final Rule Preamble Section IV.C.2.b for a discussion of why waters that are connected to any traditional navigable waters, territorial seas, and interstate waters are jurisdictional. The agencies also disagree with the commenter who stated that the agencies improperly convert the "continuous surface connection" requirement into a "physical connection or ecological connection" test. Adjacent wetlands meet the relatively permanent standard if they have a continuous surface connection to a relatively permanent impoundment or a jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard. See

Final Rule Preamble Section IV.C.5.c.ii for further discussion of continuous surface connection.

Finally, the agencies disagree with the commenter who stated that it is improper to assert jurisdiction over wetlands adjacent to relatively permanent impoundments if such impoundments are not themselves connected to a traditional interstate navigable water. See Final Rule Preamble Section IV.C.3.c. The agencies' implementation of the paragraph (a)(2) impoundments category is based on two primary principles. First, as a matter of policy, law, and science, impoundments do not render "waters of the United States" no longer "waters of the United States." Second, as a matter of policy and science, if an impounded water has the characteristics of another jurisdictional water, then the impoundment is jurisdictional. Wetlands adjacent to these impoundments are jurisdictional if they have a continuous surface connection to relatively permanent impoundments or are adjacent to paragraph (a)(2) impoundments and meet the significant nexus standard. The final rule protects these adjacent wetlands because of the ecological relationship between adjacent wetlands and jurisdictional waters.

10.2.1 Prior regulatory regimes

A few commenters wrote in support of the 2020 NWPR and its "categorical" approach to wetlands and adjacency and said it was easily recognizable to landowners and transportation planners, while consistent with the original scope of the CWA. A few of these commenters challenged what they characterized as the agencies' assertion that the 2020 NWPR was difficult to implement. Specifically, "the agencies claim in the preamble that their staff found it difficult to implement the NWPR adjacency definition, in certain circumstances. Only a few examples of these 'difficulties' were provided by the agencies in the preamble, but these difficulties could have been addressed through minor revisions to the NWPR adjacency definition or inclusion of field-based indicators. Rather than build on to the NWPR's definition to address the limitations in certain circumstances, the agencies decided to retain the long-standing and ambiguous 1986 definition."

Another commenter critiqued the inconsistent use of the terms "dry land" and "upland," (*e.g.,* in the context of exclusions or the significant nexus standard). They called for "replacing the term 'dry land' with the term 'upland,' with a clear definition of 'upland' codified in the rule. These commenters generally supported the 2020 NWPR's approach to the definition of adjacent wetlands and in defining upland.

Other commenters critiqued the 2020 NWPR's approach to wetlands and adjacency. Those commenters called for broader protections and challenged the 2020 NWPR's more narrow approach, particularly related to subsurface connections and adjacency. Some commenters characterized the 2020 NWPR's approach as inconsistent with science.

Several commenters wrote in favor of the 2015 Clean Water Rule's approach, stating that it was consistent with science. A couple of the commenters thought the 2015 Clean Water Rule expanded jurisdiction for adjacent wetlands and argued that it created "uncertainty." A number of commenters wrote about the pre-2015 regulatory regime and/or 1986 regulations and approaches to wetlands and/or adjacency. Some of these commenters critiqued the pre-2015 regulatory regime for not being protective enough and/or causing confusion, generally citing scientific or regulatory reasons. A number of

commenters generally supported returning to the pre-2015 regulatory regime, with some calling for additional clarifications and implementation support. Others critiqued the pre-2015 regulatory regime, citing implementation challenges and regulatory overreach. A few commenters argued that the proposed rule's approach to wetlands and definitions goes beyond the pre-2015 regulatory regime. A commenter broadly critiqued the concept of wetland adjacency in both the 2015 Clean Water Rule and the proposed rule.

Agencies' Response: As the agencies explain in Section IV.B.3 of the preamble to the final rule, implementing the adjacency definition of the 2020 NWPR posed challenges. The agencies disagree with the commenter who stated that the implementation problems with the 2020 NWPR could have been addressed with minor revisions. The "typical year" concept was fundamental to the 2020 NWPR because it is the only way that the 2020 NWPR could make its bright line exclusions work. It proved extremely difficult to implement for the reasons discussed in the preamble and the agencies are not aware of minor revisions that could have addressed these difficulties. However, the agencies incorporated some concepts from the 2020 NWPR's interpretation of adjacency in addressing the "continuous surface connection" component of the relatively permanent standard, as discussed in Section IV.C.5 of the preamble to the final rule. The agencies are also codifying the significant nexus standard for the reasons discussed in Section IV.A of the preamble to the final rule.

The agencies agree that use of the terms "upland" and "dry land" interchangeably may be confusing and lead to inconsistent implementation of the rule. The proposed rule and the pre-2015 regulatory regime used the phrases "dry land" and "upland" interchangeably in their description of features that the agencies considered to be generally non-jurisdictional. In the final regulatory text for these exclusions, the agencies are consistently using the term "dry land" rather than "upland." The term "dry land" refers to areas of the geographic landscape that do not include waters such as streams, rivers, wetlands, lakes, ponds, tidal waters, ditches, and the like. It is important to note that jurisdictional and non-jurisdictional waters are not considered "dry land" just because they lack water at a given time. Similarly, an area may remain "dry land" even if it is wet after a precipitation event. The agencies are not adopting the 2020 NWPR's definition of "upland" as any area that does not satisfy the regulatory definition of wetland and that does not lie below the ordinary high water mark or the high tide line of a jurisdictional water. The agencies have concluded that defining "upland" as an area that does not satisfy certain regulatory criteria would be confusing. The agencies prefer to use the more intuitive, plain meaning approach that refers to dry land as areas that do not include waters, as opposed to the converse of a regulatory definition.

The agencies agree with commenters who stated that the definition of "adjacent wetlands" in the 2020 NWPR was inconsistent with science and that the 2015 Rule's protections were more consistent with science. The agencies ultimately decided to use the familiar framework of the pre-2015 regulatory regime. 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. Consistent implementation of the final rule will be aided by improved and increased scientific and technical information and tools that both the agencies and the public can use to determine whether waters meet the definition of "waters of the United States." See Final Rule Preamble Section IV.G.

This rule allows for the consideration of shallow subsurface connections in assessing jurisdiction over adjacent wetlands. The agencies conclude that consideration of shallow subsurface hydrologic connections is consistent with longstanding agency practice and note waters that possess a shallow subsurface connection are only jurisdictional where they meet the requirements under paragraph (a) of the final rule. Further, the agencies find that consideration of shallow subsurface flow as a factor in determining if waters meet the applicable standards to be "waters of the United States" is not inconsistent with the long-recognized understanding that groundwater is not a "water of the United States."

10.2.2 Regulatory text

A number of commenters discussed the parenthetical in the "adjacent wetlands" category (*i.e.*, "(other than waters that are themselves wetlands)"). Many commenters argued in favor of removing the parenthetical, claiming that it created "confusion," with most commenters citing concerns that the parenthetical could improperly limit jurisdiction of wetlands, for example leading some wetlands "to be targeted by polluters wishing to exploit the poorly worded parenthetical." A few commenters voiced support for keeping the parenthetical.

Agencies' Response: The agencies agree with those commenters who supported removing the parenthetical. The final rule does not alter the long-standing definition of "wetlands" or "adjacency." As discussed in Preamble Section IV.C.5.b.i, the parenthetical created unnecessary confusion for the public. Therefore, the agencies deleted the parenthetical in the final rule in order to streamline the regulation and provide more clarity.

10.2.3 Subsurface hydrology and distance

In calling for "the inclusion of certain subsurface hydrologic connections in the definition of WOTUS" and highlighting karst geology in New Jersey, one commenter, "urge[d] the agencies to further explore subsurface hydrology in round two of the rulemaking process." The same commenter voiced support for "the inclusion of certain subsurface hydrologic connections in the definition of WOTUS," especially based on karst geology in their state. Several commenters highlighted the importance of subsurface flows. Some of these commenters critiqued the 2020 NWPR's approach to subsurface flows on scientific grounds and the fact that it did not consider subsurface flows as establishing connections for purposes of jurisdiction, other than subterranean rivers.

A few commenters referenced the importance of protecting floodplain wetlands. For example, a commenter highlighted that "riparian/floodplain wetlands that rarely flood (*e.g.*, lack direct perennial or intermittent hydrologic surface connections with other WOTUS) can be important because of long-lasting effects on streams and rivers. Most of the major changes in sediment load and river-channel structure that are critical to maintaining the health of a river result from large floods that provide infrequent connections with more distant riparian/floodplain wetlands." A few commenters called for including subsurface flow as a parameter for regulating adjacent wetlands. One commenter suggested clarifications on subsurface

and surface flows and more information on hydrologic connections between them. One commenter did not write specifically about "subsurface" flows but wrote more generally about broad hydrologic interconnectedness between wetlands and other waterbodies, even if subsurface flow isn't readily apparent.

Other commenters argued against jurisdiction based on subsurface flows due to a lack of clarity and/or vagueness and highlighted associated implementation challenges. A few commenters shared that "the agencies do not define "shallow" subsurface connection or demonstrate how to distinguish such connections from groundwater. Moreover, the term introduces significant implementation challenges and establishing adjacency based on such connections comes dangerously close to the "any hydrological connection" test rejected in *Rapanos*."

A number of the commenters who wrote about subsurface flows also wrote about distance considerations for adjacency. One commenter argued that "a scientifically informed definition of 'adjacent' should focus on functional relationships, informed by proximity, but not be based on distance alone." This commenter described the approach to distance requirements (or lack thereof) in the pre-2015 regulatory regime, under the 2015 Clean Water Rule, and under the 2020 NWPR. The commenter suggested "that the final Rule explanation of the definition of "adjacency" focus[es] on functional relationships, including both surface and shallow subsurface connections, informed by proximity, but not based on distance alone" and argued against the 2020 NWPR approach, as well as the 2015 Clean Water Rule approach, unless providing scientific analysis, including on functionality. Another commenter explained that "the agencies do not define what it means to be an "unbroken . . . shallow subsurface connection" or how to distinguish such connections from groundwater. The same commenter asked whether there are any limitations on the distance of the sub-surface connection between the "adjacent" wetland and the non-navigable water, and how deep can such connections be and still be considered "shallow.'"

Commenters argued that any distance criteria should account for regional differences. One commenter called for regionally quantitative criteria in the second rulemaking. A few of these commenters critiqued the use of the terms "reasonably close" as too general and broad, with unclear field application, calling for clarity. One commenter suggested the final rule assign a range of values for adjacency on the scale of feet or yards, as opposed to hundreds of yards or miles. Another commenter specifically argued that such distance criteria are not consistent with the "plurality's test" from the *Rapanos* case. An additional commenter called for more objective criteria, arguing "the greater the distance and the more tenuous a connection to a TNW, the stronger the site-specific evidence is needed to assert jurisdiction."

> **<u>Agencies' Response</u>: The agencies have determined that certain subsurface hydrologic connections should be considered when determining if a particular aquatic resource meets the definition of "waters of the United States." The agencies consider shallow subsurface hydrologic connections to play an important role in determining adjacency and have determined that shallow subsurface flow is one of the factors to be considered as part of the significant nexus analysis. See Sections III.B.ii and of the TSD. The agencies conclude that consideration of shallow subsurface hydrologic connections is consistent with longstanding agency practice and note that waters that possess a shallow subsurface connection to other jurisdictional waters are only themselves jurisdictional where they meet the requirements under paragraph (a) of the final rule. Further, the agencies find that consideration of shallow subsurface flow as a factor in determining if waters meet the applicable standards to be "waters of the United States" is not inconsistent with the long-recognized**

understanding that groundwater is not a "water of the United States." The agencies also recognize the role of karst geology in conveying subsurface hydrologic flow.

The agencies recognize that wetlands lacking a direct perennial or intermittent hydrologic surface connection with other jurisdictional waters can still be connected to the waters they are located near and can have important effects on paragraph (a)(1) waters. For instance, wetlands with an unbroken shallow subsurface connection to paragraph (a)(1) water, a paragraph (a)(2) impoundment, or paragraph (a)(3) tributary are "adjacent" under the final rule, consistent with the pre-2015 regulatory regime. A shallow subsurface hydrologic connection is predominantly lateral water flow through a shallow subsurface layer. Such flows may be found, for example, in wetlands on slopes, where water seeps through surface soils to downstream waters; in soils with a restrictive horizon; in the hyporheic zone; or in karst systems. A shallow subsurface connection also exists, for example, when the adjacent wetland and the water to which it is adjacent are in contact with the same shallow aquifer or with the same shallow water table which fluctuates within the soil profile, sometimes rising to or near the ground surface. Shallow subsurface connections can also be maintained as water moves through karst topography and through confined human-made subsurface conveyance systems such as drain tiles and storm sewers. Shallow subsurface connections may be found below the ordinary root zone (below 12 inches), where other wetland delineation factors may not be present. A variety of factors may reflect the presence of a shallow subsurface connection, including position of the wetland in the landscape (for example, on a slope above the jurisdictional waters); stream hydrographs; soil surveys (for example, exhibiting indicators of high transmissivity over an impermeable layer); and information indicating that the water table in the stream is lower than the shallow subsurface. Shallow subsurface connections convey water quickly through the soil and impact surface water directly within hours or days rather than the months or years it may take long pathways to reach surface waters. However, the agencies note that neither shallow subsurface connections nor any type of groundwater, shallow or deep, are themselves "waters of the United States." See TSD section III.B.ii for additional information on surface and shallow subsurface hydrologic connections.

In Section IV.C.5.c of the Preamble, the agencies clarify the difference between shallow subsurface hydrologic connections and groundwater. Shallow subsurface hydrologic connection is predominantly lateral water flow through a shallow subsurface layer, where the flow maintains the same or very nearly the same flow volume underground and at the downgradient point where it returns to the surface. Such flows may be found, for example, in steeply seeping forested areas with shallow soils, soils with a restrictive horizon, in the hyporheic zone, or in karst systems. However, neither shallow subsurface connections nor any type of groundwater, shallow or deep, are themselves "waters of the United States."

This rule does not establish specific distance limitations for adjacency, to ensure that site-specific and regional factors can be considered when a wetland is being evaluated for adjacency. The agencies have not established a specific distance limitation in the rule beyond which wetlands are never adjacent because whether a wetland is reasonably close, such that the wetland and the jurisdictional water are part of the same aquatic ecosystem, depends on regional variations in climate, landscape, and geomorphology. However, the agencies can state, based on nearly 45 years of implementation of this definition, that in a

substantial number of cases, adjacent wetlands abut (*i.e.*, touch) a jurisdictional water. And, on the whole, nationwide, adjacent wetlands are within a few hundred feet from jurisdictional waters; in the instances where the distance is greater than a few hundred feet, adjacency is likely supported by a pipe, non-jurisdictional ditch, karst geology, or some other feature that connects the wetland directly to the jurisdictional water. While bright-line rules (for example, wetlands that are a specific number of feet from a jurisdictional water are not "adjacent") are easiest to understand and implement, convenience is not the only goal the agencies must consider in administering the Clean Water Act. Because the relationship between a wetland and a proximate jurisdictional water can depend upon a number of site-specific factors, like climate, geomorphology, landscapes, hydrology, and size of the jurisdictional water (*e.g.*, the ocean compared to a headwater stream), and because the central purpose of the Act is to protect the integrity of our nation's waters, a more nuanced analysis is required. See Final Rule Preamble Section IV.C.5. For purposes of determining whether a wetland is "adjacent," artificial structures do not divide a wetland if a hydrologic connection is maintained between the divided portions of the wetland. Rather, the wetland is treated as one wetland. For example, if a wetland is divided by a road, a culvert could maintain a hydrologic connection. The agencies may also consider if a subsurface hydrologic connection is maintained, using indicators such as hydric soils, the permeability of the artificial structure, and/or the permeability of the soils below the artificial structure.

Wetlands are also adjacent when their proximity to a jurisdictional water is reasonably close. The ecological relationship between jurisdictional waters and their adjacent wetlands is well-documented in the scientific literature and reflects their physical proximity as well as shared hydrological and biological characteristics. See TSD section III.B. The close proximity between an adjacent wetland and a jurisdictional water means the wetland can modulate water quantity and water quality in the jurisdictional water, and the jurisdictional water can modulate water quantity and quality in the wetland. For example, adjacent wetlands typically help to store floodwaters, pollutants, and sediments that could otherwise reach a jurisdictional water. They also provide flow contributions to the waters which they are adjacent during high hydroperiods, where water spills from the wetland to the nearby jurisdictional water, and such contributions of flow are facilitated by their close proximity to the jurisdictional water. The proximate jurisdictional waters can serve as important sources of water for adjacent wetlands, for example, through overtopping events where flow from the jurisdictional waters is stored in the wetlands. A wetland within the riparian area or floodplain of a jurisdictional water typically has such an interconnection, though this rule is not establishing a requirement for adjacent wetlands to be located within a riparian area or floodplain. While under this rule the agencies are not establishing distance limits for adjacency, the agencies recognize that as the distance between the wetland and jurisdictional water increases, the reasonableness of the connection between the waters will generally decrease, particularly in the absence of the type of surface or shallow subsurface connections described above, and a finding of adjacency is less likely. The distance between a jurisdictional water and its adjacent wetlands may vary by region, as well as based on site-specific factors within regions. In practice, under this criterion, the agencies have found that adjacent wetlands are on the whole, nationwide, within a few hundred feet of jurisdictional waters. This can vary from site to site and region to region due to differences in climate, geomorphology, landscape setting, hydrology, soils, vegetation,

elevation, size of the jurisdictional water, and other site-specific variables. See Final Rule Preamble Section IV.C.5.c. for further discussion.

In regard to comments relating to a second rulemaking, in the preamble to the proposed rule, the agencies stated that they would consider changes through a second rulemaking that they anticipated proposing in the future, which would build upon the foundation of this rule. The agencies have concluded that this rule is durable and implementable because it is founded on the familiar framework of the 1986 regulations, fully consistent with the statute, informed by relevant Supreme Court decisions, and reflects the record before the agencies, including consideration of the best available science, as well as the agencies' expertise and experience implementing the pre-2015 regulatory regime. The agencies may consider further refinements in a future rule to address implementation or other issues that may arise.

Regarding the term "reasonably close" and its consistency with the *Rapanos* case, see the agencies' response to comments in Section 2.3.5 for a response to comments regarding the agencies' legal authority over wetlands, including consistency with Supreme Court case law.

10.2.4 Bordering, contiguous, neighboring

Some commenters who wrote about adjacency discussed the concepts of bordering, contiguous, and/or neighboring, including in some cases whether natural and/or artificial barriers (*e.g.*, berms) should be taken into consideration. For example, some commenters supported inclusion of wetlands separated by man-made dikes or barriers, natural river berms, beach dunes and the like. A few commenters opposed this approach and stated that including wetlands physically separated by man-made dikes, barriers or natural breaks would include wetlands that have no relationship to the adjacent traditional navigable water.

One commenter wrote in support of "bordering or contiguous" but not "neighboring" because that term was not defined and would lead to "confusion and/or inconsistent application." Other commenters suggested the agencies use the "neighboring" concept but more clearly define it to avoid confusion. Some commenters called for the concept of "neighboring" to be applied in a "uniform" and "consistent" manner "across all [Corps] Districts," with one commenter arguing, "the application of the term has led to widely varying interpretation of the limits of 'waters of the United States.'" In some cases, neighboring wetlands are merely yards away, while other neighboring wetlands may approach a mile from the nearest jurisdictional water.

Another commenter suggested clarifying distance requirements for "neighboring." One commenter suggested providing clarification and definition for the term "neighboring" and argued that neighboring wetlands should include "those wetlands located within a federally regulated 100-year floodplain of a jurisdictional water and are separated by a man-made or natural barrier from the jurisdictional water or lack a direct hydrological connection to it." Another commenter suggested defining "bordering, contiguous, and neighboring," because of "confusion and disagreement during the pre-2015 regulatory regime." One commenter also suggested clarifications but generally supported the agencies' proposed approach.

One commenter stated that measuring floodplains by a hydrogeomorphic boundary, such as a 100-year flood, could be confusing, as constructed barriers, such as levees, could cut off connections to downstream waters and thereby cut off jurisdiction.

One commenter requested regional guidance regarding jurisdictional determination of flooding that creates wetland hydrology.

<u>Agencies' Response</u>: The agencies will continue to implement a number of longstanding interpretations of "adjacent" based on scientific principles and practical administration of the definition with this rule. The agencies consider wetlands "adjacent" if one of following three criteria is satisfied. First, there is an unbroken surface or shallow subsurface connection to jurisdictional waters. All wetlands that directly abut jurisdictional waters have an unbroken surface or shallow subsurface connection because they physically touch the jurisdictional water. Wetlands that do not directly abut a jurisdictional water may have an unbroken surface or shallow subsurface connection to jurisdictional waters. Water does not need to be continuously present in the surface or shallow subsurface connection. Second, the wetlands are physically separated from jurisdictional waters by human-made dikes or barriers, or natural landforms (*e.g.*, river berms, beach dunes). Or third, the wetlands proximity to a jurisdictional water is reasonably close. Wetlands that meet one of these three criteria are considered bordering, contiguous, or neighboring for purposes of this rule. See the Final Rule Preamble Section IV.C.5 for further discussion on the implementation of these definitions.

While this rule does not explicitly identify regional factors that influence what is "reasonably close" for purposes of adjacency, the agencies recognize there may be site-specific factors (*e.g.*, topography) that influence what is "reasonably close." This rule does not establish specific distance limitations for adjacency, which helps ensure that site-specific and regional factors can be considered when a wetland is being evaluated (see Section IV.C.6.c of the Final Rule Preamble). The agencies have not established a specific distance limitation in the rule beyond which wetlands are never adjacent because whether a wetland is reasonably close such that the wetland and the jurisdictional water are part of the same aquatic ecosystem depends on regional variations in climate, landscape, and geomorphology. However, the agencies can state, based on nearly 45 years of implementation of this definition, that in a substantial number of cases, adjacent wetlands abut (*i.e.*, touch) a jurisdictional water. And, on the whole, nationwide, adjacent wetlands are within a few hundred feet from jurisdictional waters; in the instances where the distance is greater than a few hundred feet, adjacency is likely supported by a pipe, non-jurisdictional ditch, karst geology, or some other feature that connects the wetland directly to the jurisdictional water. While bright-line rules (for example, wetlands that are a specific number of feet from a jurisdictional water are not "adjacent") are easiest to understand and implement, convenience is not the only goal the agencies must consider in administering the Clean Water Act. Because the relationship between a wetland and a proximate jurisdictional water can depend upon a number of site-specific factors, like climate, geomorphology, landscapes, hydrology, and size of the jurisdictional water (*e.g.*, the ocean compared to a headwater stream), and because the central purpose of the Act is to protect the integrity of our nation's waters, a more nuanced analysis is required. See Final Rule Preamble Section IV.C.5.

The agencies agree with commenters in support of the 1986 regulation's definition of "adjacent" to include wetlands even if they are separated by natural landforms or human-made barriers for the reasons discussed in sections IV.A.3 and IV.C.8.b of the Final Rule Preamble. The rationale for including these wetlands as adjacent is discussed in sections IV.A and IV.C.5 of the Preamble for the Final Rule. This approach is also supported by scientific literature and aligns with the agencies' scientific and technical expertise and experience, which confirm that wetlands separated by other jurisdictional waters from constructed dikes or barriers, natural river berms, beach dunes, and the like have chemical, physical, and biological effects on downstream waters. See TSD section III.B.

Although a wetland within the riparian area or floodplain usually has an interconnection, this rule is not establishing a requirement for adjacent wetlands to be located within a riparian area or floodplain as wetlands not located within federally regulated 100-year floodplain of a jurisdictional water provide numerous functions that benefit downstream water integrity. The scientific literature unequivocally demonstrates that wetlands and open waters in non-floodplain landscape settings (hereafter called "non-floodplain wetlands") can provide numerous functions that benefit the chemical, physical, and biological integrity of larger downstream waters, including the paragraph (a)(1) waters, particularly when analyzed in the aggregate. These functions include: storage of floodwater; recharge of groundwater that sustains river baseflow; retention and transformation of nutrients, metals, and pesticides; export of organisms or reproductive propagules (*e.g.*, seeds, eggs, spores) to downstream waters; and habitats needed for stream species. This diverse group of wetlands (*e.g.*, many prairie potholes, vernal pools, playa lakes) can be connected to downstream waters through surface water, shallow subsurface water, and groundwater flows and through biological and chemical connections. Some effects of non-floodplain wetlands on larger downstream waters are due to their relative isolation, rather than their connectivity. Where the wetland intercepts materials that otherwise would reach downstream water, wetland "sink" functions trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage). See TSD Sections I, III.B, and III.D.

As with any final regulation, the agencies will consider developing new guidance to facilitate implementation of the final rule should questions arise in the field regarding application of the final rule to regional settings. Nevertheless, the agencies conclude that the final rule, together with the preamble and existing tools, provides sufficient clarity to allow consistent implementation of the final rule.

10.2.5 Wetlands adjacent to lakes, ponds, and impoundments

One commenter stated that for wetlands adjacent to jurisdictional lakes and ponds, a case-specific determination of jurisdiction may be best. The commenter noted that in Wisconsin, many lakes "can be determined to be foundational[6] waters on the basis that they are susceptible of supporting waterborne

[6] In the proposed rule, the term "foundational waters" was used to refer to traditional navigable waters, the territorial seas, and interstate waters. In this response to comments, the agencies will preserve the use of the term

commerce. Wetlands adjacent to these lakes provide spawning and nursery habitat, while smaller lakes and ponds that may not be fishing destinations can be key breeding habitat for amphibians and other aquatic life. These wetlands support the biological integrity of other lakes, streams, and wetlands that are either foundational waters themselves or have a significant nexus to foundational waters."

Several commenters asked the agencies to protect wetlands adjacent to impoundments because science shows that wetlands have an effect on downstream traditional navigable waters, the territorial seas, and interstate waters. Some commenters indicated that the proposed rule was unclear with regard to the inclusion of impoundments and wetlands adjacent to impoundments.

> **Agencies' Response: The agencies agree that wetlands adjacent to jurisdictional lakes and ponds can perform many important functions that support the integrity of paragraph (a)(1) waters. The agencies also agree that wetlands adjacent to impoundments can have an effect on the integrity of paragraph (a)(1) waters. Wetlands that are adjacent to lakes, ponds, or impoundments that are paragraph (a)(1) waters are jurisdictional under the final rule. Wetlands adjacent to lakes and ponds that are tributaries (*e.g.*, in-stream lakes or ponds) to paragraph (a)(1) waters are jurisdictional if they meet either the relatively permanent standard or the significant nexus standard. Additionally, wetlands adjacent to paragraph (a)(2) impoundments are jurisdictional if they meet either the relatively permanent standard or the significant nexus standard. Wetlands adjacent only to paragraph (a)(5) waters would themselves be assessed under paragraph (a)(5) of the final rule, and such wetlands would be jurisdictional if they meet either the relatively permanent standard or the significant nexus standard.**
>
> **When evaluating a wetland adjacent to a paragraph (a)(2) impoundment under the relatively permanent standard, field staff would assess whether the impounded water is relatively permanent, standing or continuously flowing, and then determine whether the wetland has a continuous surface connection to the impoundment. See Final Rule Preamble Section IV.C.3 for more information about wetlands adjacent to impoundments.**

10.3 Regulatory Definition of "Wetlands" and Wetland Delineation

Several commenters discussed the proposed rule's definition of "wetlands." A number of commenters wrote in favor of using the agencies' longstanding regulatory definition of "wetlands" and/or its three criteria, which requires that a feature meet the three requirements for delineation criteria: hydrology, hydrophytic vegetation, and hydric soils. One commenter, in their support of the proposed definition of "wetlands," noted "it makes no changes from the 1986 and 2020 rules." A few commenters, however, argued that the agencies' applications of the definition of "wetlands" are not always consistent, specifically in terms of not requiring all three delineation criteria to be met, or use of the term "dry land."

A number of commenters critiqued the proposed definition of "wetlands," for example as "nearly unrestrained" or "ill defined." The commenter who used the term "ill defined" also argued that the proposed definition would require professional jurisdiction determinations, which would "contribute

"foundational waters" as used by commenters; however, responses will use "traditional navigable waters, the territorial seas, and interstate waters" or "paragraph (a)(1) waters," as the final rule does not use the term "foundational waters."

significantly to costs for jurisdiction determinations regardless of permitting and mitigation requirements, only to be unnecessary for non-jurisdictional waters/wetlands."

A commenter suggested amending the definition of "wetlands" to accept wetland delineations conducted by the U.S. Department of Agriculture (USDA). Another commenter asked the agencies to clarify that the definition of "wetlands" does not apply to engineered facilities, such as constructed wetlands.

In the context of adjacency, a few commenters argued that the agencies' three wetland delineation factors ("hydric soils, hydrophytic vegetation, and hydrology") must be present for wetlands to be jurisdictional. Several commenters specifically discussed wetland delineations, including different agencies' approaches to them, although this theme is also relevant to several other themes in this summary (*e.g.*, definition of "wetlands," wetlands jurisdiction, approach to adjacency, distance parameters). One commenter argued, "it remains unclear as to which methods would be used to delineate the boundary of jurisdictional wetlands adjacent to WOTUS," and suggested using the agencies' three factor test for defining "wetlands."

One commenter recommended that federal agencies take a unified approach to wetland delineations and different delineation manuals, including the following:

- USDA's Natural Resources Conservation Service (NRCS) and the Food Security Act of 1985
- U.S. Department of Interior's U.S. Fish and Wildlife Service and the National Wildlife Refuge System Administration and Duck Stamp Acts
- EPA and the Corps and the Clean Water Act

The commenter argued, "[a] unified approach by all agencies of the federal government to wetland identification, delineation, and mitigation would decrease the burden on regulatory agencies, save administrative costs to the agencies and the regulated community, and help bring clarity and trust back to the administrative process." The commenter further "encourage[d] the EPA and the Army Corps to enter into a Memorandum of Agreement with the U.S. Department of Agriculture and the Department of Interior concerning delineation of wetlands for purposes of the Clean Water Act, Food Security Act, and management of waterfowl production area easements under the National Wildlife Refuge System Act." Another commenter argued "the process of delineating the contours of a wetland must be reasonably clear to an average landowner and capable of consistent, predictable application by field agents" and suggested a simple approach and pamphlet that landowners could use, instead of a lengthy wetland delineation manual. That commenter also suggested limiting wetland jurisdiction more broadly to simplify wetland delineations. One commenter cited one of their own policies that reads: "Federal and state agencies should only use the guidance set forth in the 1987 Army Corps of Engineers Wetland Delineation Manual to determine whether an area is considered a 'wetland.'"

> **<u>Agencies' Response</u>: The agencies disagree with the commentors that regard the definition of wetland as ill defined, nearly unrestrained, or unclear. The final rule regulatory text defines the term "wetlands" and the agencies are not amending this longstanding definition in this rule. The definition of "wetlands" in the final rule is identical to the definition of this term in the 1986 regulations, 2019 Repeal Rule, and 2020 NWPR. Thus, under the final rule, the longstanding definition of "wetlands" will remain as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and**

similar areas.'' The agencies note, however, that the definition of "wetlands" in the final rule can apply to engineered facilities, such as constructed wetlands, if such aquatic resources meet the definition of "wetlands" under the final rule.

Comments regarding the process for wetland delineations are outside the scope of the final rule. The agencies note that, as under prior regimes, wetlands are identified in the field in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and applicable regional delineation manuals. Field work is often necessary to confirm the presence of a wetland and to accurately delineate its boundaries. However, in addition to field observations on hydrology, vegetation, and soils, remote tools and resources can be used to support the identification of a wetland.