

under paragraph (a)(2).⁹² However, a subsequently impounded jurisdictional paragraph (a)(5) water may still be determined to be jurisdictional if it meets the requirements of a category of “waters of the United States” other than paragraph (a)(2) at the time of assessment (*i.e.*, as a traditional navigable water, the territorial seas, an interstate water, a jurisdictional tributary, a jurisdictional adjacent wetland, or a paragraph (a)(5) water).⁹³

Consistent with the 1986 regulations, under this rule tributaries may be tributaries to paragraph (a)(1) or (a)(2) waters. Tributaries to paragraph (a)(2) impoundments, and wetlands adjacent to such tributaries, 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. In order for a tributary to a paragraph (a)(2) impoundment to meet the relatively permanent standard, the agencies must be able to trace evidence of a flowpath (*e.g.*, physical features on the landscape, such as a channel, ditch, pipe, or swale) directly or indirectly through another water or waters, downstream from the structure that creates the paragraph (a)(2) impoundment to a paragraph (a)(1) water. 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. When evaluating a wetland adjacent to a jurisdictional tributary to a paragraph (a)(2) impoundment when the jurisdictional tributary meets the relatively permanent standard, field staff would determine

⁹² When an approved jurisdictional determination does not exist for an impounded water that the agencies conclude based on its characteristics could only be jurisdictional under paragraph (a)(5), the paragraph (a)(2) impoundments provision does not apply and the water will be assessed under another jurisdictional category.

⁹³ For example, if a stream that is not part of the tributary system of a paragraph (a)(1) water, but which is assessed under paragraph (a)(5) and is determined to meet the significant nexus standard, is lawfully impounded subsequent to the jurisdictional determination, the stream is not automatically jurisdictional as a paragraph (a)(2) water under this rule. However, the impounded stream may still meet the significant nexus standard under paragraph (a)(5) or the impounded stream may develop the characteristics of a traditional navigable water and become jurisdictional under paragraph (a)(1).

whether the wetland has a continuous surface connection to the tributary. See section IV.C.4.c and section IV.C.5.c of this preamble for additional information on evaluations under the relatively permanent standard for tributaries and adjacent wetlands. For a tributary to a paragraph (a)(2) impoundment, a wetland adjacent to a paragraph (a)(2) impoundment, or a wetland adjacent to a tributary to a paragraph (a)(2) impoundment, that is assessed under the significant nexus standard, the significant nexus must be to a paragraph (a)(1) water. See sections IV.C.4.c and IV.C.5.c of this preamble for additional information on significant nexus evaluations for tributaries and adjacent wetlands.

b. Summary of the Agencies' Consideration of Public Comments and Rationale for This Rule

The agencies have determined that as a matter of law, science, and policy, impoundments do not de-federalize a water, and therefore impoundments of “waters of the United States” remain “waters of the United States.” The Supreme Court has confirmed that damming or impounding “waters of the United States” does not make those waters non-jurisdictional. See *S.D. Warren Co. v. Maine Bd. of Env'tl. Prot.*, 547 U.S. 370, 379 n.5 (2006) (“*S.D. Warren*”) (“[N]or can we agree that one can denationalize national waters by exerting private control over them.”). While *S.D. Warren* addressed the meaning of the word “discharge” rather than the definition of “waters of the United States,” the Court’s conclusion regarding the jurisdictional status of a dammed river supports the agencies’ longstanding interpretation of the Clean Water Act that “waters of the United States” remain “waters of the United States” even if impounded, as reflected in the 1986 regulations and continued in this rule. Essentially, the action of creating an impoundment cannot on its own render “waters of the United States” no longer jurisdictional.⁹⁴ The Court of Appeals for the Ninth Circuit has similarly found that “it is doubtful that a mere man-made diversion would have turned what was part of the waters of the United States into something else and, thus, eliminated it from national concern.” *United States v. Moses*, 496

⁹⁴ Note that a Clean Water Act section 404 permit may authorize impoundment of a water such that the water is no longer jurisdictional, for example, to create a waste treatment system that is excluded from the definition of “waters of the United States.” In such circumstances, the water is analyzed under the regulatory exclusion where applicable, not under the impoundments provision of the definition.

F.3d 984, 988 (9th Cir. 2007), *cert. denied*, 554 U.S. 918 (2008).

Asserting Clean Water Act jurisdiction over impoundments also aligns with the scientific literature, as well as the agencies’ scientific and technical expertise and experience, which confirm that impoundments have chemical, physical, and biological effects on downstream waters through surface or subsurface hydrologic connections. As discussed in section III.C of the Technical Support Document, impoundments are typically built to maintain some level of hydrologic connection between the water that is being impounded and the downstream tributary network. For example, water may pass from a reservoir to the downstream side of an impoundment by passing through a main spillway or outlet works, passing over an auxiliary spillway, or overtopping the impoundment. Indeed, berms, dikes, and similar features used to create impoundments typically do not block all water flow. Even dams, which are specifically designed and constructed to impound large amounts of water effectively and safely, generally do not prevent all water flow, but rather allow seepage under the foundation of the dam and through the dam itself. See, *e.g.*, International Atomic Energy Agency, 2003, “Investigating Leaks in Dams & Reservoirs.” INIS-IA-616. Vienna, Austria (“All dams are designed to lose some water through seepage.”); U.S. Bureau of Reclamation, “Safety of Dams.” Provo Area Office (last updated July 1, 2017) (“All dams seep, but the key is to control the seepage through properly designed and constructed filters and drains.”); Federal Energy Regulatory Commission, 2005, “Chapter 14: Dam Safety Performance Monitoring Program.” Engineering Guidelines for the Evaluation of Hydropower Projects. (“Seepage through a dam or through the foundations or abutments of dams is a normal condition.”). Further, as an agency with expertise and responsibilities in engineering and public works, the Corps extensively studies water retention structures like berms, levees, and earth and rock-fill dams. The agency has found that all water retention structures are subject to seepage through their foundations and abutments. See section III.C of the Technical Support Document.

Paragraph (a)(2) waters include impoundments created in waters that were jurisdictional under this rule’s definition at the time the impoundment was created, as well as impoundments of waters that at the time of assessment are jurisdictional under paragraph (a)(1), (a)(3), or (a)(4) of this rule regardless of

the water's jurisdictional status at the time the impoundment was created.⁹⁵ This is generally consistent with the agencies' longstanding approach to impoundments. See U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (2007) at 58, available at <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Related-Resources/CWA-Guidance/> (hereinafter, "2007 Corps Instructional Guidebook"). The agencies have concluded that it is appropriate based on relevant case law, science, and as a practical matter to interpret "waters of the United States" to include both impoundments of waters that qualified as "waters of the United States" under this rule's definition at the time of impoundment, and impoundments of waters that at the time of assessment meet the definition of "waters of the United States" (other than waters jurisdictional under paragraph (a)(5)). As discussed above, waters that qualified as "waters of the United States" at the time of impoundment (other than waters jurisdictional under paragraph (a)(5)) remain "waters of the United States." And impoundments of waters that at the time of assessment fall within one of the other categories of "waters of the United States" in this rule (other than waters jurisdictional under paragraph (a)(5)) are jurisdictional under paragraph (a)(2).

The agencies received a variety of comments on impoundments during the public comment period. Some commenters supported the agencies' inclusion of impoundments of "waters of the United States" as a separate category of jurisdictional waters. A few commenters stated that the relatively permanent standard and significant nexus standard should also apply to impoundments for the purposes of jurisdiction. Some commenters agreed with the proposed rule's approach to not include impounded paragraph (a)(5) waters in the impoundments category. Many commenters requested the agencies provide greater clarity about the definition of impoundments.

After consideration of public comments and for the reasons described above and in section III.C of the Technical Support Document, the agencies affirm in this rule that impoundments of "waters of the United States" remain "waters of the United States," except for impoundments of paragraph (a)(5) waters, which the

agencies find are better assessed under other categories of this rule. As discussed above, paragraph (a)(2) impoundments of "waters of the United States" legally remain "waters of the United States," so the agencies are not requiring an additional determination of their jurisdiction under this rule. While the agencies are not defining "impoundment" in this rule, in this preamble the agencies are providing additional clarity below about the types of impoundments that are and that are not considered "waters of the United States" under paragraph (a)(2). Additionally, section IV.C.3.c of this preamble provides implementation guidance for identifying impoundments on the landscape.

As in the proposed rule, impoundments of waters that are determined to be jurisdictional under paragraph (a)(5) are not included in this rule as paragraph (a)(2) impoundments. As discussed above, impoundments of paragraph (a)(5) waters would need to be assessed for jurisdiction in their current state under paragraph (a)(1), (a)(3), (a)(4), or (a)(5) of this rule. Thus, if a water is determined to be jurisdictional under paragraph (a)(5) and is then later lawfully impounded, it is not jurisdictional by rule under the paragraph (a)(2) impoundments provision. Instead, the impoundment of a paragraph (a)(5) water would itself need to be assessed in its current state to determine whether it is jurisdictional under one of the provisions of the rule besides paragraph (a)(2). Impounded paragraph (a)(5) waters will most likely continue to not meet any of the other categories of jurisdictional waters and will therefore need to be re-assessed under paragraph (a)(5). However, if, once impounded, such a water became, for example, a traditional navigable water, it would be jurisdictional under paragraph (a)(1) of this rule. This approach in this rule is consistent with the agencies' careful approach to jurisdiction over paragraph (a)(5) waters. For example, as discussed in sections IV.C.4 and IV.C.5 of this preamble below, the "tributaries" category does not include tributaries to paragraph (a)(5) waters and the adjacent wetlands category does not include wetlands adjacent to paragraph (a)(5) waters. This change from the 1986 regulations reflects the agencies' consideration of the jurisdictional concerns and limitations of the statute as informed by SWANCC and *Rapanos*.

c. Implementation

Under this rule, for the reasons discussed above, impounding a water that meets the definition of "waters of

the United States" generally does not affect such water's jurisdictional status, consistent with pre-2015 practice. See 2007 Corps Instructional Guidebook at 58. A water can be found to be a jurisdictional impoundment under paragraph (a)(2) of this rule if (1) the impounded water met the definition of "waters of the United States" based on this rule's definition at the time the impoundment was created⁹⁶ (other than an impoundment of a paragraph (a)(5) water) or (2) the water that is being impounded, at the time of assessment, meets the definition of "waters of the United States" under paragraph (a)(1), (a)(3), or (a)(4), regardless of the water's jurisdictional status when the impoundment was created. The agencies also note that over time an impoundment of a water that does not initially meet the definition of "waters of the United States" can become jurisdictional under another provision of the regulation; for example, an impounded water could become navigable-in-fact and covered under paragraph (a)(1)(i) of this rule. This approach to implementation of impoundments is generally consistent with pre-2015 practice. This section of the preamble provides information for determining jurisdiction for impoundments under paragraph (a)(2) and for determining jurisdiction for tributaries of impoundments, wetlands adjacent to impoundments, and wetlands adjacent to tributaries of impoundments.

i. Determining the Presence of a Paragraph (a)(2) Impoundment

Impoundments are distinguishable from natural lakes and ponds because they are created by discrete structures (often human-built) like dams or levees that typically have the effect of raising the water surface elevation, creating or expanding the area of open water, or both. Impoundments can vary in size, with some being very small and others being very large, like Lake Mead, a reservoir on the Colorado River that is created by the Hoover Dam. Paragraph (a)(2) impoundments under this rule can include both natural impoundments (like beaver ponds) and artificial impoundments (like reservoirs). Paragraph (a)(2) impoundments under this rule can be located off-channel (*i.e.*,

⁹⁵ See *infra* for a discussion of impoundments of waters that are jurisdictional as paragraph (a)(5) waters, which are treated differently under this rule.

⁹⁶ Note, however, if an impoundment is a waste treatment system constructed prior to the 1972 Clean Water Act amendments, it is eligible for the exclusion under paragraph (b) of this rule so long as the system is in compliance with currently applicable Clean Water Act requirements, such as treating water such that discharges, if any, from the system meet the Act's requirements. See section IV.C.7.b of this preamble.

an impoundment with no outlet or hydrologic connection to the tributary network) or in-line with the channel (*i.e.*, an impoundment with a hydrologic connection to the tributary network).

An impoundment is jurisdictional under paragraph (a)(2) of this rule if the impounded water met the definition of “waters of the United States” based on this rule’s definition when the impoundment was created (other than impoundments of paragraph (a)(5) waters). To determine if an impoundment meets this criterion, the water would be assessed to see if the water was jurisdictional as a paragraph (a)(1) water, tributary, or adjacent wetland based on this rule’s definition at the time it was impounded. Tools that can be used for such assessment are discussed further in sections IV.C.4.c and IV.C.5.c of this preamble. Historic aerial photographs, maps, and geospatial datasets may be particularly useful in helping to determine if a water was jurisdictional under paragraph (a)(1), (a)(3), or (a)(4) of this rule at the time the impoundment was created, especially where such materials depict the aquatic system before and after the impoundment was created. Similarly, planning, engineering, and design documents, if available, may provide useful information.

Paragraph (a)(2) waters also include impoundments of waters that at the time of assessment are jurisdictional under paragraph (a)(1), (a)(3), or (a)(4) of this rule regardless of the water’s jurisdictional status at the time the impoundment was created. This approach is consistent with pre-2015 practice. *See* 2007 Corps Instructional Guidebook at 58. A water that is impounded may not meet this rule’s jurisdictional criteria at the time the water was originally impounded, but the water may meet this rule’s jurisdictional criteria at the time of the assessment (in some cases, many years later). This is because aquatic resources generally can evolve over time as aquatic landscapes, precipitation and other climatic patterns, and other environmental conditions change, or due to human-caused changes (*e.g.*, stream modification, filling in of wetlands, water withdrawals, or effluent discharges). Impounded waters may be particularly likely to evolve as the surface waters are raised or expanded behind the impoundment. To determine if an impoundment is jurisdictional based on such changes, the impounded water would be assessed to see if it is a traditional navigable water, the territorial seas, an interstate water, a jurisdictional tributary, or a jurisdictional adjacent wetland. Tools

that can be used for such assessment are discussed further in sections IV.C.4.c and IV.C.5.c of this preamble.

In assessing if an impoundment of a paragraph (a)(1) water is jurisdictional under paragraph (a)(2), the agencies would assess whether the water that is being impounded met the requirements to be a paragraph (a)(1) water under this rule either at the time of impoundment or at the time of assessment. Impoundments of paragraph (a)(1) waters that continue to meet the requirements under paragraph (a)(1) remain paragraph (a)(1) waters.

In assessing whether an impoundment of a tributary is jurisdictional under paragraph (a)(2), the agencies would first assess if the tributary either met this rule’s definition of “waters of the United States” at the time the impoundment was created or if the tributary meets this rule’s definition of “waters of the United States” at the time of assessment. For impoundments of tributaries that met this rule’s definition of “waters of the United States” at the time the impoundment was created, the agencies must be able to demonstrate that at the time the impoundment was created, there was evidence of a flowpath (*e.g.*, physical features on the landscape, such as a channel, ditch, pipe, or swale) directly or indirectly through another water or waters, downstream from the structure that created the impoundment to a paragraph (a)(1) water. Thus, an impoundment of a tributary that met this rule’s definition of “waters of the United States” at the time the impoundment was created could currently be located off-channel (*e.g.*, due to changes in hydrology) or in-line with the channel, but the flowpath would only need to be traceable at the time the impoundment was created. For impoundments of tributaries that meet this rule’s definition of “waters of the United States” at the time of assessment, the agencies must be able to at the time of assessment trace a flowpath directly or indirectly through another water or waters, downstream from the structure that creates the impoundment to a paragraph (a)(1) water. Thus, impoundments of tributaries that meet the definition of “waters of the United States” at the time of assessment will always be in-line with the channel due to the flowpath requirement. This is consistent with the agencies’ approach to tributaries under the final rule. *See* section IV.C.4. of this preamble. As with assessment of tributaries under this rule, while the physical flowpath from the paragraph (a)(2) impoundment to the paragraph (a)(1) water must be traceable, there is

not a need to demonstrate that flow from the impoundment reaches the paragraph (a)(1) water. For an off-channel impoundment (*i.e.*, an impoundment with no outlet to the tributary network), such as an impoundment of a jurisdictional adjacent wetland, such a flowpath is not required. Under the final rule, adjacent wetlands do not require a flowpath to the tributary network, and similarly, impoundments of such adjacent wetlands do not require a flowpath. The agencies would only need to determine that the impoundment was created in a water that is currently jurisdictional under paragraphs (a)(1) through (4) or that the impoundment was created in a water that was jurisdictional under paragraphs (a)(1) through (4) at the time the impoundment was created.

In assessing whether an impoundment of an adjacent wetland is jurisdictional under paragraph (a)(2), the agencies would need to determine that the impoundment was created in an adjacent wetland that was jurisdictional at the time the impoundment was created or that is currently jurisdictional at the time of assessment. Such impoundments of adjacent wetlands may be located either off-channel or in-line with the channel, and do not require a traceable flowpath that is required for impoundments of tributaries. This is because under the final rule, adjacent wetlands do not require a flowpath to the tributary network, and similarly, impoundments of such adjacent wetlands do not require a flowpath.

Because impoundments can be jurisdictional under other categories of “waters of the United States” under this rule, field staff may document that the impoundment is jurisdictional under other categories. For example, if an impoundment is itself a traditional navigable water, part of the territorial seas, or an interstate water, the agencies would typically determine that the impoundment is a paragraph (a)(1) water, rather than asserting jurisdiction under paragraph (a)(2) of this rule. Field staff may document any such waters as jurisdictional under the relevant provision of the rule rather than documenting that it is jurisdictional as a paragraph (a)(2) impoundment.

Finally, as discussed above in section IV.C.3.b of this preamble, waters that are jurisdictional under paragraph (a)(5) and that are subsequently impounded do not categorically retain their jurisdictional status as “waters of the United States” under paragraph (a)(2). If the impoundment of the paragraph (a)(5) water does not meet the jurisdictional standards under one of

the other categories of “waters of the United States” in this rule (*i.e.*, as a paragraph (a)(1) water, jurisdictional tributary, or jurisdictional adjacent wetland), the impoundment would be re-assessed as a paragraph (a)(5) water. Implementation of waters assessed under paragraph (a)(5) is discussed in section IV.C.6.c of this preamble.

ii. Determining Jurisdiction for Tributaries of Impoundments, Wetlands Adjacent to Impoundments, and Wetlands Adjacent to Tributaries of Impoundments

Tributaries of paragraph (a)(2) impoundments are jurisdictional, as with all tributaries under this rule, when they meet either the relatively permanent standard or the significant nexus standard. In order to determine if a water is a tributary of a paragraph (a)(2) impoundment, the same tools and methods can be used that are discussed in section IV.C.4.c.i of this preamble to trace the flowpath to the impoundment. Field staff would then determine if the tributary should be evaluated under the relatively permanent standard or the significant nexus standard. For tributaries assessed under the relatively permanent standard, the agencies must be able to trace evidence of a flowpath downstream from the structure that creates the impoundment to a paragraph (a)(1) water. To meet the latter standard, the significant nexus must be to a paragraph (a)(1) water. Implementation of the relatively permanent standard for tributaries is discussed in more detail in section IV.C.4.c.ii of this preamble. Implementation of the significant nexus standard for tributaries is discussed in section IV.C.4.c.iii of this preamble.

For tributaries of paragraph (a)(2) impoundments that are evaluated under the relatively permanent standard, field staff would determine if the tributary has flowing or standing water year-round or continuously during certain times of the year, *see* section IV.C.4.c.ii of this preamble, and then determine whether there is evidence of a flowpath downstream from the structure that creates the impoundment to a paragraph (a)(1) water. As with all tributaries under the rule, there is no requirement under the relatively permanent standard for relatively permanent flow for the entirety of a tributary’s flowpath to a downstream paragraph (a)(1) water. *See id.* Thus, under the relatively permanent standard for tributaries of paragraph (a)(2) impoundments, field staff would not need to determine that flow occurs over, through, around, or underneath the structure that creates the impoundment. Instead, the agencies will document that flow occurs from the

tributary to the impoundment, either directly or indirectly through another water or waters, including non-jurisdictional features, as described in section IV.C.4 of this preamble, and that there is evidence of a flowpath downstream of the structure (*e.g.*, physical features on the landscape, such as a channel, non-jurisdictional ditch, pipe, or swale) to a paragraph (a)(1) water, either directly or indirectly through another water or waters. For example, a tributary may flow through another stream that flows infrequently, and only in direct response to precipitation, and the presence of that stream is sufficient to demonstrate that the tributary flows to a paragraph (a)(1) water.

If a wetland is adjacent to a paragraph (a)(2) impoundment and that wetland is evaluated under the relatively permanent standard, field staff would, only for purposes of determining whether the adjacent wetland meets the relatively permanent standard, assess whether the impounded water is relatively permanent, standing or continuously flowing. Next, field staff would determine whether the wetland has a continuous surface connection to the paragraph (a)(2) impoundment, consistent with section IV.C.5 of this preamble. If the paragraph (a)(2) impoundment is not relatively permanent, standing or continuously flowing, then field staff will assess the adjacent wetland under the significant nexus standard.

If a wetland is adjacent to a tributary to a paragraph (a)(2) impoundment, and the tributary meets the relatively permanent standard, the wetland would be assessed for whether it has a continuous surface connection to the tributary, consistent with section IV.C.5 of this preamble. If the adjacent wetland does not have a continuous surface connection, it will be assessed under the significant nexus standard. If the tributary does not meet the relatively permanent standard, then field staff will assess the adjacent wetland under the significant nexus standard. To apply the significant nexus standard to tributaries of paragraph (a)(2) impoundments, wetlands adjacent to those tributaries, or wetlands adjacent to paragraph (a)(2) impoundments, the agencies will assess if the waters of interest significantly affect the chemical, physical, or biological integrity of paragraph (a)(1) waters using the tools and approaches described in sections IV.C.4.c.iii and IV.C.5.c.iii of this preamble. As part of that analysis, the agencies will determine if there is a surface or subsurface hydrologic connection downstream that is maintained over,

through, around, or underneath the structure that creates the impoundment. Such a hydrologic connection can occur in a variety of ways, such as overtopping of the structure or through features like dam spillways, drainage and other galleries, sluiceways, culverts, pipes, diversion tunnels, or conduits that are built to maintain a hydrologic connection through the dam or levee. Subsurface hydrologic connectivity can also occur via seepage through or underneath the dam or similar structure. Field staff can document that surface or subsurface hydrologic connectivity occurs using direct observation of overtopping or a feature that is constructed to maintain a hydrologic connection, through review of construction plans for the structure, through other field observations (*e.g.*, dye tests or tracer studies, or observations of flow within the spillway such as bent over vegetation or water staining where the spillway is concrete, soil saturation, changes in vegetation above and below the structure), or through remote tools (*e.g.*, aerial photography interpretation that provides indications of wetter signatures below the dam). As stated in section IV.C.9 of this preamble, a hydrologic connection to a paragraph (a)(1) water is not necessary to determine that the water being evaluated significantly affects the integrity of paragraph (a)(1) waters, though it is one of the factors that is considered. Where such a hydrologic connection exists at the surface or subsurface, it can help to facilitate the functions that the tributary of the paragraph (a)(2) impoundment performs that impact the downstream paragraph (a)(1) water, such as contribution of flow, pollutants, sediment, and organic material. In the rare circumstances where such a hydrologic connection does not exist, the lack of such a connection can facilitate other functions, such as holding back floodwaters that could otherwise harm paragraph (a)(1) waters. *See* preamble section IV.C.9 for additional information on implementing the significant nexus standard more generally.

4. Tributaries

a. This Rule

Consistent with the proposal, this rule retains the tributary provision of the 1986 regulations, updated to reflect consideration of the law, the science, and agency expertise. The 1986 regulations defined “waters of the United States” to include tributaries of traditional navigable waters, interstate waters, paragraph (a)(3) “other waters”

(a category that has been modified and codified in this rule as paragraph (a)(5) waters) and impoundments. With this rule, the agencies are adding the territorial seas to the list of waters to which tributaries may connect to constitute a jurisdictional tributary and removing paragraph (a)(3) waters from the list. This rule defines “waters of the United States” to include tributaries of traditional navigable waters, the territorial seas, interstate waters, or paragraph (a)(2) impoundments if the tributaries meet either the relatively permanent standard or the significant nexus standard.

The 1986 regulations do not contain a definition of “tributary,” and the agencies similarly are not including a definition in this rule. However, for more than 45 years, the agencies have recognized the need to protect “the many tributary streams that feed into the tidal and commercially navigable waters . . . since the destruction and/or degradation of the physical, chemical, and biological integrity of each of these waters is threatened by the unregulated discharge of dredged or fill material.” 42 FR 37121, 37123 (July 19, 1977). Accordingly, the agencies are maintaining their interpretation of tributary for purposes of the definition of “waters of the United States.” See *Rapanos* Guidance at 6 n.24. A tributary for purposes of this rule includes rivers, streams, lakes, ponds, and impoundments, regardless of their flow regime, that flow directly or indirectly through another water or waters to a traditional navigable water, the territorial seas, or an interstate water. Waters through which a tributary may flow indirectly include, for example, impoundments, wetlands, lakes, ponds, and streams. A tributary may flow through a number of downstream waters, including a non-jurisdictional tributary or non-jurisdictional features, such as a ditch excluded under paragraph (b) of this rule or an excluded waste treatment system, and jurisdictional waters that are not tributaries, such as an adjacent wetland. But to be jurisdictional, the tributary must be part of a tributary system that eventually flows to a traditional navigable water, the territorial seas, or an interstate water. The agencies will utilize the Corps’ well-established definition of an ordinary high water mark (OHWM) to assist in identifying tributaries for purposes of this rule. See section IV.C.4.c.i of this preamble for information on using the OHWM to assist in identifying a water as a tributary for purposes of this rule. To be a jurisdictional tributary under this

provision of the rule, the tributary must meet either the relatively permanent standard or the significant nexus standard.

Like the 1986 regulations, this rule includes tributaries of interstate waters since interstate waters, like traditional navigable waters and the territorial seas, are waters clearly protected by the Clean Water Act. In this rule, the agencies are adding the territorial seas to the list of waters to which tributaries may connect to constitute a jurisdictional tributary because the territorial seas are explicitly protected by the Clean Water Act. Because the territorial seas are explicitly covered by the Clean Water Act, it is reasonable and appropriate to protect tributaries to the territorial seas that meet either the relatively permanent standard or the significant nexus standard for the same reasons that tributaries to traditional navigable waters are protected. In practice, the agencies recognize that most tributaries will reach a traditional navigable water before they reach the territorial seas. Finally, consistent with the 1986 regulations, this rule includes tributaries that flow directly or indirectly through another water or waters to paragraph (a)(2) impoundments.⁹⁷

The agencies’ longstanding interpretation of the Clean Water Act includes tributaries that are natural, modified, or constructed waters. The Clean Water Act, in defining “navigable waters,” does not turn on any such distinctions, which have no bearing on a tributary’s capacity to carry water (and pollutants) to paragraph (a)(1) waters. See, e.g., Technical Support Document section II.B.iv.3 (explaining that human-made ditches “perform many of the same functions as natural tributaries,” including “convey[ing] water that carries nutrients, pollutants, and other constituents, both good and bad, to downstream traditional navigable waters”). Given the extensive human modification of watercourses and hydrologic systems throughout the country, it is often difficult to distinguish, as a practical or scientific matter, between natural watercourses and watercourses that are wholly or partly modified or constructed. For example, tributaries that have been channelized in concrete or otherwise have been modified would still be tributaries for purposes of this rule so long as they contribute flow to a traditional navigable water, the territorial seas, or an interstate water, and so long as they are not excluded

⁹⁷ See discussion of tributaries to paragraph (a)(2) impoundments in section IV.C.3 of this preamble.

under paragraph (b) of this rule. Thus, tributaries can include ditches and canals.

Under this rule, swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow are not tributaries and are not jurisdictional. See section IV.C.7 of this preamble.

Once a water is determined to be a tributary, under this rule, the tributary must meet either the relatively permanent or significant nexus standard to be jurisdictional. The relatively permanent standard encompasses tributaries that have flowing or standing water year-round or continuously during certain times of the year. Relatively permanent waters do not include tributaries with flowing or standing water for only a short duration in direct response to precipitation. In evaluating tributaries under the significant nexus standard, the agencies will determine whether the tributaries, 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. Implementation of each of those standards for purposes of determining jurisdiction over tributaries is discussed below in section IV.C.4.c of this preamble.

b. Summary of the Agencies’ Consideration of Public Comments and Rationale for This Rule

Commenters expressed a range of views on the agencies’ proposed treatment of tributaries. This section of the preamble provides a summary of the major comments received on the regulatory text and the agencies’ consideration of the comments. The preamble to the proposed rule also provided information about the agencies’ longstanding interpretation of practice for identifying tributaries for purposes of the definition of “waters of the United States,” and this section also summarizes and addresses major comments received on those topics.

i. Comments on the Tributaries Provision of This Rule

Some commenters requested that the agencies include a definition of “tributary” in this rule. A subset of these commenters stated that the definition should include waters with a bed, bank, or other evidence of flow that contribute flow directly or indirectly to downstream paragraph (a)(1) waters. Other commenters maintained that the lack of a formal definition makes it unclear which features are tributaries and which are not. Some of these commenters stated that the lack of a

definition left too much discretion to the agencies to identify tributaries based on physical features, which they asserted would lead to confusion. Some commenters supported the proposed approach for assessing tributaries, stating that the longstanding interpretation and practice would allow for regionalized implementation. Although the agencies are not promulgating a new definition of “tributary” the agencies have decades of experience implementing the 1986 regulations (which also did not include a definition of “tributary”) and have concluded that a new regulatory definition of tributary is not required. To provide further clarity, the agencies have been careful in this preamble to articulate and explain the agencies’ well-established interpretation and practices for identifying tributaries. In addition, the agencies note that while the first step under this provision of the regulation is to identify whether a water is a tributary under longstanding practice, that is not the end of the inquiry under this rule, in contrast to the 1986 regulations. A water must not only be a tributary but must also meet either the relatively permanent standard or the significant nexus standard to be jurisdictional under this provision. These standards provide important limitations that also help define the scope of the tributaries that are jurisdictional under the rule.

Commenters on the proposed rule expressed a variety of perspectives on the appropriate scope of jurisdiction for tributaries. Some commenters supported the proposal that tributaries are jurisdictional if they meet either the relatively permanent or significant nexus standard. Other commenters asserted that tributaries should meet both standards. Some commenters stated that this rule should include categorical protections for all tributaries (e.g., features with an OHWM), rather than requiring case-by-case analysis, asserting that such an interpretation is supported by the science and Supreme Court case law. For the reasons described in section IV.A of this preamble, this rule defines “waters of the United States” to include tributaries that meet either the relatively permanent standard or the significant nexus standard on a case-specific basis.

Some commenters criticized the definition of “tributary” from the 2020 NWPR, while others supported that definition, stating that it was clear and logical. The 2020 NWPR defined “tributary” as a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to the territorial seas or a

traditional navigable water in a typical year either directly or indirectly through other tributaries, jurisdictional lakes, ponds, or impoundments, or adjacent wetlands. A tributary was required to be perennial or intermittent in a typical year. 85 FR 22251 (April 21, 2020). The definition of “tributary” in the 2020 NWPR failed to advance the objective of the Clean Water Act and was inconsistent with scientific information about the important effects of many types of tributaries on the integrity of downstream paragraph (a)(1) waters.

The key limitations that the 2020 NWPR created in its definition of “tributary,” which this rule does not adopt, are the categorical exclusion of ephemeral streams and the requirement that streams contribute flow to a traditional navigable water or territorial sea in a “typical year.” With respect to ephemeral streams, commenters provided a wide variety of perspectives on whether they should be jurisdictional under this rule. Some commenters asserted that the agencies’ interpretation of tributary should exclude ephemeral streams. Some commenters asserted that ephemeral streams should be categorically jurisdictional under this rule. These commenters referenced the importance of ephemeral streams for providing functions like nutrient and materials transport, erosion and flood control, water quality maintenance downstream, drinking water and irrigation provisioning, groundwater recharge, and wildlife habitat. Other commenters asserted that ephemeral streams are important for buffering against the impacts of climate change, supporting Tribal communities, and providing functions in specific regions like arid areas. Another group of commenters stated that all ephemeral streams should be non-jurisdictional across the country, or non-jurisdictional in certain regions such as the arid West. These commenters asserted that ephemeral streams do not flow frequently enough or provide sufficiently important functions to impact the integrity of downstream paragraph (a)(1) waters. As discussed further in section IV.A of this preamble, the agencies are not categorically including or excluding streams as jurisdictional based on their flow regime in this rule. The agencies agree that ephemeral streams can provide many important functions for paragraph (a)(1) waters.

With respect to the “typical year requirement” in the 2020 NWPR definition of “tributary,” the agencies found it challenging and sometimes impossible to implement, for the reasons discussed in section IV.B.3.c of

this preamble. The “typical year” requirement for tributaries was also not supported by science. Scientific information does not demonstrate that only those streams that contribute intermittent or perennial flow to a traditional navigable water or territorial sea in a “typical year” have significant effects on the chemical, physical, and biological integrity of larger downstream waters, including paragraph (a)(1) waters. See sections IV.B.3.a and IV.B.3.b of this preamble. Because the limitations in the 2020 NWPR’s definition of “tributary” are inconsistent with science and created substantial implementation difficulties, the agencies are not adopting this definition. See section III.A of the Technical Support Document for more information on the agencies’ rationale for the scope of tributaries covered by this rule. Streams that are tributaries, regardless of their flow regime, will be assessed under the relatively permanent or significant nexus standard per paragraph (a)(3) of this rule, and streams that are not tributaries will be assessed under the relatively permanent or significant nexus standard per paragraph (a)(5) of this rule.

Some commenters opposed as arbitrary and unsupported by the law or science the agencies’ proposed approach to delete the category for intrastate lakes and ponds, streams, or wetlands that do not meet another jurisdictional category (the (a)(3) “other waters” provision from the 1986 regulations) as a category of waters to which tributaries may connect to be determined “waters of the United States.” Some of these commenters requested clarification as to how tributaries to intrastate lakes and ponds, streams, or wetlands that do not meet another jurisdictional category would be assessed. One commenter asserted that the agencies were “excluding” tributaries to paragraph (a)(5) waters. Streams that flow to paragraph (a)(5) waters are not excluded in this rule. Deleting the cross reference to the category for intrastate lakes and ponds, streams, or wetlands that do not meet another jurisdictional category (the (a)(3) “other waters” provision from the 1986 regulations) as a category of waters to which tributaries may connect reflects the agencies’ consideration of the statute as a whole and the jurisdictional concerns and limitations of *SWANCC* and *Rapanos*. The agencies have concluded that a provision that authorizes consideration of jurisdiction over tributaries that meet the relatively permanent or significant nexus standard when assessed based simply on connections to such waters would have

too tenuous a connection to paragraph (a)(1) waters. However, in this rule any such streams that flow to jurisdictional paragraph (a)(5) waters could be assessed themselves under the paragraph (a)(5) waters category to determine if they meet the relatively permanent or significant nexus standard. For example, a stream that flows to a lake that meets the significant nexus standard under the paragraph (a)(5) waters provision could itself be assessed under the paragraph (a)(5) waters provision to determine whether it significantly affects the chemical, physical, or biological integrity of a paragraph (a)(1) water.

ii. Comments on the Interpretation and Implementation of the Tributaries Provision of This Rule

As discussed further above, the agencies interpret tributary for purposes of this rule to include rivers, streams, lakes, ponds, and impoundments that flow directly or indirectly through another water or waters to a traditional navigable water, the territorial seas, an interstate water, or a paragraph (a)(2) impoundment. The agencies received comments on elements of this longstanding interpretation of tributary for purposes of the “waters of the United States.”

Some commenters disagreed with the agencies’ interpretation that tributaries include certain lakes and ponds. Some of these commenters stated that lakes and ponds should comprise a separate jurisdictional category. Several commenters asserted that considering certain lakes and ponds to be tributaries could lead to overly broad jurisdiction, and one commenter requested clarification in this rule that not every feature that might be considered a lake or a pond is necessarily jurisdictional. Other commenters agreed with the agencies’ longstanding approach. Lakes, ponds, and impoundments function as part of the tributary system where they contribute flow to downstream waters, and therefore it is reasonable to assess them for jurisdiction as tributaries under this rule. The agencies will continue to interpret the regulations to address lakes, ponds, and impoundments with both an inlet and outlet connected to the tributary network, as well as lakes, ponds, and impoundments with an outlet connected to the tributary network as tributaries if they contribute flow directly or indirectly through one or more waters or features that lie along the flowpath to a paragraph (a)(1) water. The agencies have extensive experience implementing this approach under pre-2015 practice. The agencies disagree

that this approach will lead to overly broad jurisdiction, as these lakes, ponds, and impoundments that are tributaries must meet either the relatively permanent standard or significant nexus standard to be jurisdictional. Therefore, not every lake, pond, or impoundment is jurisdictional as a tributary or under other provisions of this rule.

Some commenters supported the agencies’ longstanding interpretation that tributaries include waterbodies that flow “directly or indirectly” to a paragraph (a)(1) water, while other commenters asserted that tributaries must flow “directly” into a paragraph (a)(1) water. There is no text in the Clean Water Act supporting this limitation, and the agencies have never interpreted the Act to cover only such tributaries. Even the *Rapanos* plurality opinion did not so limit the scope of tributaries covered by the Act. 547 U.S. at 742. Moreover, the science is clear that the chemical, physical, and biological integrity of paragraph (a)(1) waters depends on the many tributaries, including headwater streams, that feed such waters. It would be impossible to restore and maintain the chemical, physical, and biological integrity as required by the Clean Water Act with a definition of “waters of the United States” that included solely the last tributary that flows “directly” into a paragraph (a)(1) water. Tributaries upstream provide key functions that support the chemical, physical, and biological integrity of paragraph (a)(1) waters. If protections for tributaries ended just above the very last one, functions like habitat for salmon spawning, baseflow to maintain water levels, and nutrient replenishment would all be at risk. See Technical Support Document sections I.A and III.E.ii.

A tributary may contribute flow through a number of downstream waters or features, including both non-jurisdictional features, such as a ditch excluded under paragraph (b) of this rule, and jurisdictional waters that are not tributaries, such as an adjacent wetland. However, the tributary must be part of a system that eventually flows to a paragraph (a)(1) water. Waters that are part of a system that never reaches a paragraph (a)(1) water, for example, a small system of streams that ultimately flow to a non-navigable stream in an intrastate basin with no outlet, are not jurisdictional under this provision of this rule.

Some commenters asserted that the agencies’ approach to interpreting “tributary” would potentially allow the agencies to include wetlands as tributaries. The agencies disagree. While

wetlands may be a water through which a tributary flows directly or indirectly to a paragraph (a)(1) water, the agencies do not consider that wetland to be a tributary itself. This is consistent with pre-2015 practice. Only when a wetland lies entirely below the OHWM, will it be identified as part of the tributary consistent with current practice; even then, the wetland is not identified as a tributary itself. Otherwise, such wetlands are considered adjacent wetlands and will be evaluated under paragraph (a)(4) of this final rule.

Some commenters supported the agencies’ longstanding interpretation that there is no meaningful distinction among natural, human-altered, or human-made tributaries in terms of their functions, values, and influence on the integrity of downstream waters. Some commenters requested clarification as to whether both human-made and natural tributaries would be regulated in this rule. Some commenters asserted that the agencies’ proposed approach to interpreting “tributary” is overly broad and expansive because it would potentially allow the agencies to include ditches and human-made conveyances as tributaries. The agencies disagree with commenters who asserted that the agencies’ approach to human-made tributaries is overly broad and expansive. The approach is consistent with the agencies’ decades-long practice and the scientific record, and such tributaries must still meet either the relatively permanent standard or the significant nexus standard to be jurisdictional under this rule. As noted above, given the extensive human modification of watercourses and hydrologic systems throughout the country, it is often difficult to distinguish between natural watercourses and watercourses that are wholly or partly human-made or human-altered. Because natural, human-altered, and human-made tributaries provide many of the same functions, especially as conduits for the movement of water and pollutants to other tributaries or directly to paragraph (a)(1) waters, the agencies have interpreted the 1986 regulations to cover such tributaries. Ditches, for example, are tributaries under this rule if they flow directly or indirectly to paragraph (a)(1) waters and they are jurisdictional tributaries if they also meet the relatively permanent standard or significant nexus standard and are not excluded from jurisdiction under this rule. See section IV.C.7 of this preamble for additional discussion on excluded ditches.

c. Implementation

A tributary for purposes of this rule includes rivers, streams, lakes, ponds, and impoundments that flow directly or indirectly through another water or waters to a traditional navigable water, the territorial seas, an interstate water, or a paragraph (a)(2) impoundment. A tributary may flow through a number of downstream waters, including non-jurisdictional features. This section of the preamble provides additional information on the agencies' interpretation and implementation of the tributary provision of this rule. This section first explains how to determine whether a water is a tributary for purposes of this rule. The section next explains how to determine whether a tributary is jurisdictional under the relatively permanent standard or under the significant nexus standard.

i. Determining Whether a Water Is a Tributary for Purposes of This Rule

This section describes how to (1) identify a tributary for purposes of this rule and (2) determine whether the tributary is part of the tributary system of a traditional navigable water, the territorial seas, an interstate water, or a paragraph (a)(2) impoundment.

(1) Identifying a Water as a Tributary

In implementing this rule, the agencies are maintaining their longstanding interpretation that tributaries for purposes of Clean Water Act jurisdiction include rivers, streams, lakes, ponds, and impoundments. See 2007 Corps Instructional Guidebook at 8, 9. As discussed above, although tributaries are required to flow directly or indirectly through another water or waters to certain downstream waters, tributaries are not required to have a specific flow regime to meet the agencies' interpretation of "tributary." However, flow characteristics like duration and timing of flow will be considered in determining whether tributaries meet the relatively permanent or significant nexus standard, as described further below in sections IV.C.4.c.ii and IV.C.4.c.iii of this preamble. Lakes, ponds, and impoundments may be at the headwaters of the tributary network (e.g., a lake with only an outlet to the tributary network) or farther downstream from the headwaters (e.g., a lake with both an inlet and outlet connected to the tributary network). Even though such waters are considered to be lentic or "still" systems, such waters still contribute flow downstream at the point that they outlet to the tributary network and therefore the

agencies have long concluded it is appropriate to consider such waters to be tributaries.

As discussed above in this section of the preamble, the agencies' longstanding interpretation of "tributary" for purposes of the definition of "waters of the United States" includes natural, human-altered, or human-made waterbodies that flow directly or indirectly through another water or waters to a traditional navigable water, the territorial seas, or an interstate water. See *Rapanos* Guidance at 6.

The agencies will utilize the Corps' well-established definition of an ordinary high water mark (OHWM) to assist in identifying tributaries for purposes of this rule. See section IV.C.8 of this preamble (adding the definition of OHWM to EPA's regulation). Tributaries typically have at least one indicator of an OHWM and, consistent with pre-2015 practice, physical OHWM characteristics are used to identify waterbodies including streams, lakes, ponds, and ditches that are present on the landscape. See, e.g., "Final Notice of Issuance and Modification of Nationwide Permits," 65 FR 12818, 12823–24 (March 9, 2000); 2007 Corps Instructional Guidebook; RGL 05–05 (December 7, 2005). The OHWM, a term unchanged since 1977, defines the lateral limits of jurisdiction in non-tidal "waters of the United States," provided the limits of jurisdiction are not extended by adjacent wetlands. See 42 FR 37144 (July 19, 1977); 33 CFR 323.3(c) (1978). The regulations at 33 CFR 328.3(e) and 329.11(a)(1) list the factors to be applied. RGL 05–05 further explains these regulations. Delineation of an OHWM in tributaries relies on the identification and interpretation of physical features, including topographic breaks in slope, changes in vegetation characteristics (e.g., destruction of terrestrial vegetation and change in plant community), and changes in sediment characteristics (e.g., sediment sorting and deposition). Field indicators, remote sensing, and mapping information can also help identify an OHWM. The Corps continues to improve regulatory practices across the country through ongoing research and the development of regional and national OHWM delineation procedures, as described further in section IV.A.ii of the Technical Support Document. For example, the Corps has developed field indicators to help field staff identify the OHWM in common stream types in the arid West. Consistent with longstanding practice, the agencies will apply the regulations and use RGL 05–05 and applicable OHWM delineation manuals, as well as

take other steps as needed to ensure that the OHWM identification factors are applied consistently nationwide. See *Rapanos* Guidance at 10–11 n.36.

The agencies will assess any discontinuity in the OHWM and, consistent with pre-2015 practice, a natural or human-made discontinuity in the OHWM does not necessarily sever jurisdiction upstream. A discontinuity may exist where the stream temporarily flows underground. Tributaries may temporarily flow underground in regions with karst geology or lava tubes, for example, maintaining similar flow characteristics underground and at the downstream point where they return to the surface. The agencies will also continue their familiar practice that a discontinuity in the OHWM also does not typically sever jurisdiction upstream where the OHWM has been removed by development, agriculture, or other land uses. For example, tributaries can be relocated below ground to allow reasonable development to occur. In urban areas, surface waters are often rerouted through an artificial tunnel system to facilitate development. See, e.g., Science Report at 3–3, and sections III.A and IV.A.ii of the Technical Support Document. Underground streams are distinct from groundwater due to their very direct hydrologic connection to the portions of the tributaries that are or re-surface above ground. Typically, groundwater connections would be much slower than connections via underground streams. Tributaries that have been rerouted underground are contained within a tunnel system or other similar channelized subsurface feature, while naturally occurring subterranean streams flow within natural conduits like karst formations or lava tubes. The agencies will look for indicators of flow both above and below the discontinuity. For example, a discontinuity in the OHWM may exist due to constructed breaks (e.g., culverts, pipes, or dams)⁹⁸ or natural breaks (e.g., debris piles or boulder fields). Site specific conditions will continue to determine the distance up the tributary network that is evaluated to see if the feature creates a temporary break or if it severs the upstream connection and constitutes the start of the tributary system.

⁹⁸ Under past practice, the agencies have sometimes characterized bridges as artificial breaks, such as under the 2015 Clean Water Rule. See 80 FR 37106 (June 29, 2015). However, bridges do not necessarily create discontinuity in the OHWM, and the agencies recognize that tributaries flowing under bridges may still show evidence of an OHWM and in such circumstances would continue to be jurisdictional where they meet either the relatively permanent or significant nexus standard.

Under this rule, swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow are not tributaries and are not jurisdictional. See section IV.C.7 of this preamble. Because swales and erosional features were considered to be generally non-jurisdictional features under pre-2015 practice, the agencies have extensive experience differentiating between these features and tributaries on the landscape. See *Rapanos* Guidance at 11–12. Streams are waterbodies that are typically characterized by the presence of a channel and an OHWM, and lakes and ponds are waterbodies that are also typically characterized by the presence of an OHWM, in the absence of adjacent wetlands. In contrast, erosional features like gullies and rills are typically more deeply incised than streams and lack an OHWM. Similarly, swales do not have an OHWM and typically lack a more defined channel that a stream exhibits. See section IV.C.7 of this preamble and section III.A.v of the Technical Support Document for additional discussion on how to distinguish between tributaries, erosional features, and swales; see section IV.A.ii of the Technical Support Document for additional discussion on how to identify tributaries based on an OHWM.

A variety of field and remote tools can be used to determine whether a water is a tributary.⁹⁹ Due to limitations associated with some remote tools, field verification for accuracy may be necessary (e.g., due to scale or vegetation cover, not all tributaries may be visible in satellite imagery and aerial photographs or mapped in the NHD). Examples of field indicators will be discussed in more detail below.

⁹⁹ Direct observation or various remote sensing resources such as USGS stream gage data (available at <https://waterdata.usgs.gov/nwis/rt>), USGS topographic maps (available at <https://www.usgs.gov/the-national-map-data-delivery/topographic-maps>), high-resolution elevation data and associated derivatives (e.g., slope or curvature metrics), Federal Emergency Management Agency (FEMA) flood zone maps (available at <https://msc.fema.gov/portal/home>), NRCS soil maps (available at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>), National Hydrography Dataset (NHD) data, National Wetlands Inventory (NWI) data, maps and geospatial datasets from Tribal, State, or local governments, and/or aerial or satellite imagery can also be used. Tributaries are often observable in aerial imagery and high-resolution satellite imagery by their topographic expression, characteristic linear and curvilinear patterns, dark photographic tones, or the presence of riparian vegetation. USGS topographic maps often include different symbols to indicate mapped hydrographic features (see “Topographic Map Symbols,” available at <https://pubs.usgs.gov/gip/TopographicMapSymbols/topomapsymbols.pdf>).

(2) Identifying Whether the Water Is Part of the Tributary System of a Paragraph (a)(1) Water

The next step in determining whether a waterbody is a tributary is to identify whether the waterbody is part of the tributary system of a paragraph (a)(1) water. The tributary must flow directly or indirectly through another water or waters to a traditional navigable water, the territorial seas, or interstate water. Waters through which a tributary may flow indirectly include, for example, impoundments, wetlands, lakes, ponds, and streams. A tributary may flow through a number of downstream waters, including non-jurisdictional features, such as a ditch excluded under paragraph (b) of this rule or an excluded waste treatment system, and jurisdictional waters that are not tributaries, such as an adjacent wetland. But, the tributary must be part of a tributary system that eventually flows to a traditional navigable water, the territorial seas, or an interstate water to be jurisdictional. A tributary may flow through another stream that flows infrequently, and only in direct response to precipitation, and the presence of that stream is sufficient to demonstrate that the tributary flows to a paragraph (a)(1) water. Tributaries are not required to have a surface flowpath all the way down to the paragraph (a)(1) water. For example, tributaries can contribute flow through certain natural and artificial breaks (including certain non-jurisdictional features), some of which may involve subsurface flow as described above in section IV.C.4.b of this preamble.

In evaluating the flowpath from a water feature, the agencies can use USGS maps; NWI data; Tribal, State, and local knowledge or maps; dye tests, tracers, or other on the ground tests; field observations; aerial photography; or other remote sensing information. The agencies can also use available models, including models developed by Federal, Tribal, State, and local governments, academia, and the regulated community.¹⁰⁰ These tools could be used in conjunction with field observations, data, and other desktop tools to evaluate whether a tributary flows directly or indirectly to a

¹⁰⁰ One such model includes the USGS StreamStats “Flow (Raindrop) Path” GIS tool which allows the user to click a point on a map, after which a flowpath is drawn to estimate where water may flow from that point to the stream network, eventually making its way to the ocean if the tributary network allows for it (available at <https://streamstats.usgs.gov/ss/>). The StreamStats tool may potentially be used to identify the flowpath from the subject waters to the downstream paragraph (a)(1) water using the “Flow (Raindrop) Path” component of the tool.

paragraph (a)(1) water. For tributaries to paragraph (a)(2) impoundments, a flowpath to the impoundment and to a paragraph (a)(1) water can be identified using these same tools.

ii. Determining Whether a Tributary Meets the Relatively Permanent Standard

Under this rule, tributaries that meet the relatively permanent standard are jurisdictional under the Clean Water Act as “waters of the United States.” In implementing the relatively permanent standard, the agencies draw key concepts from the 2020 NWPR’s interpretation, but modify that rule’s approach to ensure the term can be practically implemented. Specifically, under this rule the relatively permanent standard encompasses surface waters that have flowing or standing water year-round or continuously during certain times of the year. Relatively permanent waters do not include surface waters with flowing or standing water for only a short duration in direct response to precipitation. The approach in this rule would encompass tributaries considered relatively permanent under the 2020 NWPR, as well as those considered relatively permanent under the *Rapanos* Guidance, providing continuity in approach for the regulated community and other stakeholders. Tributaries that do not meet the relatively permanent standard must be assessed under the significant nexus standard. See section IV.C.4.c.iii of this preamble.

The agencies’ interpretation of relatively permanent tributaries to include surface waters that have flowing or standing water year-round or continuously during certain times of the year is consistent with the *Rapanos* plurality’s interpretation of “waters of the United States.” The *Rapanos* plurality interpreted “waters of the United States” as encompassing “relatively permanent, standing or continuously flowing bodies of water,” including streams, rivers, oceans, lakes, and other bodies of waters that form geographical features. 547 U.S. at 739, 742. The plurality noted that its reference to “relatively permanent” waters did “not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought,” or “seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months.” *Id.* at 732 n.5 (emphasis in original); see also 85 FR 22289 (April 21, 2020) (citing the same language from the plurality in support of the 2020 NWPR’s interpretation of relatively permanent waters).

The agencies have decided to implement this approach because it is consistent with the *Rapanos* plurality opinion, it reflects and accommodates regional differences in hydrology and water management, and it can be implemented using available, easily accessible tools. It will therefore be a straightforward approach for the agencies and the regulated community to implement. In addition, maintaining an interpretation that encompasses the tributaries considered relatively permanent under the pre-2015 regulatory regime and the 2020 NWPR addresses the many comments from stakeholders emphasizing the need for clarity and certainty in the scope of “waters of the United States.”

“Flowing water” under this rule is meant to encompass not just streams and rivers, but also lakes, ponds, and impoundments that are part of the tributary system, as such waters outlet to the tributary network and contribute flow downstream at the outlet point. In addition, “flowing water” under this rule is meant to encompass those tributaries that are frozen for parts of the year. Such tributaries typically have flowing water underneath the frozen surface.

The phrase “certain times of the year” is intended to include extended periods of standing or continuously flowing water occurring in the same geographic feature year after year, except in times of drought. The defining characteristic of relatively permanent waters with flowing or standing water continuously during only certain times of the year is a temporary lack of surface flow, which may lead to isolated pools or dry channels during certain periods of the year. The phrase “direct response to precipitation” is intended to distinguish between episodic periods of flow associated with discrete precipitation events versus continuous flow for extended periods of time.

A number of commenters suggested that the agencies interpret relatively permanent tributaries to include those that flow year-round or at least seasonally (e.g., typically three months), consistent with the approach in the *Rapanos* Guidance. This rule encompasses tributaries that are “relatively permanent” under the *Rapanos* Guidance. However, the agencies have decided not to use the term “seasonal” from the *Rapanos* Guidance for several reasons. First, the agencies have determined that directly describing the scenarios in which waters would be “relatively permanent” is clearer than using the term “seasonal,” the meaning of which can vary and could be misunderstood to

establish a specific required flow duration. See section IV.C.4.c.ii.1 of this preamble for further discussion of the challenges of requiring a specific flow duration. Relatively permanent flow may occur seasonally, but the phrase is also intended to encompass tributaries in which extended periods of standing or continuously flowing water are not linked to naturally recurring annual or seasonal cycles. Specifically, relatively permanent waters may include tributaries in which flow is driven more by various water management regimes and practices, such as tributaries with extensive flow alteration (e.g., diversions, bypass channels, water transfers) and effluent-dependent streams. For example, in areas of the West where water withdrawals or groundwater pumping can substantially modify flow characteristics, onset and cessation of streamflow in some tributaries may be more closely tied to changes in water use associated with irrigation than with seasons of the year. In such flow-altered tributaries, streamflow may change abruptly throughout the year due to adjustments in facility operations or may vary from year to year due to changes in water rights or water management regimes. In addition, tributaries that typically flow throughout the spring may run dry in years following a drought while storage reservoirs are being refilled. When evaluating these types of artificially manipulated regimes, the agencies may consider information about the regular manipulation schedule and may potentially consider other remote resources or on-site information to assess flow frequency.

Other commenters recommended defining relatively permanent tributaries using the 2020 NWPR’s terms “perennial” and “intermittent.” Relatively permanent tributaries under this rule encompass tributaries that were jurisdictional under the 2020 NWPR. However, the agencies have decided to explain directly the way that the relatively permanent standard should be implemented, rather than defining the phrase with these terms. As evidenced by the variety of comments proposing definitions for “perennial” and “intermittent,” adding these terms to this rule could cause confusion and uncertainty. Moreover, many definitions of intermittent incorporate “seasonal” flow, a concept that the agencies decided not to employ in this rule for the reasons discussed above. Other definitions of “perennial” and “intermittent” that commenters suggested would require specific sources of flow, which the agencies also

decided not to establish in this rule because such requirements cannot readily apply to hydrologically altered waters, and for the reasons discussed in section IV.C.4.c.ii.2 of this preamble.

While this rule implements the scope of relatively permanent tributaries consistent with the approach in the 2020 NWPR, it does not retain the 2020 NWPR’s requirement that the tributaries contribute surface water flow to a paragraph (a)(1) water in a “typical year.” See 85 FR 22251 (April 21, 2020). The 2020 NWPR defined a “typical year” as when “precipitation and other climatic variables are within the normal periodic range (e.g., seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period.” As discussed in section IV.B.3 of this preamble and section II.B.iv.1 of the Technical Support Document, the typical year analysis proved difficult to implement and yielded arbitrary and potentially outdated results. Moreover, it is not required by the plurality opinion in *Rapanos*, which simply required a “connect[ion]” to paragraph (a)(1) waters. See 547 U.S. at 742 (describing a “wate[r] of the United States” as “i.e., a relatively permanent body of water connected to traditional interstate navigable waters”). This rule’s requirement that jurisdictional tributaries flow directly or indirectly to downstream paragraph (a)(1) waters or paragraph (a)(2) impoundments implements the plurality’s “connect[ion]” requirement. See also section IV.C.4.b of this preamble.

(1) Duration and Timing of Flow for Relatively Permanent Tributaries

Many commenters recommended that the agencies establish a particular flow duration for relatively permanent waters. Suggestions ranged from a minimum of three months to 290 days. The agencies decided not to establish a minimum duration because flow duration varies extensively by region. Establishing a uniform number equally applicable to the deserts in the arid West, the Great Lakes region, and New England forests would not be scientifically sound. The agencies instead have chosen to establish a more flexible approach to implementing this rule that accounts for specific conditions in each region. Moreover, it would often be infeasible for the regulated community or agency staff to determine whether a stream ordinarily flows or whether a lake contains standing water, for example, 12 weeks as opposed to 11 weeks per year. Even if this determination was possible, such a bright line cutoff would not reflect

hydrological diversity among different regions and alterations in flow characteristics. The agencies' conclusion that a minimum duration is not feasible is consistent with the pre-2015 regulatory regime, which did not establish a bright line cutoff (though provided three months as an example of seasonal flow) and with the approach of the 2020 NWPR. See 85 FR 22292 (April 21, 2020) ("The agencies are not providing a specific duration (e.g., the number of days, weeks, or months) of surface flow that constitutes intermittent flow, as the time period that encompasses intermittent flow can vary widely across the country based upon climate, hydrology, topography, soils, and other conditions.").

Many factors, including climate, hydrology, topography, soils, and other conditions, may affect the period in which relatively permanent flow may occur for those relatively permanent waters that do not have continuously flowing or standing water year-round. The factors which affect streamflow and flow cessation are climatically and geographically specific and therefore the periods during which a tributary might have relatively permanent flow vary by region. Non-relatively permanent tributaries are similarly diverse, and the mechanisms which differentiate relatively permanent flow from non-relatively permanent flow also vary by region.

For example, in parts of the Southeastern United States, precipitation is distributed somewhat uniformly throughout the year, but increased evapotranspiration during the growing season can reduce surficial ground water levels and reduce or remove surface flows late in the growing season (e.g., late summer or early autumn). Consequently, certain streams in the Southeast may flow primarily in the winter or early spring. Non-relatively permanent tributaries in the Southeast may often be characterized by the repeated sequence of streamflow, flow cessation, and channel drying throughout the year, where the onset of streamflow coincides with distinct rainfall events and is driven primarily by storm runoff. Streamflow in these systems may persist anywhere from a few hours to days at a time, where the cessation of flow is most often associated with termination of overland flow, hillslope runoff recession, and the depletion of water in saturated soils. Although streamflow in these tributaries may occur regularly, off and on, over the duration of a season or longer, they do not exhibit continuously flowing water for an extended period at any point during the year. In other areas of the

United States, snowpack melt drives streamflow more than rainfall, and relatively permanent flow may therefore coincide with warming temperatures in the spring or early summer.

Many headwater streams in mountainous regions flow through channels incised in bedrock with no groundwater interface with the bed of the stream. Instead, these streams are often fed primarily by high elevation snowpack melt. The same scenario may also exist in Northern regions, where flows could be fed almost exclusively through melting snowpack absent elevated groundwater tables. In these regions, relatively permanent flows coincide with warming temperatures in the spring or early summer and may persist well into the summer until there are no longer enough inputs to sustain surface water, or later into autumn when more permanent sources of meltwater (e.g., glaciers or snowfields) begin to freeze. Non-relatively permanent flows in these regions may occur in basins with thin layers of snow, where snow melts rapidly at the onset of spring thaw, and the snowmelt produced is not sufficient to sustain flows for an extended period and into the summer.

To determine the flow characteristics of a tributary for purposes of implementing this rule, the agencies will evaluate the entire reach of the tributary that is of the same Strahler¹⁰¹ stream order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point such tributary enters a higher order stream; see Technical Support Document section IV.A.ii.1). The flow characteristics of lakes, ponds, and impoundments that are part of the tributary network will be assessed in conjunction with the stream they connect to. Consistent with the pre-2015 regulatory regime, the agencies will assess the flow characteristics of a particular tributary at the farthest downstream limit of such tributary (i.e., the point the tributary enters a higher order stream). *Rapanos* Guidance at 6 n.24. Where data indicate the flow characteristics at the downstream limit are not representative of the entire reach of the tributary, the flow characteristics that best characterize the entire tributary reach will be used.

(2) Source of Flow for Relatively Permanent Tributaries

Implementation of the relatively permanent standard for tributaries in

this rule does not require that relatively permanent flow come from particular sources. This rule's approach is consistent with the plurality opinion in *Rapanos*, which lays out the relatively permanent standard and does not require that relatively permanent waters originate from any particular source. See, e.g., 547 U.S. at 739. This rule's approach is also science-based, as the source of a tributary's flow does not influence its effect on downstream waters, including paragraph (a)(1) waters. This rule's approach is similar to the familiar approach taken in the *Rapanos* Guidance and the 2020 NWPR, which also did not specify that relatively permanent flow come from particular sources.

Sources of flow in relatively permanent tributaries may include an elevated groundwater table that provides baseflow to a channel bed. Relatively permanent flow could also result from upstream contributions of flow, effluent flow, or snowpack that melts slowly over time in certain geographic regions or at high elevations. In addition, in certain regions relatively permanent flow could result from a concentrated period of back-to-back precipitation events that leads to sustained flow through a combination of runoff and upstream contributions of flow or an elevated groundwater table that provides baseflow to the channel bed. In contrast, non-relatively permanent tributaries may flow only during or shortly after individual precipitation events (including rainfall or snowfall events). Non-relatively permanent flow may occur simply because it is raining or has very recently rained, or because a recent snow has melted.

Streamflow that occurs during the monsoon season in certain parts of the country (typically June through September in the arid West) may be relatively permanent or non-relatively permanent, depending on the conditions at the location. Many tributaries in the arid West are dominated by coarse, alluvial sediments and exhibit high transmission losses, resulting in streams that often dry rapidly following a storm event (e.g., within minutes, hours, or days). These streams are not relatively permanent under this rule. However, relatively permanent flow may occur as a result of multiple back-to-back storm events throughout a watershed, during which the combination of runoff and upstream contributions of flow is high enough to exceed rates of transmission loss for an extended period of time. Relatively permanent flow may also follow one or more larger storm events, when

¹⁰¹ Strahler, A.N. 1957. "Quantitative analysis of watershed geomorphology." American Geophysical Union Transactions 38: 913-920.

floodwaters locally recharge the riparian aquifer through bank infiltration, which supplies sustained baseflow throughout the monsoon season.

Similar to the 2020 NWPR's approach, the agencies will consider tributaries that flow in direct response to "snowfall" for only a short duration during or shortly after that snowfall event to be non-relatively permanent waters under this rule. Streams that flow as a result of "snowpack melt" will be considered relatively permanent waters under this rule, where snowpack is defined as "layers of snow that accumulate over extended periods of time in certain geographic regions or at high elevation (e.g., in northern climes or mountainous regions)." See 85 FR 22275 (April 21, 2020). Tributaries that receive effluent flow that is relatively permanent will also be assessed under the relatively permanent standard.

(3) Tools Available To Determine Whether a Tributary Meets the Relatively Permanent Standard

Section IV.C.4.c.i of this preamble discusses how to determine if features on the landscape are tributaries. Direct observations and various remote tools and resources can be used to identify tributary reaches based on stream order, and topographic characteristics can assist in determining stream order. USGS topographic map blue line symbology and contour line patterns can be used to interpret the connectivity and contribution of flow within a river network, as well as topography within an evaluation area. Elevation models, including those based on light detection and ranging (LIDAR) derived data, may also illustrate tributary connectivity and flow patterns, as well as topography. In addition, aerial and satellite imagery along with maps or geospatial mapping products (e.g., NHD, NWI, soil maps, and Tribal, State, or local maps) can be used to help identify tributary reaches based on stream order. In addition to remote tools and resources, factors identified through field observations can be used to help determine the extent of a tributary reach. For example, tributary systems can be traversed to identify and characterize the branches of the network that contribute flow to a particular evaluation area. Certain geographic features (e.g., non-jurisdictional ditches, swales) may also be found to contribute to a tributary's surface hydrology.

Many available resources and tools can assist in determining whether tributaries are relatively permanent. For instance, the agencies have been working to develop regionalized streamflow duration assessment

methods (SDAMs, available at <https://www.epa.gov/streamflow-duration-assessment>), which are rapid field-based assessment methods that can be used to classify streamflow duration and assist in determining whether tributaries are "relatively permanent." These methods rely on physical and/or biological field indicators, such as the presence of hydrophytic vegetation and benthic macroinvertebrates, that can be collected or observed in a single site visit to determine the flow duration of a tributary in a reliable and rapid way. EPA, the Corps, and the State of Oregon developed a regionalized SDAM that has been validated for use throughout the Pacific Northwest (available at <http://www.epa.gov/measurements/streamflow-duration-assessment-method-pacific-northwest>). EPA and the Corps have also developed a beta SDAM for the arid West (available at <https://www.epa.gov/streamflow-duration-assessment/beta-streamflow-duration-assessment-method-arid-west>) and the Western Mountains (available at <https://www.epa.gov/streamflow-duration-assessment/beta-streamflow-duration-assessment-method-western-mountains>). EPA and the Corps are working to develop additional regionalized SDAMs in other parts of the country. Other agencies have developed similar tools that may be useful in implementing this rule.¹⁰² The agencies, co-regulators, and stakeholders can use the regionalized field indicators from SDAMs to quickly and easily identify tributaries that are relatively permanent as interpreted by the agencies under this rule.

Remote or desktop tools can also help the agencies and the public better understand streamflow and whether tributaries have continuously flowing or standing water year-round or during certain times of the year for more than for a short duration in direct response to precipitation.¹⁰³ Satellite imagery and

¹⁰² E.g., the Streamflow Methodology for Identification of Intermittent and Perennial Streams and Their Origins, developed by the North Carolina Division of Water Quality, available at https://files.nc.gov/ncdeq/Water%20Quality/Surface%20Water%20Protection/401/Policies_Guides_Manuals/StreamID_v_4point11_Final_sept_01_2010.pdf.

¹⁰³ These tools include local maps, StreamStats by the USGS (available at <https://streamstats.usgs.gov/ss/>), Probability of Streamflow Permanence (PROSPER) by the USGS, which provides streamflow permanence probabilities during the summer for stream reaches in the Pacific Northwest (available at <https://www.usgs.gov/centers/wyoming-montana-water-science-center/science/probability-streamflow-permanence-prosper>), and NRCS hydrologic tools and soil maps. Other tools include regional desktop tools that provide for the hydrologic estimation of a discharge sufficient to generate intermittent or perennial flow (e.g., a regional regression analysis or hydrologic

aerial photographs showing visible water on multiple dates can provide evidence as to whether tributaries have relatively permanent flow. Aerial photographs may show other indicators commonly used to identify the presence of an OHWM.¹⁰⁴ These indicators may include the destruction of terrestrial vegetation, the absence of vegetation in a channel, and stream channel morphology with evidence of scour, material sorting, and deposition. These indicators from aerial photographs can be correlated to the presence of USGS stream data to support an assessment of flow characteristics for a tributary.

In addition to satellite imagery and aerial photographs, desktop tools, such as a regional regression analysis and the Hydrologic Modeling System (HEC-HMS), provide for the hydrologic estimation of stream discharge in tributaries under regional conditions. The increasing availability of LIDAR-derived data can also be used to help implement this rule.¹⁰⁵ Potential LIDAR-indicated tributaries can be correlated with aerial photography or high-resolution satellite imagery interpretation and USGS stream gage data, to reasonably conclude the presence of an OHWM and shed light on the flow characteristics.

Regional field observations can be used to verify desktop assessments of the relative permanence of a tributary, when necessary. Geomorphic indicators could include active/relict floodplains, substrate sorting, clearly defined and continuous bed and banks, depositional bars and benches, and recent alluvial deposits. Hydrologic indicators might

modeling), or modeling tools using drainage area, precipitation data, climate, topography, land use, vegetation cover, geology, and/or other publicly available information. Some models that are developed for use at the reach scale may be localized in their geographic scope. NOAA national snow analyses maps can facilitate the evaluation of seasonal flow from snowmelt (available at <https://www.noahrs.noaa.gov/nsa/>), as can NRCS sources (available at <https://www.wcc.nrcs.usda.gov/snow/>), and hydrographs that may indicate a large increase in stream discharge due to the late spring/early summer thaws of melting snow.

¹⁰⁴ See definition of OHWM in section IV.C.8.d of this preamble and <https://www.erdc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training/>.

¹⁰⁵ Where LIDAR data have been processed to create elevation data such as a bare earth model, detailed depictions of the land surface are available and subtle elevation changes can indicate a tributary's bed and banks and channel morphology. Visible linear and curvilinear incisions on a bare earth model can help identify the flow characteristics of a water in greater detail than aerial photography interpretation alone. Several tools (e.g., TauDEM, Whitebox, GeoNet) can assist in developing potential stream networks based on contributing areas, curvature, and flowpaths using GIS.

include wrack/drift deposits, hydric soils, or water-stained leaves. Biologic indicators could include aquatic mollusks, crayfish, benthic macroinvertebrates, algae, and wetland or submerged aquatic plants. As noted above, the agencies are developing SDAMs for use throughout the country which evaluate and interpret these indicators and can show whether tributaries have continuously flowing or standing water year-round or during certain times of the year for more than a short duration in direct response to precipitation. Ultimately, multiple indicators, data points, and sources of information may be used to determine whether a water, including a tributary, is relatively permanent.

iii. Determining Whether a Tributary Meets the Significant Nexus Standard

In evaluating tributaries under the significant nexus standard, the agencies will determine whether the tributaries, 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. See section IV.C.9 of this preamble for additional discussion on the definition of “significantly affect” in this rule, including the factors that will be evaluated and the functions that will be assessed as part of a significant nexus analysis. The agencies consider tributaries and their adjacent wetlands to be “similarly situated” waters. The agencies consider similarly situated waters to be “in the region” when they lie within the catchment area of the tributary of interest. Identifying the catchment area for purposes of this significant nexus analysis is described below. The agencies developed this updated evaluation method from the current pre-2015 implementation approach informed by their experience, the best available science, Supreme Court decisions, and public comments. Accordingly, in implementing the significant nexus standard under this rule, all tributaries and adjacent wetlands within the catchment area of the tributary of interest will be analyzed as part of the significant nexus analysis.¹⁰⁶

For purposes of a significant nexus analysis, the agencies will identify the “region” as the catchment that drains to and includes the tributary of interest. A catchment is the area of the land surface that drains to a specific location for a

specific hydrologic feature. Catchments will be delineated from the downstream-most point of the tributary reach of interest and include the land uphill that drains to that point. For example, if the tributary of interest is a second order stream, the catchment would be delineated from the point that the second order stream enters a third order stream. See discussion of stream order in section IV.C.4.c.ii.1 of this preamble. Topography and landscape position influence the size and configuration of a catchment.

There are many existing spatial analysis tools that can be used to delineate catchments quickly and reliably in most parts of the country. USGS topographic maps can be manually interpreted to delineate catchments based on the location of the outlet point (the downstream-most point of the tributary of interest where the tributary enters a higher order stream), using calculations informed by topographic contours, the alignment of topographic high spots, and grouping of lower, valley bottoms. Various GIS tools, web applications, and automated modeling systems can also delineate catchments based on one or more of the many factors that can influence drainage, including surface topography, climate, land use, the presence of hydrologic sinks, topology of sewer systems, and design of wastewater treatment plant service areas.¹⁰⁷

After identifying the catchment, the next step is to identify the tributaries within the catchment under the agencies’ longstanding interpretation of tributary, see section IV.C.4.a of this preamble above, and any of their adjacent wetlands within the catchment area. See section IV.C.5 of this preamble for additional discussion on how to identify adjacent wetlands. The agencies’ longstanding practice in conducting the significant nexus analysis is to assess a tributary in combination with wetlands that meet the definition of “adjacent” under the regulations. *Rapanos* Guidance at 10. This approach to the significant nexus analysis recognizes the ecological

relationship between the tributaries and their adjacent wetlands, and the role those similarly situated waters have in influencing the chemical, physical, or biological integrity of paragraph (a)(1) waters. See section III.E.iii of the Technical Support Document. For purposes of this rule, the agencies will therefore assess the tributaries and their adjacent wetlands in a catchment. If the tributaries in the region, including the tributary under assessment, have no adjacent wetlands, the agencies consider only the factors and functions of the tributaries in determining whether there is a significant effect on the chemical, physical, or biological integrity of downstream paragraph (a)(1) waters. If any of the tributaries in the region, including the tributary under assessment, have adjacent wetlands, the agencies will consider the factors and functions of the tributaries, including the tributary under assessment, together with the functions performed by the wetlands adjacent to the tributaries in the catchment, in evaluating whether a significant nexus is present.

In conducting a significant nexus analysis under this rule, the agencies will evaluate available hydrologic information (e.g., gage data, precipitation records, flood predictions, historic records of water flow, statistical data, personal observations/records, etc.) and physical indicators of flow including the presence and characteristics of a reliable OHWM. To understand the chemical, physical, and biological functions provided by tributaries and their adjacent wetlands, and the effects those functions have on paragraph (a)(1) waters, it is important to use relevant geographic water quality data in conjunction with site-specific data from field sampling and hydrologic modeling. See section IV.C.9.c of this preamble for additional discussion on implementing the significant nexus analysis; see also section IV.C.10 of this preamble.

5. Adjacent Wetlands

a. This Rule

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. Aquatic resources that meet this rule’s definitions of “wetlands” and “adjacent” are assessed under this provision where they are adjacent to traditional navigable waters, the territorial seas, interstate waters,

¹⁰⁶ This implementation approach to the region for purposes of the significant nexus standard is a change from the *Rapanos* Guidance. See section IV.C.9.c of this preamble for additional discussion on implementing the significant nexus analysis.

¹⁰⁷ NHDPlus provides delineated catchments for individual stream segments by linking the mapped stream network to the landscape. In addition, StreamStats by the USGS (available at <https://streamstats.usgs.gov/ss/>) is a map-based web tool that can delineate drainage areas for streams and estimate flow characteristics for selected sites based on stream gage data, basin characteristics, climate, etc. EPA’s EnviroAtlas Interactive Map (available at <https://www.epa.gov/enviroatlas/enviroatlas-interactive-map>) has a wide variety of tools that can help delineate catchments, including a tool that illustrates how precipitation will flow over the land surface, mapped elevation profiles for selected tributaries, and designations of upstream and downstream watersheds within a stream network.

impoundments of jurisdictional waters, and tributaries.

As discussed further in section IV.C.8.a of this preamble, in this rule the agencies are retaining their longstanding definition of “wetlands” from the 1986 regulations: “Wetlands means those 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.”

Additionally, as discussed further in section IV.C.8.b of this preamble, in this rule the agencies are retaining their longstanding definition of “adjacent” unchanged for most of the past 45 years, which provides: “Adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are ‘adjacent wetlands.’” Under this definition, adjacency is focused on the distance between the wetland and the jurisdictional water. Whether the distance between the wetland and the jurisdictional water qualifies the wetland as bordering, contiguous, or neighboring (and therefore “adjacent”) depends on the factual circumstances. The agencies have three well-established criteria to determine adjacency; if any one of the criteria is met, the wetland is “adjacent,” but may require further analysis to determine if it is “waters of the United States.” See *Rapanos* Guidance at 5–8. First, there is an unbroken surface or shallow subsurface connection to a jurisdictional water, which can be established, for example, where the wetland directly abuts the jurisdictional water or by a non-jurisdictional physical feature that provides the direct connection between the wetland and a jurisdictional water, such as a pipe, culvert, non-jurisdictional ditch, or flood gate, that has at least periodic flow. Second, the wetland is physically separated from a jurisdictional water by human-made dikes or barriers, or natural landforms (e.g., river berms, beach dunes). Or third, the wetland’s proximity to a jurisdictional water is reasonably close such that “adjacent wetlands have significant effects on water quality and the aquatic ecosystem.” *Riverside Bayview*, 474 U.S. at 135 n.9. The agencies conclude that close proximity between an adjacent wetland and a jurisdictional water means the wetland can modulate water quantity or water quality in the jurisdictional water, and

the jurisdictional water can modulate water quantity or quality in the wetland. See section IV.C.5.c of this preamble for further discussion on the implementation of this provision and the three criteria. 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 can modulate water quantity or quality in the jurisdictional water or the jurisdictional water can modulate water quantity or quality in the wetland as 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). Because of regional variability and its effects on proximity for purposes of adjacency, wetlands in the arid West—where rainfall is generally lower, evaporation rates are higher, and riparian areas and floodplains do not extend far from the tributary network—are likely to be much closer than a few hundred feet to be considered adjacent under this rule. On the other hand, where the jurisdictional water is wide, topography is flat leading to larger floodplains and riparian areas, and rainfall is higher, wetlands are more likely to be determined to be reasonably close where they are a few hundred feet from that tributary because the site-specific conditions contribute to the close relationship between the wetland and the jurisdictional water, including any unbroken surface or shallow subsurface hydrologic connections between the waters.

While bright-line rules (for example, wetlands that are more than 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 the nation’s waters, a more nuanced analysis is required. While science says that all things being equal, distance, location in a riparian area or floodplain, or discrete hydrologic connections are more likely to strengthen the relationship between a wetland and a nearby water, science does not provide bright lines on appropriate distances to determine adjacency. In implementing this provision over the years, the agencies have worked hard to balance the desire for clarity and predictability with the agencies’ scientific understanding of the resources Congress has charged the agencies with protecting. The agencies have carefully considered options for nationally applicable bright lines with respect to adjacency, such as establishing that any wetland within a certain number of feet from a jurisdictional tributary is *per se* jurisdictional, in order to facilitate implementation of the Clean Water Act and to minimize the burden on both landowners and the agencies to evaluate the scope of “waters of the United States.” However, the United States is a vast country with many different types of waters, watersheds, landscapes, and hydrology. In fact, in the 2015 Clean Water Rule the agencies sought to establish a distance-based bright line for determining adjacency. As discussed in section IV.B.1 of this preamble, that rule was immediately challenged, and the distance-based limitations were a substantial factor in many of the challenges. As the Supreme Court itself has recognized, the scope of Clean Water Act jurisdiction does not easily lend itself to bright lines: “In sum, we recognize that a more absolute position . . . may be easier to administer. But, as we have said, those positions have consequences that are inconsistent with major congressional objectives, as revealed by the statute’s language, structure, and purposes.” *Maui*, 140 S. Ct. at 1477. Ultimately, for purposes of this rule, the agencies concluded that there was not a reasoned basis, consistent with the text of the statute, to establish such a regulatory bright line.

The adjacent wetlands provision in the 1986 regulations defined “waters of the United States” to include wetlands adjacent to traditional navigable waters, interstate waters, paragraph (a)(3) “other waters,” impoundments of “waters of the United States,” tributaries, and the territorial seas. This rule provides additional constraints on jurisdiction relative to the 1986 regulatory text by

defining “waters of the United States” to include: (1) wetlands adjacent to traditional navigable waters, the territorial seas, and interstate waters; (2) wetlands adjacent to and with a continuous surface connection to relatively permanent paragraph (a)(2) impoundments or jurisdictional tributaries when the jurisdictional tributaries meet the relatively permanent standard; and (3) wetlands adjacent to paragraph (a)(2) impoundments or jurisdictional tributaries when the wetlands meet the significant nexus standard. In other words, for wetlands adjacent to waters that are not paragraph (a)(1) waters, an additional showing of a continuous surface connection to a relatively permanent water or of a significant nexus to a paragraph (a)(1) water is required. The determination of whether a wetland is “adjacent” is distinct from whether an “adjacent” wetland meets the relatively permanent standard; however, wetlands that have a continuous surface connection to a relatively permanent water meet the definition of “adjacent” and thus are a subset of adjacent wetlands. See section IV.C.5.c of this preamble for further information related to implementing the final rule’s adjacent wetlands provision.

Under this rule, the relatively permanent standard and the significant nexus standard are independent jurisdictional standards. Under the relatively permanent standard for adjacent wetlands, wetlands meet the continuous surface connection requirement if they physically abut, or touch, a relatively permanent paragraph (a)(2) impoundment or a jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard, or if the wetlands are connected to these waters by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert. A natural berm, bank, dune, or similar natural landform between an adjacent wetland and a relatively permanent water does not sever a continuous surface connection to the extent it provides evidence of a continuous surface connection. Again, the determination of whether a wetland is “adjacent” under the rule is distinct from whether an “adjacent” wetland has a continuous surface connection. See section IV.C.5.c of this preamble, below, for further discussion of implementation of the final rule’s adjacent wetlands provision.

The agencies have amended the regulatory text from the proposed rule to be clearer that a wetland adjacent to but lacking a continuous surface connection to a tributary that is relatively permanent must be assessed under the

significant nexus standard. For example, if a wetland is “neighboring” to a tributary that is relatively permanent, and thus “adjacent,” but lacks a continuous surface connection to that tributary, the wetland would need to be assessed under the significant nexus standard in order to determine its jurisdictional status. This is consistent with pre-2015 practice under the *Rapanos* Guidance for wetlands adjacent to relatively permanent tributaries and was the agencies’ intent under the proposed rule language. See *Rapanos* Guidance at 8; 86 FR 69423 (“Wetlands adjacent to relatively permanent tributaries but that lack a continuous surface connection to such waters would then be assessed under the significant nexus [standard], along with the tributary.”).

In addition, under this rule, wetlands adjacent only to paragraph (a)(5) waters cannot be considered for jurisdiction under the paragraph (a)(4) adjacent wetlands category, which represents a change from the 1986 regulations. Instead, such wetlands could be considered for jurisdiction solely under paragraph (a)(5) of this rule.

Further, in this rule, the agencies are deleting the parenthetical from the 1986 regulations that limited the scope of jurisdictional adjacent wetlands to wetlands adjacent to waters “(other than waters that are themselves wetlands)” for the reasons discussed below.

b. Summary of the Agencies’ Consideration of Public Comments and Rationale for This Rule

The agencies received numerous comments on the scope and implementation of the adjacent wetlands provision.

i. Comments on the Adjacent Wetlands Provision

The agencies received a wide range of comments on adjacent wetlands. Some commenters stated that they agreed with the agencies’ approach in the proposed rule for adjacent wetlands, with several adding that they believed the proposed rule’s approach to adjacency was consistent with prior practice, the relevant case law, the statute, the Constitution, or congressional intent. Other commenters disagreed and stated that the agencies’ approach was not consistent with case law, the statute, the Constitution, or congressional intent. Many of those commenters stated that wetlands should only be jurisdictional if they meet the relatively permanent standard. Other commenters requested greater jurisdictional protections for wetlands due to the many functions that they provide that benefit downstream

waters, with some commenters requesting that adjacent wetlands be treated as categorically jurisdictional, similar to the 2015 Clean Water Rule.

After careful consideration of public comments and for the reasons described in this preamble, the agencies are promulgating the adjacent wetlands provision of this rule with minimal changes to the proposed rule. For wetlands adjacent to paragraph (a)(1) waters, adjacency alone supports jurisdiction. For wetlands that are adjacent to waters that are not paragraph (a)(1) waters, like tributaries, this rule establishes an additional limitation on jurisdiction. In that case, the adjacent wetlands are jurisdictional only if they meet either the relatively permanent standard or the significant nexus standard. The agencies agree with commenters who stated that the proposed rule’s approach to adjacent wetlands was generally consistent with prior practice and consistent with the relevant case law, the statute, the Constitution, and congressional intent, and thus disagree with commenters who took the contrary view. This rule defines “waters of the United States” to include adjacent wetlands and reflects the agencies’ interpretation 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, relevant Supreme Court decisions, the scientific record, the agencies’ experience and technical expertise, and consideration of public comments on the proposed rule. The agencies disagree with commenters who stated that only adjacent wetlands that meet the relatively permanent standard should be considered jurisdictional. As discussed further in section IV.A.3.a.ii of this preamble, the agencies have concluded that the relatively permanent standard is administratively useful but is insufficient as the sole standard for geographic jurisdiction under the Clean Water Act because it is inconsistent with the Act’s text and objective. Protecting only waters that meet the relatively permanent standard also runs counter to the scientific principles underlying protection of water quality. The agencies thus are promulgating an approach to adjacent wetlands that includes, but that is not limited to, the relatively permanent standard. 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. The scientific literature

also supports the conclusion that adjacent wetlands, either alone or in combination with similarly situated waters, provide many important functions that can significantly affect the chemical, physical, and biological integrity of paragraph (a)(1) waters. See Technical Support Document section III.B. Section IV.A of this preamble provides additional information about the legal basis for the agencies' conclusions in this rule and the scientific support for the rule's provisions regarding adjacent wetlands. The agencies are not making additional categorical determinations of jurisdiction based on the significant nexus standard, as described further in section IV.A of this preamble. Even under the 2020 NWPR, which purported to enhance clarity, a landowner could not tell simply by looking at their property whether it contained "waters of the United States" because, in the case of adjacent wetlands, it was necessary to determine (1) whether the property contained a wetland as defined in the regulations, (2) whether there was evidence of a continuous surface connection between the wetland and a water that was part of the tributary network of a traditional navigable water or the territorial seas, (3) whether there was evidence that the continuous surface connection occurred in a "typical year," as the rule defined that term, and (4) in the case of a continuous surface connection based on inundation, whether the inundation originated in the jurisdictional water (relevant to adjacency under that rule) or the wetland (irrelevant to adjacency under that rule).

The challenge inherent in establishing bright lines to address the complex and variable ways in which waters move in different regions across the country is longstanding. As the Supreme Court itself has recognized, the scope of Clean Water Act jurisdiction does not easily lend itself to bright lines: "In sum, we recognize that a more absolute position . . . may be easier to administer. But, as we have said, those positions have consequences that are inconsistent with major congressional objectives, as revealed by the statute's language, structure, and purposes." *Maui*, 140 S. Ct. at 1477. Further, as early Supreme Court decisions recognized, the Clean Water Act replaced a system whereby water quality protection had to be resolved through litigation in which courts had to apply "often vague and indeterminate nuisance concepts and maxims of equity jurisprudence." *City of Milwaukee*, 451 U.S. at 317. The Clean Water Act replaced this

unpredictable and inefficient approach with "a comprehensive regulatory program supervised by an expert administrative agency," *id.*, including a "uniform system of interstate water pollution regulation." *Arkansas v. Oklahoma*, 503 U.S. 91, 110 (1992). Shrinking Federal jurisdiction, as the 2020 NWPR did, for example, would place many waters back within the "vague and indeterminate" legal regime that the Supreme Court recognized the Clean Water Act was designed to replace. See 451 U.S. at 317.

The agencies also received a variety of comments critiquing or supporting various past practice and rulemaking approaches to adjacency including the pre-2015 regulatory regime, the 2015 Clean Water Rule, and the 2020 NWPR. The agencies are retaining their longstanding definition of adjacency and establishing an approach to adjacency that is generally consistent with the pre-2015 regulatory regime, with some changes to implementation discussed below. The agencies are rejecting certain aspects of the 2020 NWPR's approach to adjacent wetlands for the reasons discussed in this section and section IV.B.3 of this preamble. The definition of "adjacent wetlands" in the 2020 NWPR failed to advance the objective of the Clean Water Act. It also was inconsistent with scientific information about the important effects of wetlands that do not abut jurisdictional waters and that lack evidence of specific surface water connections to such waters on the integrity of paragraph (a)(1) waters. In addition, key elements of the 2020 NWPR's definition of "adjacent wetlands" were extremely difficult to implement. These deficiencies are reflected in substantial losses of Federal protections on the ground. See section IV.B.3 of this preamble. The agencies are maintaining the approach of the pre-2015 regulatory regime and the 2015 Clean Water Rule under which wetlands adjacent to traditional navigable waters, the territorial seas, and interstate waters are jurisdictional without need for further determinations, but the agencies are not determining that any additional adjacent wetlands are categorically jurisdictional in this rule. The agencies have authority to determine which tributaries and their adjacent wetlands are jurisdictional either through regulations or adjudication. See *Rapanos*, 547 U.S. at 780–81 (Kennedy, J., concurring in the judgment); see also *NLRB v. Bell Aerospace Co.*, 416 U.S. 267, 294 (1974). With respect to wetlands adjacent to waters other than paragraph (a)(1) waters, the agencies

have decided to proceed through case-specific jurisdictional determinations under this rule, rather than through categorical determinations by rule.

The agencies will continue to assert jurisdiction over wetlands adjacent to traditional navigable waters, the territorial seas, and interstate waters without need for further assessment, as they did under the 1986 regulations and the *Rapanos* Guidance. Indeed, in *Rapanos*, at least five Justices agreed that wetlands adjacent to traditional navigable waters are "waters of the United States." See *Rapanos*, 547 U.S. at 780 (Kennedy, J., concurring in the judgment) ("As applied to wetlands adjacent to navigable-in-fact waters, the Corps' conclusive standard for jurisdiction rests upon a reasonable inference of ecologic interconnection, and the assertion of jurisdiction for those wetlands is sustainable under the Act by showing adjacency alone."), *id.* at 810 (Stevens, J., dissenting) ("Given that all four Justices who have joined this opinion would uphold the Corps' jurisdiction in both of these cases—and in all other cases in which either the plurality's or Justice Kennedy's test is satisfied—on remand each of the judgments should be reinstated if either of those tests is met."); see also *Riverside Bayview*, 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."); *Rapanos* Guidance at 5. Moreover, ample scientific information makes clear that the health and productivity of rivers and lakes, including paragraph (a)(1) waters, depends upon the functions provided by upstream tributaries, adjacent wetlands, and paragraph (a)(5) waters. Under this rule, the agencies also define "waters of the United States" to include wetlands adjacent to the territorial seas without need for further assessment, as they did under the 1986 regulations, as the territorial seas are categorically protected under the Clean Water Act. Additionally, under this rule the agencies continue to define "waters of the United States" to include wetlands adjacent to interstate waters without need for further assessment since interstate waters, like traditional navigable waters and the territorial seas, are waters clearly protected by the Clean Water Act. See section IV.C.2 of this preamble for further discussion of traditional navigable waters, the territorial seas, and interstate waters.

The agencies are retaining the 1986 regulations' coverage of wetlands adjacent to paragraph (a)(2)

impoundments and wetlands adjacent to tributaries to paragraph (a)(2) impoundments, updated to include the requirement that the wetlands also meet either the relatively permanent or significant nexus standard. As discussed above in section IV.C.3 of this preamble, the agencies' longstanding interpretation of the Clean Water Act is that "waters of the United States" remain "waters of the United States" even if impounded. Since the impoundment does not "denationalize" the "waters of the United States," see *S.D. Warren*, 547 U.S. at 379 n.5, the agencies similarly interpret the Clean Water Act to continue to protect wetlands adjacent to the paragraph (a)(2) impoundment and adjacent to jurisdictional tributaries to the impoundment where those wetlands meet the relatively permanent standard or the significant nexus standard. See section IV.C.3 of this preamble for additional discussion of impoundments under this rule.

The agencies are also deleting the cross reference to paragraph (a)(5) waters as waters to which wetlands may be adjacent to be determined "waters of the United States" under the adjacent wetlands category of this rule. This change reflects the agencies' consideration of the jurisdictional concerns and limitations of the statute, informed by *SWANCC* and *Rapanos*. The agencies have concluded that a provision that authorizes consideration of jurisdiction over adjacent wetlands that meet the relatively permanent or significant nexus standard when assessed based simply on connections to paragraph (a)(5) waters would have too tenuous a connection to paragraph (a)(1) waters. Rather, any such wetlands that are adjacent only to paragraph (a)(5) waters would be assessed themselves under paragraph (a)(5) of this rule to determine if they meet the relatively permanent or significant nexus standard. For example, a wetland adjacent to a lake that meets the significant nexus standard under paragraph (a)(5) would itself need to be assessed under paragraph (a)(5) to determine whether it significantly affects the chemical, physical, or biological integrity of a paragraph (a)(1) water. See section IV.C.6.c of this preamble for further discussion on implementation of paragraph (a)(5) waters.

The agencies have removed the parenthetical "(other than waters that are themselves wetlands)" from the regulatory text because it has caused confusion for the public and the regulated community and is unnecessary. The parenthetical from the

1986 regulations limited the scope of jurisdictional adjacent wetlands to wetlands adjacent to waters "(other than waters that are themselves wetlands)." Under that provision, a wetland was not jurisdictional simply because it was adjacent to another adjacent wetland or to a wetland jurisdictional under paragraph (a)(3) of the 1986 regulations. The provision has created confusion under the pre-2015 regulatory regime, as some have asserted that a wetland that is indeed adjacent to a jurisdictional tributary, but that is separated from that tributary by another adjacent wetland, should not be determined to be a jurisdictional adjacent wetland because of that parenthetical. Several commenters discussed the parenthetical in the 1986 regulation's "adjacent wetlands" category. Most of those commenters were in favor of removing the parenthetical, claiming that it created "confusion" and citing concerns that the parenthetical could improperly limit jurisdiction of wetlands. Other commenters voiced support for keeping the parenthetical. Some even suggested that the parenthetical flatly excluded all wetlands that are adjacent to other wetlands, regardless of any other considerations. These interpretations are inconsistent with the agencies' intent and longstanding interpretation of the parenthetical. See *Universal Welding & Fabrication, Inc. v. U.S. Army Corps of Eng'rs*, 708 Fed. Appx. 301, 303 (9th Cir. 2017) (observing that "[d]espite the subject wetland's adjacency to another wetland, the Corps determined that its regulatory authority was not precluded by the parenthetical language within [section] 328.3(a)(7), which it interpreted as prohibiting the exercise of jurisdiction over a wetland only if *based upon* that wetland's adjacency to another wetland" and holding that the Corps' interpretation is "the most reasonable reading of the regulation's text"). Therefore, to streamline the regulation and provide additional clarity, the agencies have deleted the text of the parenthetical in this rule. In addition, wetlands adjacent to interstate wetlands or wetlands adjacent to tidal wetlands (which are traditional navigable waters) are jurisdictional under this rule, consistent with the 1986 regulations and longstanding practice.

ii. Comments on the Interpretation and Implementation of the Adjacent Wetlands Provision

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. As stated previously, the agencies consider wetlands "adjacent" if one of the 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, they are physically separated from jurisdictional waters by human-made dikes or barriers, or natural landforms (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 for purposes of this rule.

Several commenters provided input on these three criteria. Some commenters stated that shallow subsurface hydrologic connections are appropriate to consider for adjacency, while others stated that such connections should not be considered. Several commenters stated that there are regional differences in proximity relevant to adjacency. Some commenters stated that wetlands should be considered adjacent even if they are separated by human-made dikes or barriers, natural river berms, beach dunes and the like, while other commenters did not support that view.

The agencies agree with commenters who stated that shallow subsurface connections can be relevant to adjacency and will continue to use the criteria from pre-2015 practice that an unbroken shallow subsurface connection between a wetland and another water can demonstrate adjacency.

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.5.c of this preamble, below).

The agencies agree with commenters who supported 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.2.b.ii (explaining that the agencies' longstanding definition of "adjacent," which includes such wetlands, is a reasonable foundation for this rule), and IV.C.8.b of this preamble, and section III.B.ii of the Technical Support Document.

c. Implementation

Under this provision of the rule, wetlands adjacent to traditional navigable waters, the territorial seas, or interstate waters are jurisdictional and do not need further analysis to determine if they are "waters of the United States." Further, wetlands adjacent to paragraph (a)(2) impoundments and to jurisdictional tributaries are assessed for jurisdiction under the relatively permanent standard or significant nexus standard. Wetlands adjacent to but lacking a continuous surface connection with tributaries that are relatively permanent must be assessed under the significant nexus standard.

i. Determining the Presence of an Adjacent Wetland

Before determining if a wetland is jurisdictional, the agencies first determine if the wetland in question meets the definition of "wetlands" under this rule (see section IV.C.8.a of this preamble).

In identifying wetlands, the agencies will ordinarily consider all wetlands within a wetland mosaic collectively. The agencies have long considered wetland mosaics to be delineated as one wetland. Wetland mosaics are landscapes where wetland and non-wetland components are too closely associated to be easily delineated or mapped separately, and the wetlands in the mosaic generally act as a single ecological unit. In certain regions where wetland mosaics are common, Corps regional wetland delineation manuals address how to delineate such wetlands. Longstanding practice is that wetlands in the mosaic are not individually delineated, but that the agencies consider the entire mosaic and estimate percent wetland in the mosaic. See Technical Support Document section IV.A.iii. These longstanding implementation approaches for purposes of jurisdictional determinations are supported by the science (see Technical Support Document section IV.A.iii) and the technical expertise the agencies have developed through years of performing these assessments.

Once a feature is identified as a wetland, if the wetland itself is not

jurisdictional under paragraph (a)(1) of this rule as a traditional navigable water (such as a tidal wetland) or an interstate water, the agencies assess whether it is adjacent to a traditional navigable water, territorial sea, interstate water, paragraph (a)(2) impoundment, or jurisdictional tributary. Wetlands are "adjacent" if they are "bordering, contiguous, or neighboring." The agencies consider the entire wetland to be "adjacent" if any part of the wetland is "adjacent."

Under this rule's definition and consistent with the agencies' longstanding definition, adjacency is focused on the distance between the wetland and the jurisdictional water. Whether the distance between the wetland and the jurisdictional water qualifies the wetland as bordering, contiguous, or neighboring (and therefore "adjacent") depends on the factual circumstances, so the agencies will assess adjacency using the three criteria noted above in section IV.C.5.a of this preamble. This section of the preamble explains each of the criteria in further detail. These criteria are consistent with the text of the regulation, the underlying scientific rationale for defining "waters of the United States" to include adjacent wetlands, and pre-2015 practice. See *Rapanos* Guidance at 5–6.

The longstanding definition, 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). The Supreme Court in *Riverside Bayview* in deferring to the Corps' ecological judgment about the relationship between waters and their adjacent wetlands as an "adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act," rejected an argument that such wetlands had to be the result of flow in a particular direction to be adjacent: "This holds true even for wetlands that are not the result of flooding or permeation by water having its source in adjacent bodies of open water. The Corps has concluded that wetlands may affect the water quality of adjacent lakes, rivers, and streams even when the waters of those bodies do not actually inundate the wetlands. For example, wetlands that are not flooded by adjacent waters may still tend to drain into those waters. In such circumstances, the Corps has concluded that wetlands may serve to filter and purify water draining into adjacent bodies of water, and to slow the flow of surface runoff into lakes, rivers, and

streams and thus prevent flooding and erosion. In addition, adjacent wetlands may 'serve significant natural biological functions, including food chain production, general habitat, and nesting, spawning, rearing and resting sites for aquatic . . . species.'" 447 U.S. at 134 (citing 33 CFR 320.4(b)(2)(iv), (v), (vii) (1985)).

Wetlands with an unbroken surface or shallow subsurface connection to jurisdictional waters are adjacent, including those wetlands that directly abut a jurisdictional water (i.e., they are not separated by uplands, a berm, dike, or similar barrier from the OHWM of the water to which they are adjacent). All wetlands that directly abut jurisdictional waters have an unbroken surface or shallow subsurface connection because they physically touch the jurisdictional water. An unbroken surface or shallow subsurface connection to jurisdictional waters can also be established by a non-jurisdictional physical feature or discrete conveyance that supports at least periodic flow between the wetland and a jurisdictional water, such as a pipe, culvert, non-jurisdictional ditch, or flood gate. Water does not have to be continuously present in this hydrologic connection and the flow between the wetland and the jurisdictional water may move in either or both directions.

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. The agencies may also utilize direct observations in the field or tracer studies to demonstrate shallow subsurface flow. 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, neither shallow subsurface connections nor any type of groundwater, shallow or deep, are themselves “waters of the United States.” Some examples of wetlands that are adjacent under the final rule due to an unbroken surface or shallow subsurface connection include wetlands that are connected to a tributary via karst topography, which provide a direct subsurface hydrologic connection between the wetlands and the tributary and that is traceable via a dye test, even if those wetlands are more than several hundred feet from the tributary; and wetlands within a couple of hundred feet of a tributary, where the subsurface hydrologic connection is demonstrated via soil maps which demonstrate continuous hydric soils with indicators of high transmissivity over an impermeable layer between the tributary and the proximate wetlands. See Technical Support Document section III.B.ii for additional information on surface and shallow subsurface hydrologic connections.

If a wetland is separated from a jurisdictional water by man-made dikes or barriers, natural river berms, beach dunes, and the like, then the wetlands are adjacent under this rule, consistent with the 1986 regulations. No additional identification of a hydrologic connection between the wetland and the jurisdictional water is required for such wetlands to be considered adjacent. For example, a wetland that is separated from a jurisdictional tributary simply by a 40-foot road meets the longstanding definition of adjacent. It is also important to note that natural river berms are formed by sediment deposits accumulating at or near stream banks during flood events. Such berms vary in height from inches to feet, and also can be quite wide. With respect to beach dunes and similar natural landforms, more than one dune may exist between an adjacent wetland and jurisdictional water (including primary and secondary dunes), because beach dunes typically function as an interdunal system (particularly on barrier islands). For example, interdunal wetlands which are

located between dune ridges would be adjacent.

In some cases, a wetland may be separated from a jurisdictional water by more than one human-made dike or barrier or multiple types of barriers and landforms (e.g., a wetland separated by a human-made barrier and a natural river berm). The agencies will assess such wetlands consistent with the other adjacency criteria previously described (i.e., by identifying the presence of an unbroken surface or shallow subsurface connection or determining that their proximity to a jurisdictional water is reasonably close).

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 Supreme Court in *Riverside Bayview* deferred to the Corps’ judgment that adjacent wetlands “that form the border of or are in reasonable proximity to” other “waters of the United States” “may be defined as waters under the Act.” *Riverside Bayview*, 474 U.S. at 134. Where the wetland is reasonably close to the jurisdictional water, the agencies have concluded that “adjacent wetlands have significant effects on water quality and the aquatic ecosystem.” *Id.* at 135 n.9. 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 water quality in the wetland. For example, wetlands typically help to store floodwaters, pollutants, and sediments that could otherwise reach the jurisdictional water to which they are adjacent. They can also provide flow contributions to the jurisdictional waters to 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 the wetland’s 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. 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.

Field data, including visual observations, can assist with determining if a wetland is adjacent. In addition, a variety of remote tools can help to assess adjacency, including maps, high-resolution elevation data, aerial photographs, and high-resolution satellite imagery. For example, visual observation, NWI and USGS topographic maps, elevation data, and NHD data may identify a physical barrier or illustrate the location of the traditional navigable water, territorial sea, interstate water, paragraph (a)(2) impoundment, or jurisdictional tributary; the wetland’s proximity to the jurisdictional water; and the nature of topographic relief between the two aquatic resources. Visual observations, aerial photographs, or high-resolution satellite imagery may illustrate hydrophytic vegetation from the boundary (e.g., OHWM for non-tidal waters or high tide line for tidal waters) of the traditional navigable water, the territorial seas, the interstate water, the paragraph (a)(2) impoundment, or the jurisdictional tributary to the wetland boundary, or the presence of water or soil saturation. Soil samples or NRCS soil maps may identify the presence of hydric soil types, soil saturation, or potential surface or subsurface hydrologic connections. Additionally, methods that overlay depressions on the landscape with hydric soils and hydrophytic vegetation can be used to identify likely wetlands and hydrologic connections. Field work can help

confirm the presence and location of the OHWM or high tide line of the jurisdictional water and can provide additional information about the wetland's potential adjacency to that water.¹⁰⁸

ii. Determining Whether an Adjacent Wetland Meets the Relatively Permanent Standard

Wetlands that are adjacent to paragraph (a)(1) waters are jurisdictional without the need for further analysis. Wetlands adjacent to paragraph (a)(2) impoundments and wetlands adjacent to jurisdictional tributaries must meet a second requirement to be jurisdictional as “waters of the United States” under this rule—they must satisfy either the relatively permanent standard or the significant nexus standard.

Under this rule, adjacent wetlands meet the relatively permanent standard if they have a continuous surface connection to a relatively permanent paragraph (a)(2) impoundment or a jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard. As discussed previously in this section of this preamble, wetlands that have a continuous surface connection to such waters are a subset of adjacent wetlands. Wetlands that do not have a continuous surface connection but are adjacent to paragraph (a)(2) impoundments or jurisdictional tributaries will be evaluated for jurisdiction under the significant nexus standard. *See also* section IV.C.5.c.iii of this preamble.

A continuous surface connection does not require a constant hydrologic connection. Rather, the agencies will identify a continuous surface connection consistent with the *Rapanos* plurality opinion, which indicates that the continuous surface connection requirement is a “physical-connection requirement.” 547 U.S. at 751 n.13; *see also Rapanos* Guidance at 7. Wetlands meet the continuous surface connection requirement if they physically abut or touch a relatively permanent paragraph (a)(2) impoundment or a jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard. Wetlands also meet the continuous surface connection requirement if they are connected to relatively permanent waters by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert. This is

because a ditch or other such feature can serve as a physical connection that maintains a continuous surface connection between an adjacent wetland and a relatively permanent water. This approach to the continuous surface connection is supported by the scientific literature, case law, and the agencies' technical expertise and experience. As the Court of Appeals for the Sixth Circuit has explained, “it does not make a difference whether the channel by which water flows from a wetland to a navigable-in-fact waterway or its tributary was manmade or formed naturally.” *United States v. Cundiff*, 555 F.3d 200, 213 (6th Cir. 2009) (“*Cundiff*”) (holding wetlands were jurisdictional under the *Rapanos* plurality where plaintiff created a continuous surface connection by digging ditches to enhance the acid mine drainage into the creeks and away from his wetlands).

Similarly, a natural berm, bank, dune, or similar natural landform between an adjacent wetland and a relatively permanent water does not sever a continuous surface connection to the extent it provides evidence of a continuous surface connection. This approach is consistent with the agencies' interpretation in the 2020 NWPR that natural berms and similar natural landforms “are indicators of a direct hydrologic surface connection as they are formed through repeated hydrologic events.” 85 FR 22311 (April 21, 2020). As the 2020 NWPR explained, “a natural river berm can be created by repeated flooding and sedimentation events when a river overtops its banks and deposits sediment between the river and a wetland.” *Id.* (citing Science Report at A–7). The 2020 NWPR noted that the adjacent wetland could have been formed at the same time as or after the formation of the natural river berm due to repeated flooding and the impeded return flow created by the berm. Natural banks can also provide evidence of a continuous surface connection because the processes that result in their formation can also be representative of the interconnected relationship between the wetlands and the relatively permanent water. Adjacent wetlands may be separated by a bank from a relatively permanent water due to an elevation difference between the bank and the water (*e.g.*, when the stream is incised). The surface water flow of a tributary over time can erode a channel, which creates a bank separating the tributary from the adjacent wetland. *See* 85 FR 22311 (April 21, 2020). In addition, the presence of a beaver dam between a wetland and a relatively permanent

water can be evidence of a continuous surface connection between the two features, even if the dam itself blocks surface hydrologic flow for periods of time. Beach dunes may also separate adjacent wetlands and relatively permanent waters. Beach dunes are sometimes formed through wind erosion which results in the sand surface interacting with the water table, providing enough hydrology to create wetlands. Beach dunes may also be formed when water levels drop in lakes or from historic glacial retreat. Many interdunal wetlands have seasonally variable hydroperiods where they may be dry during periods of low rainfall. All of these processes and the resulting natural berm, bank, dune, or similar natural landform indicate that the wetlands are integrated and “inseparably bound up” with the relatively permanent waters. *See* 85 FR 22280 (April 21, 2020) (citing *Rapanos*, 547 U.S. at 732 (Scalia, J., plurality opinion)). The agencies recognize that not all natural berms, banks, dunes, and similar natural landforms demonstrate evidence of a continuous surface connection. For example, an adjacent wetland may be separated from a relatively permanent water by a relict landform like a natural berm that no longer interacts hydrologically with the tributary network. Such relict barriers do not demonstrate evidence of a continuous surface connection and may in fact sever the continuous surface connection.

While natural barriers may at times occur within a floodplain, the existence of a floodplain (and other land masses similar to a floodplain, such as a riparian area or fluvial terrace) generally is not sufficient to indicate a continuous surface connection. Wetlands separated from jurisdictional waters by cliffs, bluffs, or canyon walls also typically do not have a continuous surface connection, and thus would be assessed under the significant nexus standard. However, if these cliffs, bluffs, or canyon walls have gaps or built structures (*e.g.*, culverts, pipes, or waterfalls) that provide for a continuous surface connection between the adjacent wetlands and the relatively permanent water, this type of connection would satisfy the physical connection requirement for a continuous surface connection. The same is true for dikes or other artificial barriers with gaps or structural components that allow for a continuous surface connection. For example, an upland levee that separates an adjacent wetland from a tributary that is relatively permanent may have gaps along the length of the levee that

¹⁰⁸ Field work may include, *e.g.*, traversing the landscape from the traditional navigable water, territorial sea, interstate water, paragraph (a)(2) impoundment, or jurisdictional tributary to the wetland and examining topographic and geomorphic characteristics, as well as hydrologic and biologic indicators.

provide for a physical connection between the wetlands and the tributary that satisfies the requirement for a continuous surface connection.

Some commenters asserted that the agencies' use of the relatively permanent standard in the proposed rule is inconsistent with the *Rapanos* plurality opinion because it does not require a continuous hydrologic connection for adjacent wetlands to be jurisdictional, with one commenter referencing the agencies' statement in the proposed rule that a continuous surface connection "does not require surface water to be continuously present between the wetland and the tributary." Another commenter asserted that the proposed rule's approach to adjacent wetlands is inconsistent with the *Rapanos* plurality opinion because it allows for the continuous surface connection requirement to be satisfied by physical connections such as non-jurisdictional ditches with an irregular flow surface connection requirement. The agencies disagree that the approach in this rule is inconsistent with the plurality opinion. The plurality opinion indicates that "continuous surface connection" is a "physical connection requirement." *Rapanos*, 547 U.S. at 751 n.13 (referring to "our physical-connection requirement" and later stating that *Riverside Bayview* does not reject "the physical-connection requirement"). This approach to the continuous surface connection requirement is consistent with the *Rapanos* Guidance. *Rapanos* Guidance at 7 & n.28. A continuous surface connection is not the same as a continuous surface water connection, by its terms and in effect. Therefore, because the plurality opinion requires only a "continuous surface connection," the relatively permanent standard in this rule, consistent with the plurality opinion, does not require surface water to be continuously present between the wetland and the tributary. The agencies also disagree that it is inconsistent with the plurality opinion for adjacent wetlands to be considered to meet the continuous surface connection requirement if they are connected to relatively permanent waters by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert. This is because a ditch or other such feature can serve as a physical connection that maintains a continuous surface connection between an adjacent wetland and a relatively permanent water. This approach to the continuous surface connection is supported by the scientific literature, case law, and the agencies' technical expertise and

experience. See *Cundiff*, 555 F.3d at 213.

The agencies agree with commenters who stated that a continuous surface connection does not require the continuous presence of surface water between the adjacent wetland and relatively permanent paragraph (a)(2) impoundment or jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard, and the agencies continue this longstanding approach in this rule. The agencies' approach is consistent with science, as well as the longstanding regulatory definition of "wetlands," which does not require such aquatic resources to contain surface water. See 33 CFR 328.3(b)(2014) and 40 CFR 232.2 (2014)(defining wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions" (emphasis added)); see also Technical Support Document section III.B. Since wetlands frequently do not contain surface water, a requirement for continuous surface water between a relatively permanent water and adjacent wetlands would be illogical as a scientific and practical matter.

The agencies have a variety of tools for determining whether adjacent wetlands have a continuous surface connection to relatively permanent waters, or if they are separated from them by natural landforms or artificial barriers, including the same tools used to establish adjacency. Visual observations, high-resolution satellite imagery, NRCS soil maps, USGS topographic maps, and NHD data may show soil saturation, surface flow patterns and infrastructure crossings (e.g., roads) that can be used to indicate possible culvert locations. Visual observations, high-resolution satellite imagery, elevation data such as LIDAR-based topographic models, and USGS topographic maps may identify the presence of swales that are located between a wetland and a relatively permanent water. Similar tools (described below) and visual observations can be used to identify the potential presence of natural landforms that can maintain a continuous surface connection and the potential presence of breaks that may sever a continuous surface connection. Distinguishing between landforms like upland breaks and natural berms can be facilitated by assessing their linear extent and continuity, or observations on how they hydrologically interact with an associated relatively permanent water.

To assess whether wetlands are separated from relatively permanent waters by natural landforms or artificial barriers, the agencies can rely upon a variety of tools. For example, USGS topographic maps may show topographic highs between the wetland and relatively permanent water, or simple indices can be calculated based on topography to indicate where these separations occur and their linear extent. FEMA flood zone or other floodplain maps may indicate constricted floodplains along the length of the tributary channel with physical separation of flood waters. High-resolution elevation data can illustrate topographic highs between a wetland and tributary channel that extend along the length of a tributary's channel. Aerial photographs or high-resolution satellite imagery may illustrate upland vegetation along the tributary channel between the wetland and tributary channel, or bright soil signatures indicative of higher ground. NRCS soil maps may identify mapped linear, upland soil types along the tributary channel. Field work may help to confirm the presence and location of the OHWM of a tributary that is relatively permanent. In addition, field work may confirm whether there is a continuous physical connection between the wetland and the tributary, or identify breaks that may sever the continuous surface connection.¹⁰⁹

iii. Determining Whether an Adjacent Wetland Meets the Significant Nexus Standard

The agencies note again that the determination of adjacency and the determination of a significant nexus are different and that there are two key differences. First, adjacency is about the relationship between a wetland and a jurisdictional water and is based on reasonable proximity, whereas significant nexus is about the functions provided by an adjacent wetland to a paragraph (a)(1) water—the significant nexus assessment is not to the jurisdictional water to which the wetland is adjacent (if the jurisdictional water is a paragraph (a)(1) water, it is jurisdictional without a case-specific significant nexus assessment). Second, a wetland must meet the adjacency standard on its own, whereas a significant nexus assessment is based on whether an adjacent wetland alone or in combination with other similarly situated waters significantly affects the

¹⁰⁹ Field work may include, e.g., traversing the landscape from the tributary to the wetland and examining topographic and geomorphic characteristics, the linear extent of those features, as well as hydrologic and biologic indicators.

integrity of a paragraph (a)(1) water. Once a wetland has been determined to be “adjacent,” if the adjacent wetland does not meet the relatively permanent standard, the agencies will conduct a significant nexus analysis to assess if the wetland is jurisdictional.

Under the regulations, the adjacent wetlands which do not meet the relatively permanent standard and for which a significant nexus analysis must be conducted are: (1) adjacent wetlands that lack a continuous surface connection to a relatively permanent paragraph (a)(2) impoundment or a jurisdictional tributary when the jurisdictional tributary meets the relatively permanent standard, and (2) wetlands adjacent to a paragraph (a)(2) impoundment or a tributary when the paragraph (a)(2) impoundment or the tributary is not relatively permanent. In evaluating such adjacent wetlands under the significant nexus standard, 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. See section IV.C.9 of this preamble for additional discussion on the definition of “significantly affect” in this rule, including the factors that will be evaluated and the functions that will be assessed as part of a significant nexus analysis. The agencies consider tributaries and their adjacent wetlands to be “similarly situated” waters. The agencies consider similarly situated waters to be “in the region” when they lie within the catchment area of the tributary of interest. Therefore, in implementing the significant nexus standard under this rule, all tributaries and adjacent wetlands within the catchment area of the tributary of interest will be analyzed as part of the significant nexus analysis.

For a significant nexus analysis, the region would be the catchment that drains to and includes the tributary to which the wetland in question is adjacent. A catchment is the area of the land surface that drains to a specific location for a specific hydrologic feature, such as a tributary. Catchments will be delineated from the downstream-most point of the tributary reach to which the wetland is adjacent and include the land uphill that drains to that point, as discussed in further detail in section IV.C.4.c of this preamble and its subsections.

After identifying the catchment, the next step is to identify the tributaries within the catchment under the agencies’ longstanding interpretation of tributary, see section IV.C.4.a of this

preamble, and their adjacent wetlands within the catchment area, see section IV.C.5.c.i of this preamble. When evaluating whether an adjacent wetland meets the significant nexus standard, the agencies will consider the factors in the final rule, along with the functions of the tributaries in the catchment together with the functions performed by the wetlands adjacent to the tributaries in the catchment, including the subject wetland, in relation to the chemical, physical, or biological integrity of the paragraph (a)(1) water. This approach to the significant nexus analysis recognizes the ecological relationship between wetlands and the tributaries to which they are adjacent, and the role those similarly situated waters have in influencing the chemical, physical, or biological integrity of paragraph (a)(1) waters. See Technical Support Document section III.E.

Section IV.C.9.c of this preamble discusses a variety of tools and sources of information that can be used to assess significant effects on the chemical, physical, and biological integrity of paragraph (a)(1) waters. Remote tools, field indicators and observational methods, and datasets can all assist in determining whether adjacent wetlands meet the significant nexus standard. In addition, a variety of modeling approaches can be used to quantify the connectivity and cumulative effects of wetlands, including non-floodplain wetlands, on other waters, as discussed further in section IV.A.v of the Technical Support Document.¹¹⁰

6. Waters Not Identified in Paragraphs (a)(1) Through (4)

a. This Rule

Paragraph (a)(5) of this rule defines “waters of the United States” to include “intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4)” that meet either the relatively permanent standard or the significant nexus standard. Waters in this category in the 1986 regulations were sometimes referred to as “(a)(3) waters” or “other waters.” With this

¹¹⁰ Some examples include the Soil and Water Assessment Tool (SWAT, available at <https://swat.tamu.edu/>), the Hydrologic Simulation Program in Fortran (available at <https://www.epa.gov/ceam/hydrological-simulation-program-fortran-hspf>), and DRAINMOD for Watersheds (DRAINWAT, available at <https://www.bae.ncsu.edu/agricultural-water-management/drainmod/>). Other examples of models applicable to identifying effects of wetlands on downstream waters include the USGS hydrologic model MODFLOW (available at https://www.usgs.gov/mission-areas/water-resources/science/modflow-and-related-programs?qt-science_center_objects=0#qt-science_center_objects) and the USGS flow simulation model VS2DI (available at <https://www.usgs.gov/software/vs2di-version-13>).

rule, the agencies have made important changes to the 1986 regulations to reflect the agencies’ construction of the statutory limits on the scope of “waters of the United States” informed by 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.” Of particular importance, the agencies have replaced the broad Commerce Clause basis for jurisdiction from the 1986 regulations for waters not identified in other provisions of the definition with the relatively permanent standard and the significant nexus standard. Because the relatively permanent standard and the significant nexus standard require connections to a paragraph (a)(1) water, and the significant nexus standard further requires that waters significantly affect paragraph (a)(1) waters, this provision of the rule is substantially narrower than the 1986 regulations. The 1986 regulations, for example, authorized the assertion of jurisdiction over waters from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

The agencies are including a provision for intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of the rule because such waters can provide functions that restore and maintain the chemical, physical, and biological integrity of traditional navigable waters, the territorial seas, and interstate waters. See section IV.A.2.c.iii of this preamble. For example, a large lake that is very close to a tributary or paragraph (a)(1) water, but that is not part of the tributary system, would be non-jurisdictional if the agencies did not include the category for assessing such waters under paragraph (a)(5) in this rule, even if that lake provides many functions that significantly affect a traditional navigable water.

The agencies have streamlined and clarified the provision for paragraph (a)(5) waters as compared to the 1986 regulations. The agencies have added the requirement that these waters must meet either the relatively permanent standard or significant nexus standard to be “waters of the United States.” In addition, the agencies have deleted the non-exclusive list of “other waters” that was featured in paragraph (a)(3) of the 1986 regulations. Under the final rule’s new paragraph (a)(5) provision, only “intrastate lakes and ponds, streams, or wetlands not identified in paragraphs

(a)(1) through (4)” can be assessed for jurisdiction under the relatively permanent standard or significant nexus standard. As discussed further below, however, the agencies have concluded that the more specific water types previously listed in paragraph (a)(3) of the 1986 regulations nonetheless generally fall within one of the four water types listed in paragraph (a)(5) of this rule.

Finally, the agencies have moved the provision for paragraph (a)(5) waters to the end of the section of the regulation which defines the categories of jurisdictional waters, since paragraph (a)(5) waters are those that are not covered by the preceding categories. As a result, “other waters” are now in paragraph (a)(5) of this rule. In light of these changes to the regulatory text, the agencies refer to these waters as “those not identified in paragraphs (a)(1) through (4)” or “paragraph (a)(5) waters” for purposes of this rule.

Waters assessed under paragraph (a)(5) meet the relatively permanent standard if they are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to a paragraph (a)(1) water or a tributary that is relatively permanent. The agencies will assess waters under paragraph (a)(5) to determine if they are relatively permanent using a similar approach to the one described for tributaries in section IV.C.4 of this preamble, and the agencies will assess a continuous surface connection between waters assessed under paragraph (a)(5) and a paragraph (a)(1) water or a tributary that is relatively permanent using the approach described for adjacent wetlands in section IV.C.5 of this preamble. Waters assessed under paragraph (a)(5) meet the significant nexus standard if they significantly affect the chemical, physical, or biological integrity of a traditional navigable water, the territorial seas, or an interstate water. See section IV.C.6.c of this preamble for further discussion on implementation of these standards for waters assessed under paragraph (a)(5). The agencies also note that the characteristics of a water considered for jurisdiction under paragraph (a)(5) can change over time such that it meets the requirements for consideration under another category of “waters of the United States.” For example, a river that does not drain to a paragraph (a)(1) water could potentially become a traditional navigable water, for instance, if it is impounded and becomes a navigable-in-fact reservoir. Such water would then be assessed as a traditional navigable water under paragraph

(a)(1)(i) of the final rule. Similarly, a wetland that historically was not adjacent can become an adjacent wetland, for example, if a ditch is constructed that connects the wetland to a jurisdictional tributary. Such a wetland would then be considered under paragraph (a)(4) of the final rule due to the unbroken surface connection to a jurisdictional water via the ditch.

b. Summary of the Agencies’ Consideration of Public Comments and Rationale for This Rule

The agencies received numerous comments on whether to include a category for waters that do not fall within one of the more specific categories in the definition of “waters of the United States” and the standard upon which to base jurisdiction over such waters, as well as on implementation of this provision of the rule.

i. Comments on the Provision for Waters That Do Not Fall Within One of the More Specific Categories

Some commenters expressed general support for including a category for waters that do not fall within one of the more specific categories in this rule, while others opposed including such a category. Many commenters requested clarification of the category for waters that do not fall within one of the more specific categories. Some commenters addressed the agencies’ legal authority to assert jurisdiction over waters that do not fall within one of the more specific categories. Some commenters asserted that following the Supreme Court’s decisions in *SWANCC* and *Rapanos*, the agencies lack authority to assert jurisdiction over such waters. Other commenters stated that the proposed rule’s approach to such waters is legally defensible. Several commenters further stated that the proposed rule does not go far enough in protecting waters that do not fall within one of the more specific categories and asserted that broader protection would be consistent with *Rapanos*, *SWANCC*, and *Mauui*.

The agencies disagree that the agencies lack authority to assert jurisdiction over waters that do not fall within one of the more specific categories. The agencies’ regulations have long had provisions for case-specific determinations of jurisdiction over waters that did not fall within the other jurisdictional categories. See section IV.A.2.b of this preamble. Such waters under this rule can be assessed under paragraph (a)(5), and they are only jurisdictional if they meet the relatively permanent standard or significant nexus standard. The agencies

have thus established limits on the scope of these waters consistent with the law, the science, and agency expertise. See section IV.A of this preamble. In addition, the agencies have carefully considered the limitations on their authority under the Clean Water Act, especially concerning paragraph (a)(5) waters. The agencies have made a number of changes to the 1986 regulations that collectively ensure the definition of “waters of the United States” remains well within statutory and constitutional limits. Those changes include replacing the broad Commerce Clause basis for jurisdiction over paragraph (a)(5) waters with the narrower relatively permanent and significant nexus standards, eliminating jurisdiction over tributaries and adjacent wetlands based on their connection to paragraph (a)(5) waters, and eliminating jurisdiction by rule over impoundments of paragraph (a)(5) waters. See sections IV.A.3.a.i, IV.C.3, IV.C.4, and IV.C.5 of this preamble. In addition, as discussed further in the implementation section below, the agencies are intending to continue a thoughtful, careful approach to implementation and coordination for paragraph (a)(5) waters.

The agencies also received numerous comments on the standard to be used for determining jurisdiction over waters that do not fall within one of the more specific categories. Some commenters supported the proposed rule’s requirement that such waters meet either the relatively permanent standard or the significant nexus standard. However, other commenters did not support this approach. One commenter recommended that the agencies not apply the relatively permanent standard to waters that do not fall within one of the more specific categories because it would be duplicative. Specifically, the commenter asserted that waters that meet the relatively permanent standard as described in the proposed rule would always meet the jurisdictional criteria for another rule category. A few commenters disagreed with applying the significant nexus standard to waters that do not fall within one of the more specific categories, asserting that it goes beyond the scope of jurisdiction contemplated by Justice Kennedy in *Rapanos*. Many other commenters opposed the proposed rule’s removal of the interstate and foreign commerce jurisdictional basis for protecting waters that do not fall within one of the more specific categories. Commenters expressed that this basis would protect many important waterways which provide valuable public health,

agricultural, recreational, drinking water, ecological, and economic services important to local, regional, and national interests.

Under the 1986 regulations, “other waters” (such as intrastate rivers, lakes, and wetlands that were not otherwise jurisdictional under other sections of the rule) could be determined to be jurisdictional if the use, degradation, or destruction of the water could affect interstate or foreign commerce. This rule amends the 1986 regulations to delete all the provisions referring to authority over activities that “could affect interstate or foreign commerce” and replaces them with the relatively permanent and significant nexus standards. Thus, this rule would provide for case-specific analysis of waters not addressed by any other provision of the definition to determine whether they are “waters of the United States” under the relatively permanent or significant nexus standards.

The text of the 1986 regulations reflected the agencies’ interpretation at the time, based primarily on the legislative history of the Clean Water Act, that the jurisdiction of the Act extended to the maximum extent permissible under the Commerce Clause of the Constitution. While *SWANCC* did not invalidate the 1986 regulations’ “other waters” provision or any other parts of the 1986 regulations’ definition of “waters of the United States,” the Court cautioned that that it “assum[es] that Congress does not casually authorize administrative agencies to interpret a statute to push the limit of congressional authority.” 531 U.S. at 172–73. Therefore, the agencies conclude that asserting jurisdiction over non-navigable, intrastate waters based solely on whether the use, degradation, or destruction of the water could affect interstate or foreign commerce pushes the limit of the Clean Water Act where those waters do not significantly affect paragraph (a)(1) waters. This rule thus replaces the interstate commerce test with the relatively permanent and significant nexus standards. As discussed in section IV.A of this preamble, the agencies have concluded that the significant nexus standard is consistent with the statutory text and legislative history, advances the objective of the Clean Water Act, is informed by the scientific record and Supreme Court case law, and appropriately considers the policies of the Act. The relatively permanent standard is included in the rule because it provides important efficiencies and additional clarity for regulators and the public by more readily identifying a subset of waters that will virtually

always significantly affect paragraph (a)(1) waters. Thus, this rule gives effect to the Clean Water Act’s broad terms and environmentally protective aim as well as its limitations.

Accordingly, waters that do not fall within one of the more specific categories identified in paragraphs (a)(1) through (4) of this rule may still be jurisdictional. This is consistent with the text of the statute, relevant Supreme Court case law, and the science. See section IV.A of this preamble and Technical Support Document section III.D. The *Rapanos* plurality concluded, “relatively permanent, standing or continuously flowing bodies of water,” 547 U.S. at 739, that are connected to traditional navigable waters, *id.* at 742, and waters with a “continuous surface connection” to such water bodies, *id.* (Scalia, J., plurality opinion), are “waters of the United States” under the relatively permanent standard. Without paragraph (a)(5), a relatively permanent lake that is not a tributary and is not a wetland, but which nonetheless has a continuous surface connection to a traditional navigable water, could not be evaluated for jurisdiction. Justice Kennedy concluded that *SWANCC* held that “to constitute ‘navigable waters’ under the Act, a water or wetland must possess a ‘significant nexus’ to waters that are or were navigable in fact or that could reasonably be so made.” *Id.* at 759 (citing *SWANCC*, 531 U.S. at 167, 172). Many lakes and ponds that are not part of the tributary system and that do not qualify as a paragraph (a)(1) water can only be assessed under paragraph (a)(5) of this rule. There is no basis in the statute or the science for excluding a lake or pond from the definition of “waters of the United States” that is situated on the landscape in a similar manner as an adjacent wetland, solely because it is a lake and not a wetland.

Multiple commenters stated that the proposed rule’s inclusion of waters that do not fall within one of the more specific categories would impermissibly assert jurisdiction over a wide range of features that are far from traditional navigable waters and that have only minor volumes of flow. A few commenters suggested that although the proposed rule recognizes the importance of the strength of connection, particularly the distance of such waters to navigable waters, it suggests that the agencies may rely too much on scientific principles when making jurisdictional determinations in a manner that improperly expands the scope of the agencies’ authority. Another commenter asserted that the agencies should not consider water functions that indicate isolation

between water features as a basis for finding a significant nexus for waters that do not fall within one of the more specific categories.

The agencies disagree that this rule’s category for waters that do not fall within one of the more specific categories, paragraph (a)(5), improperly expands the scope of their authority. The agencies have not only narrowed this category from the 1986 regulations by replacing the broad Commerce Clause provisions with the relatively permanent standard and the significant nexus standard, but they have also made additional changes from the 1986 regulations in order to ensure that they are not pushing the outer limits of the authority granted to them by Congress under the Clean Water Act. See section IV.A.3.a.i of this preamble. Impoundments of waters jurisdictional under paragraph (a)(5) no longer remain jurisdictional by rule. Tributaries to waters jurisdictional under paragraph (a)(5) are not tributaries under paragraph (a)(3) of this rule and must themselves be assessed under paragraph (a)(5). Wetlands adjacent to waters jurisdictional under paragraph (a)(5) are not adjacent wetlands under paragraph (a)(4) of this rule and must themselves be assessed under paragraph (a)(5). In addition, as discussed further below, the agencies have established enhanced coordination procedures for waters assessed under the significant nexus standard under paragraph (a)(5) in order to ensure that such jurisdictional determinations are consistent with this rule. The agencies have also carefully defined “significantly affect,” and have drawn upon the scientific literature to identify the factors and functions that will be used to make significant nexus determinations. See section IV.C.9 of this preamble. In addition, the agencies will be appropriately relying on both scientific principles and requirements of the relatively permanent standard or the significant nexus standard when assessing jurisdiction under this provision of the rule. As described in section IV.A.2.c.iii of this preamble, paragraph (a)(5) waters can provide functions that restore and maintain the chemical, physical, and biological integrity of paragraph (a)(1) waters. Therefore, the agencies have determined that including the category for paragraph (a)(5) waters in this rule best advances the objective of the Clean Water Act. The agencies disagree with the commenter that asserted that the agencies should not consider water functions that indicate isolation between water features as a basis for finding a significant nexus. That

position is contrary to Justice Kennedy's opinion on the role the absence of a hydrologic connection should play in a significant nexus analysis. *See Rapanos*, 547 U.S. at 786 (Kennedy, J., concurring in the judgment) ("Given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system."). That argument is also inconsistent with the science regarding the functions that waters that do not fall within one of the more specific categories provide to paragraph (a)(1) waters. *See* Technical Support Document section III.D.

Many commenters stated that certain types of wetlands should be categorically protected in the rule category for waters that do not fall within one of the more specific categories, such as Carolina and Delmarva bays, pocosins, prairie potholes, vernal pools, and other non-floodplain wetlands, because they provide functions that protect the chemical, physical, or biological integrity of paragraph (a)(1) waters. These commenters also stated that these waters provide valuable public health, agricultural, recreational, drinking water, ecological, and economic services important to local, regional, and national interests. The agencies acknowledge commenters who discussed the functions that these waters can provide. Agencies may choose to proceed via rulemaking or adjudication. *NLRB v. Bell Aerospace Co.*, 416 U.S. 267, 294 (1974) ("[T]he choice between rulemaking and adjudication lies in the first instance within the [agency's] discretion."). With respect to the significant nexus standard in particular, Justice Kennedy stated that the agencies could proceed to determine waters jurisdictional through regulations or adjudication. *See* 547 U.S. at 780–81. The agencies have concluded that adjudication of which waters assessed under paragraph (a)(5) are within Clean Water Act protections through case-specific application of the significant nexus standard or the relatively permanent standard under this rule, is appropriate. Therefore, the agencies are not categorically including or excluding waters that do not fall within one of the more specific categories as jurisdictional under this rule. *See also* section III.D of the Technical Support Document for more information on the agencies' rationale for evaluating waters under paragraph (a)(5). Waters assessed under paragraph (a)(5) will be evaluated using the

relatively permanent standard or significant nexus standard to determine their jurisdictional status.

Some commenters expressed that the category for waters that do not fall within one of the more specific categories is too ambiguous or too inclusive of waters that they believed should not be protected. The agencies disagree with commenters who asserted that the category for waters that do not fall within one of the more specific categories should be removed, or that the category is too confusing or overly broad. Waters assessed under paragraph (a)(5) in this rule are only jurisdictional if they meet the relatively permanent standard or the significant nexus standard. The agencies have also amended this provision of the rule to more clearly identify the types of waters addressed by this provision of the rule. Additionally, a category for waters that do not fall within one of the more specific categories is a longstanding and generally familiar category of waters included in the definition of "waters of the United States" under the 1986 regulations. 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 consistency of jurisdictional determinations.

The 1986 regulations contained a non-exclusive list of water types that could be jurisdictional if they were not jurisdictional under the other provisions of the definition: "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds." The agencies sought comment in the proposed rule on whether it would be helpful to the public to delete the list of water types or to otherwise provide more clarity to the list of water types in the regulation. Commenters provided a variety of perspectives on the specific list of waters in the 1986 regulations. Several commenters recommended that the agencies clarify that the example list of waters is illustrative and not exhaustive. Commenters requested additions to the example list of waters, such as Delmarva bays, vernal pools, and seepage lakes. Other commenters requested that certain features be excluded from the example list of waters, such as prairie potholes. Some commenters expressed confusion as to why the example list from the 1986 regulations included

"intermittent streams" but not "ephemeral streams."

In this rule, the agencies have made changes to the 1986 regulations to clarify the list of water types that can be jurisdictional under this provision, and to clarify that waters assessed under paragraph (a)(5) include waters that do not meet the requirements under paragraphs (a)(1) through (4) of this rule. The list of water types in the 1986 regulations led to confusion as it was sometimes incorrectly read as an exclusive list. There has also been confusion about some of the listed water types. For example, the list includes intermittent streams and was meant to allow for jurisdictional evaluation of intermittent streams that do not fall within the other categories (such as intermittent streams that are not tributaries to the requisite water types but which under the 1986 regulations could affect interstate commerce and under the proposed rule could meet the significant nexus standard). The list was not meant to imply that intermittent streams were not jurisdictional under the tributary provision of the 1986 regulations. In addition, a flowing aquatic feature that is human-made or human-altered but which is neither a jurisdictional tributary nor an excluded ditch would be assessed as a stream under paragraph (a)(5).

Paragraph (a)(5) of this rule identifies as "waters of the United States" "intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4)" that meet either the relatively permanent standard or significant nexus standard. Removing the list of water types from the 1986 regulations is not meant to imply that any of the water types listed in the 1986 regulations are *not* potentially subject to jurisdiction; rather, the revised list of water types is intended to more clearly inform the public of the types of waters that can be assessed for jurisdiction under paragraph (a)(5), and in this rule the list is intended to be exclusive. The revised list is also streamlined for clarity. The agencies have concluded that the more specific water types previously listed in paragraph (a)(3) of the 1986 regulations fall within one of the four water types in the rule. For example, prairie potholes were in the list of water types in the 1986 regulations and, depending upon the characteristics of a particular prairie pothole, they may fall within the wetlands water type on the list (where they meet the regulatory definition of wetlands) or they may be lakes or ponds. Other examples include sloughs, as they typically fall within the wetlands water type or the streams