Draft Guidance on Identifying Waters Protected by the Clean Water Act

This draft guidance clarifies how the Environmental Protection Agency (EPA)*[i] and the U.S. Army Corps of Engineers (the Corps)[ii] will identify waters protected by the Federal Water Pollution Control Act Amendments of 1972[1] (Clean Water Act or CWA or Act) and implement the Supreme Court's decisions concerning the extent of waters covered by the Act (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*[2] and *Rapanos v. United States (Rapanos)*[3]). This document clarifies how the EPA and the Corps understand existing requirements of the CWA and the agencies' implementing regulations in light of *SWANCC* and *Rapanos* and provides guidance to agency field staff in making determinations about whether waters are protected by the CWA.

This draft guidance document is intended to describe for agency field staff the agencies' current understandings; it is not a rule, and hence it is not binding and lacks the force of law. Once finalized, this guidance will supersede existing guidance to field staff issued in 2003 and 2008 on the scope of "waters of the United States" (also "waters of the U.S.") subject to CWA programs.[iii] Although guidance does not have the force of law, it is frequently used by Federal agencies to explain and clarify their understandings of existing requirements. In this case, the agencies believe that field staff across the country will benefit from new guidance that is informed by lessons learned since 2008 and that reflects the agencies' understandings with respect to CWA jurisdiction, consistent with Supreme Court decisions and existing agency regulations. Each jurisdictional determination, however, will be made on a case-by-case basis considering the facts and circumstances of the case and consistent with applicable statutes, regulations, and case law.

After receiving and taking account of public comments on this document, EPA and the Corps expect to finalize it and to undertake rulemaking consistent with the Administrative Procedure Act. This process is expected to start with a proposed rule, to clarify further via regulation the extent of Clean Water Act jurisdiction, consistent with the Court's decisions. EPA and the Corps decided to begin this process with draft, nonbinding guidance in order to clarify their existing understandings while also considering and receiving the benefit of public comments.

Congress enacted the Clean Water Act "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," and this guidance will help the agencies implement specific provisions of the Act to achieve this objective.[4] The CWA has a number of programs designed to protect and restore the Nation's waters. Together, these programs provide effective protection from pollution for waterbodies across the country, including waters that

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* To increase clarity of this document, endnotes that primarily provide citations will be indicated with Arabic numerals, and footnotes that provide additional substantive information will be indicated with Roman numerals.

[i] EPA Regions will use this guidance to oversee and implement programs under the Clean Water Act, including those under sections 303, 311, 401, 402 and 404, 33 U.S.C. §§ 1313, 1321, 1341, 1342 and 1344. (See endnote 1 for an explanation of the relevant history of the Clean Water Act.)

[ii] Corps Districts will utilize this guidance to implement Clean Water Act section 404, 33 U.S.C. § 1344.

[iii] Specifically, this memorandum supersedes the "Joint Memorandum" providing clarifying guidance on *SWANCC,* dated January 15, 2003 (68 Fed. Reg. 1991, 1995), and "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States,*" dated December 2, 2008.

supply drinking water, filter pollutants, provide water for irrigation, and support hunting and fishing, outdoor recreation, and tourism.

The Clean Water Act, however, applies only to waters that are "waters of the United States." This draft guidance clarifies how EPA and the Corps will identify waters to be protected under the Act consistent with the statute, regulations, Supreme Court caselaw, relevant science related to aquatic ecosystems, and the agencies' field experience. As noted above, this guidance, once finalized, will supersede previously issued guidance on the scope of "waters of the United States" (also "waters of the U.S.") subject to CWA programs. However, it is not the agencies' intention that previously issued jurisdictional determinations be re-opened as a result of this guidance.

The U.S. Supreme Court has addressed the scope of waters of the United States protected by the CWA in three cases. In *United States v. Riverside Bayview Homes, Inc.* (474 U.S. 121 (1985)), the Supreme Court held that wetlands adjacent to a traditional navigable water were properly considered to be "waters of the United States." In *SWANCC*, the Court addressed the question of CWA jurisdiction over isolated, non-navigable, intrastate ponds, and concluded that CWA jurisdiction could not be based solely on the presence of migratory birds. In *Rapanos*, the Court addressed CWA protections for wetlands adjacent to non-navigable tributaries, and issued five opinions with no single opinion commanding a majority of the Court. The plurality opinion, authored by Justice Scalia, stated that "waters of the United States" extended beyond traditional navigable waters to include "relatively permanent, standing or flowing bodies of water." Id. at 739. The plurality went on to clarify that relatively permanent waters "do not necessarily exclude" streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought, and seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months. The plurality opinion also asserted that only wetlands with a "continuous surface connection" to other jurisdictional waters are considered "adjacent" and protected by the CWA. Id. at 742.

Justice Kennedy's concurring opinion took a different approach from Justice Scalia's. Justice Kennedy concluded that "waters of the United States" included wetlands that had a significant nexus to traditional navigable waters, "if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable'" (id. at 780). The four justices who signed on to Justice Stevens' opinion would have upheld jurisdiction under the agencies' existing regulations and stated that they would uphold jurisdiction under either the plurality or Justice Kennedy's opinion (id. at 810).

The agencies continue to believe, as expressed in previous guidance, that it is most consistent with the *Rapanos* decision to assert jurisdiction over waters that satisfy either the plurality or the Justice Kennedy standard, since a majority of justices would support jurisdiction under either standard. However, after careful review of these opinions, the agencies concluded that previous guidance did not make full use of the authority provided by the CWA to include waters within the scope of the Act, as interpreted by the Court. This draft guidance provides a more complete discussion of the agencies' interpretation, including of how waters with a "significant nexus" to traditional navigable waters or interstate waters are protected by the CWA.

In addition, this guidance explains the legal basis for coverage of waters by the CWA in cases that were not addressed by the previous guidance (for example, interstate waters).

The agencies expect, based on relevant science and recent field experience, that under the understandings stated in this draft guidance, the extent of waters over which the agencies assert jurisdiction under the CWA will increase compared to the extent of waters over which jurisdiction has been asserted under existing guidance, though certainly not to the full extent that it was typically asserted prior to the Supreme Court decisions in *SWANCC* and *Rapanos*. However, each jurisdictional determination will be made on a case-by-case basis considering the facts and circumstances of the case and consistent with applicable statutes, regulations, and case law.

The agencies understand that decisions concerning whether or not a waterbody is subject to the CWA have consequences for State, tribal, and local governments and for private parties. Consistent with Executive Order 13563, and in particular its emphasis on predictability and certainty, key goals of this draft guidance are to increase clarity and to reduce costs and delays in obtaining CWA permits by reducing the complexity of Corps of Engineers and EPA decisions concerning waters protected by the CWA, thus improving the predictability of the process of identifying waters protected by the Act, and increasing consistency of decisions across the country.

There is only one CWA definition of "waters of the United States." Thus, this draft guidance, like the earlier guidance it replaces, necessarily will apply to decisions concerning whether a waterbody is subject to any of the programs authorized under the CWA. Although *SWANCC* and *Rapanos* specifically involved section 404 of the CWA and discharges of dredged or fill material, the term "waters of the United States" must be interpreted consistently for all CWA provisions that use the term. These provisions include the section 402 National Pollutant Discharge Elimination System (NPDES) permit program, the section 311 oil spill program,[5] the water quality standards and total maximum daily load programs under section 303, and the section 401 State water quality certification process. However, while there is only one CWA definition of "waters of the United States," there may be other statutory factors that define the reach of a particular CWA program or provision.[6]

This draft guidance does not address the regulatory exclusions from coverage under the CWA for waste treatment systems and prior converted croplands, or practices for identifying waste treatment systems or prior converted croplands.[7] It does not affect any of the exemptions from CWA section 404 permitting requirements provided by CWA section 404(f), including those for normal agriculture, forestry and ranching practices.[8] This guidance also does not address the statutory and regulatory exemptions from NPDES permitting requirements for agricultural stormwater discharges and return flows from irrigated agriculture.[9]

The CWA provisions and supporting regulations described in this document contain legally binding requirements. The agencies emphasize that this guidance does not substitute for those provisions or regulations and is not itself a regulation. It does not impose legally binding requirements on EPA, the Corps, or the regulated community, and may not apply to a particular situation depending on the circumstances. Any decisions regarding a particular water will be

based on the applicable statutes, regulations, and case law. Therefore, interested persons are free to raise questions regarding particular situations, and EPA and/or the Corps will consider whether or not the recommendations or interpretations of this guidance are appropriate in that situation based on the statutes, regulations, and case law. The use of language such as "recommend," "may," "should" and "can" is intended to describe agency policies and recommendations, while the use of mandatory terminology such as "must" and "required" is intended to describe the agencies' interpretations of controlling requirements under the terms of the CWA, its implementing regulations, and relevant case law.

This draft guidance is divided into eight sections:

- The first two sections address the fundamental classes of waters subject to Clean Water Act jurisdiction: traditional navigable waters (Section 1) and interstate waters (Section 2).

- The next section provides general guidance relating to the "significant nexus" standard described by Justice Kennedy in the *Rapanos* decision (Section 3).

- The next three sections provide guidance on determining whether various types of waters are subject to CWA jurisdiction, including:
  - Tributaries (Section 4);
  - Adjacent wetlands (Section 5); and
  - Other waters (Section 6).

- The next section provides examples of waters that are generally not waters of the United States under the CWA (Section 7).

- The final section provides guidance on the documentation necessary to support decisions concerning whether waters are protected by the CWA (Section 8).

Additional scientific and legal information concerning these topics is provided in an appendix at the end of this document.

Summary of Key Points

Based on the agencies' interpretation of the statute, implementing regulations and relevant caselaw, the following waters are protected by the Clean Water Act:

- **Traditional navigable waters;**
- **Interstate waters;**
- **Wetlands adjacent to either traditional navigable waters or interstate waters;**
- **Non-navigable tributaries to traditional navigable waters that are relatively permanent, meaning they contain water at least seasonally; and**
- **Wetlands that directly abut relatively permanent waters.**

In addition, the following waters are protected by the Clean Water Act if a fact-specific analysis determines they have a "significant nexus" to a traditional navigable water or interstate water:

- **Tributaries to traditional navigable waters or interstate waters;**
- **Wetlands adjacent to jurisdictional tributaries to traditional navigable waters or interstate waters; and**
- **Waters that fall under the "other waters" category of the regulations. The guidance divides these waters into two categories, those that are physically proximate to other jurisdictional waters and those that are not, and discusses how each category should be evaluated.**

The following aquatic areas are generally not protected by the Clean Water Act:

- **Wet areas that are not tributaries or open waters and do not meet the agencies' regulatory definition of "wetlands";**
- **Waters excluded from coverage under the CWA by existing regulations;**
- **Waters that lack a "significant nexus" where one is required for a water to be protected by the CWA;**
- **Artificially irrigated areas that would revert to upland should irrigation cease;**
- **Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;**
- **Artificial reflecting pools or swimming pools created by excavating and/or diking dry land;**
- **Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;**
- **Water-filled depressions created incidental to construction activity;**
- **Groundwater drained through subsurface drainage systems and**
- **Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands.**

Section 1: Traditional Navigable Waters

EPA and the Corps will continue to assert CWA jurisdiction over "[a]ll waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide."[10] These waters are referred to in this guidance as "traditional navigable waters." The traditional navigable waters include all of the "navigable waters of the United States," as defined in 33 C.F.R. part 329 and by numerous decisions of the federal courts, plus all other waters that are navigable-in-fact (for example, the Great Salt Lake, Utah, and Lake Minnetonka, Minnesota). Thus, the traditional navigable waters include, but are not limited to, the "navigable waters of the United States" within the meaning of section 10 of the Rivers and Harbors Act of 1899 (also known as "Section 10 waters").[11]

For purposes of CWA jurisdiction and this guidance, waters will be considered traditional navigable waters if:

- They are subject to section 9 or 10 of the Rivers and Harbors Act; or
- A federal court has determined that the water body is navigable-in-fact under federal law; or
- They are waters currently being used for commercial navigation, including commercial waterborne recreation (for example, boat rentals, guided fishing trips, or water ski tournaments); or
- They have historically been used for commercial navigation, including commercial waterborne recreation; or
- They are susceptible to being used in the future for commercial navigation, including commercial waterborne recreation. Susceptibility for future use may be determined by examining a number of factors, including the physical characteristics and capacity of the water to be used in commercial navigation, including commercial recreational navigation (for example, size, depth, and flow velocity[iv]), and the likelihood of future commercial navigation, including commercial waterborne recreation. A likelihood of future commercial navigation, including commercial waterborne recreation, can be demonstrated by current boating or canoe trips for recreation or other purposes. A determination that a water is susceptible to future commercial navigation, including commercial waterborne recreation, should be supported by evidence. [v]

[iv] While a traditional navigable water need not be capable of supporting navigation at all times, the frequency, volume, and duration of flow are relevant considerations for determining if a waterbody has the physical characteristics suitable for navigation.

[v] A trip taken solely for the purpose of demonstrating a waterbody can be navigated would be sufficient. *See, e.g., FPL Energy Marine Hydro L.L.C. v. FERC*, 287 F.3d 1151, 1157 (D.C. Cir. 2002).

Section 2: Interstate Waters

EPA and the Corps will assert jurisdiction over all interstate waters, consistent with the agencies' current regulations defining "waters of the United States" to include "interstate waters including interstate wetlands."[12] Interstate waters, defined by the federal water pollution control statutes prior to the CWA as "all rivers, lakes, and other waters that flow across, or form a part of, State boundaries," remain jurisdictional waters under the CWA, even if such waters are not traditional navigable waters as described in Section 1 above.[13] For purposes of this guidance, lakes, ponds, and similar lentic (or still) water features crossing state boundaries are jurisdictional as interstate waters in their entirety. For streams and rivers, including impoundments, field staff should determine the upstream and downstream extent of the stream or river crossing a state boundary that should be considered the "interstate water." One method of determining the extent of a riverine "interstate water" is the use of stream order. Thus, for rivers and streams the "interstate water" would extend upstream and downstream of such boundary for the entire length that the water is of the same stream order.[14]

The agencies will analyze tributaries to interstate waters[15] consistent with the treatment of tributaries to traditional navigable waters under Justice Kennedy's standard discussed in Section 4 below. Similarly, the agencies will analyze wetlands adjacent to interstate waters (except wetlands that are adjacent to interstate wetlands)[16] consistent with the treatment of adjacent wetlands under Justice Kennedy's standard discussed in Section 5 below. Finally, EPA and the Corps will analyze other waters relative to an interstate water consistent with Section 6 below.

Section 3: Significant Nexus Analysis

The agencies will assert jurisdiction over waters with a significant nexus to traditional navigable waters or interstate waters in accordance with *SWANCC* and *Rapanos*. Justice Kennedy stated:

> "In *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers*, 531 U.S. 159 (2001) (*SWANCC*), the Court held, under the circumstances presented there, 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."[17]

Waters have the requisite significant nexus if they, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters or interstate waters.[vi] There is one significant nexus standard for waters of the United States, and this section provides general guidance for determining the presence or absence of a significant nexus. Sections 4, 5 and 6 provide more

[vi] In discussing the significant nexus standard, Justice Kennedy stated: "The required nexus must be assessed in terms of the statute's goals and purposes. Congress enacted the [CWA] to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters' . . . ." 547 U.S. at 779. Consistent with Justice Kennedy's instruction, EPA and the Corps will apply the significant nexus standard in a manner that restores and maintains any of these three attributes of traditional navigable waters and interstate waters.

specific guidance to field staff for applying the significant nexus standard when determining jurisdiction over:

- tributaries,
- adjacent wetlands, and
- other waters.

To evaluate the presence or absence of a significant nexus, the agencies intend to, as a general matter, consider:

(1) Waters to be "similarly situated" with waters of the same resource type, specifically (a) tributaries; (b) adjacent wetlands; or (c) other waters that are in close physical proximity to traditional navigable waters, interstate waters, or their jurisdictional tributaries ("proximate other waters");[vii]
(2) Waters to be "in the region" if they fall within the same watershed. For the purposes of this analysis, the watershed is defined by the area draining into the traditional navigable water or interstate water; and
(3) Waters to have a significant nexus if they alone or in combination with other similarly situated waters in the same watershed have an effect on the chemical, physical, or biological integrity of traditional navigable waters or interstate waters that is more than "speculative or insubstantial."

Therefore, field staff should first determine whether the water to be evaluated is a tributary, adjacent wetland, or proximate other water under the regulations - waters in the same category should be considered the similarly situated waters.

Next, field staff should determine the watershed, as defined by the area[18] draining into the nearest traditional navigable water or interstate water, and should identify the "similarly situated" waters in that watershed. The logical and scientifically valid "region" for determining whether similarly situated waters have a significant nexus is the watershed that drains to the nearest traditional navigable water or interstate water through a single point of entry. There may be circumstances in which field staff, for efficiency purposes, elect to begin the case-by-case significant nexus analysis utilizing a smaller watershed (for example, in some circumstances, the Hydrologic Unit Code (HUC)-10 "watershed" as identified by the U.S. Geological Survey and the Natural Resources Conservation Service, which are typically between 40,000-250,000 acres in size).[19] Field staff should not, however, utilize an area larger than the watershed that drains to the nearest traditional navigable water or interstate water through a single point of entry. When a smaller watershed provides sufficient science-based justification to establish jurisdiction, field staff need not unnecessarily expend administrative time and resources analyzing the entire single point of entry watershed. However, field staff should not use a watershed smaller than the single point of entry watershed as the basis for a finding of no jurisdiction.

[vii] For other waters that are not in close physical proximity to traditional navigable waters, interstate waters, or their jurisdictional tributaries, the agencies will apply the significant nexus standard to each of these waters individually, except in cases where there is a compelling scientific basis for treating a group of such waters as similarly situated waters in the same region (see Section 6).

Finally, field staff should determine whether the water they are evaluating, in combination with other similarly situated waters in the watershed, has a significant nexus to the nearest traditional navigable water or interstate water. Functions of waters that might demonstrate a significant nexus include sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of aquatic habitat. A hydrologic connection is not necessary to establish a significant nexus, because in some cases the lack of a hydrologic connection would be a sign of the water's function in relationship to the traditional navigable water or interstate water, such as retention of flood waters or pollutants that would otherwise flow downstream to the traditional navigable water or interstate water.

Within a single point of entry watershed, over a period of time there will probably be multiple jurisdictional determinations. While field staff will have to make case-specific determinations, they may use information used in previous determinations, and the agencies would generally expect that if a significant nexus has been established for one water in the watershed, then other similarly situated waters in the watershed would also be found to have a significant nexus, because under Justice Kennedy's test, similarly situated waters in the region should be evaluated together. However, the documentation for each case should be complete enough to support the specific jurisdictional determination without cross-references to other files, including an explanation of which waters were considered together as similarly situated and in the same region.

Among the most important tasks for field staff is demonstrating that a <u>significant</u> nexus exists between the "similarly situated" waters that are the subject of a case-specific jurisdictional determination and the relevant traditional navigable water or interstate water. Justice Kennedy provides guidance about the nature of the nexus when he concludes that waters are not jurisdictional when their effects on the physical, chemical, or biological integrity of downstream traditional navigable waters are speculative or insubstantial. In the context used by Justice Kennedy, a "significant nexus" includes having a predictable or observable chemical, physical, or biological functional relationship between the similarly situated waters and the traditional navigable water or interstate water. EPA and the Corps should further demonstrate that the similarly situated waters significantly affect the traditional navigable water or interstate water.

Thus, field staff should look for indicators of hydrology, effects on water quality, and physical, chemical, and biological (including ecological) connections or functions when assessing whether a water, alone or in combination with similarly situated waters, has a more than speculative or insubstantial effect on the chemical, physical, or biological integrity of downstream traditional navigable waters or interstate waters. Examples of ways in which hydrology can significantly affect downstream waters include, but are not limited to, transport of water and materials and compounds carried by the water (e.g., suspended materials, dissolved compounds), water retention, as a medium for the movement of aquatic organisms such as fish and invertebrates, and water discharge (e.g., release of retained water to other waters). Effects on the chemical integrity of downstream waters may include the extent to which the waters have the capacity to carry pollutants (for example, petroleum wastes, toxic wastes, and sediment) or flood waters downstream to traditional navigable waters or interstate waters; the extent to which

the waters reduce the amount of pollutants or flood waters that would otherwise enter traditional navigable waters or interstate waters; and the extent to which the waters perform physical functions related to the maintenance of downstream water quality such as sediment trapping. Biological functions performed by the waters that may affect downstream traditional navigable waters or interstate waters include the capacity to transfer nutrients and organic carbon to downstream food webs (for example, macroinvertebrates present in headwater streams convert carbon in leaf litter, making it available to species downstream), and the maintenance of habitat that provides spawning areas for species in downstream waters.

Analysis of the above indicators, whether documented for an individual water or based on scientific literature describing functions applicable to the waters in question, along with an analysis of how the described functions affect a traditional navigable water or interstate water will allow field staff to evaluate whether the water alone or in combination with similarly situated waters in the watershed is likely to have a more than speculative or insubstantial effect on the chemical, physical, or biological integrity of a traditional navigable water or interstate water. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (for example, between a tributary and the traditional navigable water). Watershed ecosystems, and their interrelationships, are constructed of component parts that have relevance when considered collectively. Failure to protect the components can undermine the ecosystem in its entirety. Therefore, the agencies have an obligation to evaluate waters in terms of how they interrelate and function as ecosystems rather than as individual units, especially in the context of complex ecosystems where their integrity may be compromised by environmental harms that individually may not be measurably large but collectively are significant.

It is important to clarify that agency field staff, in conducting a significant nexus analysis, are not required to identify or evaluate every similarly situated water located within a particular watershed being assessed. Staff should evaluate as many waters of the same type as is necessary to support and document the presence or absence of a significant nexus for that type of water (e.g., adjacent wetland, tributary or proximate other water). Staff should be confident that their significant nexus determination based on evaluation of a representative subset of adjacent wetlands, tributaries, or proximate other waters in a particular watershed would be fully consistent with a determination based on an evaluation of all waters of the same type in the watershed. Field staff should look at the best available information to identify the similarly situated waters in the point of entry watershed and their effects on downstream traditional navigable waters or interstate waters. In many circumstances, a reliable affirmative jurisdictional determination may be based on consideration of a subset of similarly situated waters, since including additional waters in the analysis would only establish a more significant nexus to the traditional navigable water or interstate water. In general, field staff are not expected to develop new information on similarly situated waters (e.g., the identification or delineation of as yet unmapped wetlands or tributaries). In many cases, scientifically credible (e.g., peer reviewed) literature on the functions and effects of similarly situated waters generally will be sufficient, along with site-specific information for the water for which a determination is being conducted, to support a significant nexus jurisdictional determination. This information should be incorporated into a site-specific explanation of how the waterbody and similarly situated waters in the region significantly affect the physical, chemical, or biological integrity of a traditional navigable or interstate water.

Section 4: Tributaries

EPA and the Corps will assert jurisdiction over tributaries under either the plurality standard or the Kennedy standard, as described below.

For purposes of this guidance, a water may be a tributary if it contributes flow to a traditional navigable water or interstate water, either directly or indirectly by means of other tributaries. A tributary can be a natural, man-altered, or man-made water body. Examples include rivers and streams, as well as lakes and certain wetlands that are part of the tributary system and flow directly or indirectly into traditional navigable waters or interstate waters. A tributary is physically characterized by the presence of a channel with defined bed and bank. The bed of a stream is the bottom of the channel. The lateral constraints (channel margins) are the stream banks. Channels are formed, maintained, and altered by the water and sediment they carry, and the forms they take can vary greatly.

A means of identifying the lateral limits of a tributary, including where there are no contiguous wetlands, is the existence of an ordinary high water mark (OHWM). Corps regulations define OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."[20] In many tributaries, the bed is that part of the channel below the OWHM, and the banks often extend above the OHWM. Channel characteristics depend on variables such as hydrology, lithology, climate, physiography, and gradient,[21] among others. A tributary continues as far as a channel (i.e., bed and bank) is present. A natural or manmade break (e.g., rock outcrop, underground flow, dam, weir, diversion, or similar break) in the presence of a bed and bank or ordinary high water mark does not establish the upstream limit of a tributary in cases where a bed and bank and an ordinary high water mark can be identified upstream and downstream of the break. Tributaries that have been channelized by being lined with concrete are still considered tributaries for the purposes of this guidance.

Certain types of erosional features, such as gullies and rills, are not tributaries for purposes of this guidance. Gullies[22] are relatively deep channels that are ordinarily formed on valley sides and floors where no well-defined channel previously existed. They are commonly found in areas with low-density vegetative cover or with soils that are highly erodible. Rills[23] are formed by overland water flows eroding the soil surface during rain storms. Erosional features that are not tributaries for the purposes of this guidance can also be found in environments where compacted soil and sparse vegetation have increased overland flow significantly. The two main processes that result in the formation of gullies and similar erosional features are downcutting and headcutting, which are forms of longitudinal (incising) erosion. These actions ordinarily result in erosional cuts that are often deeper than they are wide, with very steep banks, often small beds, and typically only carry water during precipitation events. The principal erosional processes that modify streams are also downcutting and headcutting. In streams, however, lateral erosion is also very important. The result is that streams, except on steep slopes or where soils are highly erodible, are characterized by the presence of more defined

bed and banks as compared to typical erosional features that are more deeply incised. Field staff should consider these factors as they distinguish streams and other tributaries that may be subject to Clean Water Act jurisdiction from other types of erosional features.

Non-tidal ditches (including roadside and agricultural ditches) are also not tributaries except where they have a bed, bank, and ordinary high water mark; connect directly or indirectly to a traditional navigable or interstate water; and have one of the following five characteristics:

- natural streams that have been altered (e.g., channelized, straightened or relocated);
- ditches that have been excavated in waters of the U.S., including wetlands;
- ditches that have relatively permanent flowing or standing water;
- ditches that connect two or more jurisdictional waters of the U.S.; or
- ditches that drain natural water bodies (including wetlands) into the tributary system of a traditional navigable or interstate water.

If a ditch is considered a tributary, it will be evaluated in the same manner as other tributaries (i.e., plurality standard or Kennedy standard, as appropriate). Note that tidal ditches are by definition waters of the U.S.

Natural and man-made swales are also not tributaries for purposes of this guidance. In certain circumstances, however, ditches or swales include areas that meet the regulatory definition of "wetlands." Wetland ditches and swales will be evaluated as wetlands under the plurality or Kennedy standard, not as tributaries (unless the ditch itself is considered a tributary for one of the reasons stated above). Ditches and swales are considered wetlands when they meet the applicable criteria in the Corps of Engineers Wetland Delineation Manual or the appropriate regional supplement to that Wetland Delineation Manual.

Even when not jurisdictional waters, these geographic features (e.g., swales, ditches) may still contribute to a surface hydrologic connection between an adjacent wetland and a traditional navigable water or interstate water. In addition, these geographic features may function as "point sources" (i.e., "discernible, confined and discrete conveyance[s]" under CWA section 502(14)), such that discharges of pollutants to waters through these features could be subject to other CWA regulations (e.g., CWA section 402).

Tributaries Covered under the *Rapanos* Plurality Standard

EPA and the Corps will assert jurisdiction over "relatively permanent, standing or continuously flowing bodies of water" connected to traditional navigable waters.[viii] Under the plurality standard, relatively permanent waters are jurisdictional without making a significant nexus finding.

[viii] 547 U.S. at 739. The agencies will not assert jurisdiction over such waters under the plurality standard within the Eleventh Circuit, i.e., waters in the states of Florida, Georgia and Alabama. *See United States v. Robison*, 505 F.3d 1208 (11th Cir.); *reh'g en banc denied*, 521 F.3d 1319 (11th Cir. 2007), *cert. denied*, 129 S. Ct. 627, 630 (2008). Instead the agencies will use the Kennedy standard only.

Under the plurality standard, a non-navigable tributary is jurisdictional when it satisfies the following characteristics:

(1) The tributary is connected, directly or indirectly through other tributaries, to a downstream traditional navigable water, and
(2) Flow in the tributary, except for drought years, is at least seasonal.

A central issue to the plurality standard is what constitutes "seasonal flow." In this context, a water is "seasonal" when it has predictable flow during wet seasons in most years. The time period constituting "seasonal" will vary across the country. Rather than having distinct, rigid boundaries, stream reaches classified as perennial, intermittent, and ephemeral may more accurately be described as dynamic zones within stream networks. The length or extent of these zones may be highly variable and is dictated by multiple factors such as annual precipitation, evapotranspiration, and land- and water-use practices.[24] Thus, determination of whether a water meets the plurality standard for relatively permanent should involve determination of the length and timing of seasonal flows in the ecoregion in question.

Tributaries that are not relatively permanent will be evaluated under the Kennedy standard.

Tributaries Covered under the *Rapanos* Kennedy Standard

EPA and Corps regulations define "waters of the United States" to include tributaries to traditional navigable waters and to interstate waters.[25] Consistent with the agencies' interpretation of the CWA, these regulations and the relevant case law, EPA and the Corps expect to assert jurisdiction over all tributaries to traditional navigable waters or interstate waters, provided that the tributary, alone or in combination with other similarly situated tributaries in the watershed, significantly affects the chemical, physical, or biological integrity of traditional navigable waters or interstate waters.

Thus, a tributary is jurisdictional where:

(1) It is a tributary as defined for purposes of this guidance to a traditional navigable water or an interstate water; and
(2) The tributary, alone or in combination with other tributaries in the watershed, has a significant nexus with the traditional navigable water or interstate water.

When performing a significant nexus analysis for a tributary, the first step is to determine whether that tributary has a bed and bank and an ordinary high water mark. If the tributary possesses those characteristics, the next step is to determine whether the tributary drains, or is part of a network of tributaries that drain, into a downstream traditional navigable water or interstate water. If it can be demonstrated that the tributary has a bed and bank, and an OHWM, and is part of a tributary system to a traditional navigable water or an interstate water, and, therefore, can transport pollutants, flood waters or other materials to a traditional navigable water or interstate water, then the agencies would generally expect that the tributary, along with the

other tributaries in the watershed (the "similarly situated" waters), can be demonstrated to have a significant nexus with the downstream traditional navigable water or interstate water. This expectation is based on the significant harm that pollutants can have on the physical, chemical, or biological integrity of the downstream traditional navigable water or interstate water.[26] The presence of a bed and bank and an OHWM are physical indicators of flow and it is likely that flows through all of the tributaries collectively in a watershed with the above characteristics are sufficient to transport pollutants, or other materials downstream to the traditional navigable water or interstate water in amounts that would significantly affect its chemical, physical or biological integrity.

When considering whether the tributary being evaluated eventually flows to an interstate water or traditional navigable water, field staff should trace the tributary connection using resources such as direct observation or U.S. Geological Survey maps, aerial photography or other reliable remote sensing information, soil survey data or other appropriate information.

Although the agencies generally expect that tributaries will be found to have a significant nexus with downstream traditional navigable waters or interstate waters, as explained above, it is still important that field staff document such a significant nexus through a site-specific analysis for tributaries that are not relatively permanent. Field staff should document, using available or readily obtainable information wherever possible, the flow characteristics and functions of the tributary or tributaries, and their hydrologic relationship to the nearest downstream traditional navigable water or interstate water. Hydrologic information may include volume, duration, and frequency of flow (if such information is readily available, e.g., through publicly available reports or on-line resources), as well as physical indicators of flow. Field staff may document the flow characteristics of tributaries by using physical indicators of flow, observations of flow considered in the context of local precipitation patterns and recent precipitation events, field reports, local expert statements, and other sources of information. Ordinary high water mark determinations are made by examining recent physical evidence of flow.[27] It is not necessary to document actual flow data via stream gages.[28] Field staff should also document other functions provided by the tributary, and describe how those functions may significantly affect the physical, chemical, or biological integrity of downstream traditional navigable waters or interstate waters.

Flow characteristics and functions of the tributary or tributaries and their hydrologic relationship to the nearest downstream traditional navigable water or interstate water may include topographic maps, gage data, historic records of water flow, statistical data, personal observations/records, and other relevant information. Consideration may also be given to relevant contextual factors that directly influence the hydrology of tributaries, including the size of the watershed, average annual rainfall, and average annual winter snow pack. The significant nexus evaluation should also discuss the potential for the tributaries to transport pollutants to a traditional navigable water or interstate water. Direct observation of the tributary is not necessary if other available documentation is sufficient to establish the significant nexus.

Examples of other functions provided by tributaries that may significantly affect the physical, chemical, or biological integrity of downstream traditional navigable waters or interstate waters include: distributing sediment[29] to maintain stream and riparian habitat; nutrient cycling and removal; providing habitat for amphibians, fish, and other aquatic or semi-aquatic

species living in and near the stream that may use the downstream waters for other portions of their life stages (e.g., spawning areas for recreationally or commercially important species); improving or maintaining biological integrity in downstream waters; and transferring nutrients and organic carbon vital to support downstream food webs (e.g., macroinvertebrates present in headwater streams convert carbon in leaf litter making it available to species downstream).[30] Disruptions in these biological processes can significantly affect the functional capacity of the entire downstream system.[31] Tributaries help to maintain base flow in the larger rivers downstream, which is particularly important in times of drought. At the same time, a network of tributaries can regulate the flow of water into downstream waters, moderate low flow and high flow extremes, reduce local and downstream flooding, and prevent excess erosion caused by flooding.[32]

Section 5: Adjacent Wetlands

The agencies will assert Clean Water Act jurisdiction over adjacent wetlands that meet either the plurality standard or the Kennedy standard under *Rapanos*.

Wetlands Covered Under the *Rapanos* Plurality Standard

EPA and the Corps will assert jurisdiction over "wetlands with a continuous surface connection to" "relatively permanent, standing or continuously flowing bodies of water" connected to traditional navigable waters.[ix]

The plurality opinion in *Rapanos* created a standard for finding statutory jurisdiction under the CWA for wetlands, which is related to the presence of a physical connection between the wetland and the relatively permanent water to which it is adjacent. Under the plurality standard, wetlands with a continuous surface connection to relatively permanent waters are jurisdictional without the legal obligation to make a significant nexus finding.

Under the plurality standard, an adjacent wetland is jurisdictional when it satisfies the following characteristics:

(1) The wetland is adjacent to a relatively permanent, non-navigable tributary, that is connected to a downstream traditional navigable water, and

(2) A continuous surface connection exists between the wetland and a relatively permanent tributary where the wetland directly abuts the water (e.g., they are not separated by uplands, a berm, dike, or similar feature). A "continuous surface connection" does not require the presence of water at all times in the connection between the wetland and the jurisdictional water.

Wetlands Covered Under the *Rapanos* Kennedy Standard

[ix] 547 U.S. at 739, 742. As noted, the agencies will not assert jurisdiction over such waters under the plurality standard within the Eleventh Circuit, i.e., waters in the states of Florida, Georgia and Alabama. *See United States v. Robison*, supra, footnote h.

The agencies will assert Clean Water Act jurisdiction over wetlands[x] adjacent to traditional navigable waters or non-wetland interstate waters or to another water of the U.S. where such wetlands have a significant nexus with downstream traditional navigable or interstate waters.[xi] Adjacent wetlands will be considered to have a significant nexus if they, alone or in combination with similarly situated wetlands, have an effect on the chemical, physical, or biological integrity of traditional navigable waters or interstate waters that is more than "speculative or insubstantial."[33] As a general matter, "similarly situated" adjacent wetlands include all adjacent wetlands located in the point-of-entry watershed. Wetlands adjacent to traditional navigable waters or non-wetland interstate waters are *per se* jurisdictional and do not require a showing of significant nexus.[34]

Thus, an adjacent wetland is jurisdictional where such wetland meets the definition of "adjacent" as that term is defined in the agencies' regulations and is either:

> (1) Adjacent to a traditional navigable water or non-wetland interstate water; or
> (2) Adjacent to a tributary, lake, reservoir, or other jurisdictional water (except another wetland) and either alone or in combination with other adjacent wetlands in the watershed has a significant nexus to the nearest downstream traditional navigable or interstate water.

The regulations define "adjacent" as follows: "The term *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.'"[35] Under this definition, a wetland does not need to meet all criteria to be considered adjacent. The agencies consider wetlands to be bordering, contiguous, or neighboring, and therefore "adjacent" if at least <u>one</u> of following three criteria is satisfied:

(1) There is an unbroken surface or shallow sub-surface hydrologic connection between the wetland and jurisdictional waters; or
(2) The wetlands are physically separated from jurisdictional waters by "man-made dikes or barriers, natural river berms, beach dunes, and the like"; or
(3) Where a wetland's physical proximity to a jurisdictional water is reasonably close, that wetland is "neighboring" and thus adjacent. For example, wetlands located within the riparian area or floodplain of a jurisdictional water will generally be considered neighboring, and thus adjacent. One test for whether a wetland is sufficiently proximate to be considered "neighboring" is whether there is a demonstrable ecological interconnection between the wetland and the jurisdictional waterbody. For example, if resident aquatic species (e.g., amphibians, aquatic turtles, fish, or ducks) rely on both the wetland and the jurisdictional waterbody for all or part of their life cycles (e.g., nesting, rearing, or feeding), that may demonstrate that

[x] Under normal circumstances, a wetland will meet all three factors of hydrology, hydrophytic vegetation, and hydric soils, as required by agency regulations, and described in the United States, U.S. Army Corps of Engineers, *Wetlands Delineation Manual* (Washington, D.C.: U.S. Army Corps of Engineers,1987) or appropriate Regional Supplement. The regulatory definition of waters of the U.S. includes "wetlands adjacent to waters (other than waters that are themselves wetlands) identified [as jurisdictional]." 33 C.F.R. § 328.3(a)(7); 40 C.F.R. § 230.3(s)(7).
[xi] The plurality standard in *Rapanos* may provide an alternative basis for asserting jurisdiction. See Section 5.

the wetland is neighboring and thus adjacent. The agencies recognize that as the distance between the wetland and jurisdictional water increases, the potential ecological interconnection between the waters is likely to decrease.

An unbroken surface or shallow sub-surface hydrologic connection to jurisdictional waters may be established by a physical feature or discrete conveyance that supports periodic flow between the wetland and a jurisdictional water. 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. The hydrologic connection need not itself be a water of the U.S. A shallow subsurface hydrologic connection is lateral water flow through a shallow subsurface layer, such as may be found in steeply sloping forested areas with shallow soils, soils with a restrictive horizon, or in karst systems.[36] Shallow subsurface connections may be found below the ordinary root zone (below 12 inches), where other wetland delineation factors may not be present. A combination of physical factors may reflect the presence of a shallow subsurface connection, including, position in the landscape (for example, on a slope directing flow from wetland to jurisdictional waters), stream hydrograph, and soil surveys (for example, exhibiting indicators of high transmissivity over an impermeable layer).

If uplands separating a wetland from jurisdictional water can reasonably be characterized as "man-made dikes or barriers, natural river berms, beach dunes, and the like," then, under the agencies' regulations, the wetlands are adjacent even if no apparent hydrologic connection exists. It is important to note that natural river berms are formed by sediment deposits accumulating at or near the stream bank during flood events. Such berms vary in height from inches to feet, and also can be quite wide.[37] Similarly, multiple beach dunes may exist between a wetland and jurisdictional water (including primary and secondary dunes), because beach dunes typically function as an interdunal system (particularly on barrier islands).

The link between physical proximity and a physical or ecological (biological) connection is well documented in the scientific literature. A wetland within the riparian area[38] or floodplain[39] typically has such an interconnection. For example, adjacent wetlands typically help to store floodwaters, pollutants, and sediments that could otherwise reach a jurisdictional water.[40] Adjacent wetlands often provide important sources of stored water that augment stream flow during low-flow periods.[41] Species, such as amphibians, certain reptiles (e.g., watersnakes), waterfowl, invertebrates, and fish (including anadromous and catadromous fish), move between an adjacent wetland and a jurisdictional water for spawning, nesting, feeding, refuge, and other life stage requirements.[42] Species that move between an adjacent wetland and a jurisdictional water are distinguishable from migratory species. Migratory species use the wetland during a journey to a different area[43] and are not to be used as a scientific basis for demonstrating an ecological interconnection for adjacency. While it is not appropriate to determine adjacency based solely on any specific threshold of distance, as the distance between the wetland and jurisdictional water increases, the potential interconnection between the waters will decrease and a finding of adjacency is less likely. The distance between a tributary and its adjacent wetlands may vary by region, as well as based on site-specific factors within regions.

All wetlands within a wetland mosaic should ordinarily be considered collectively when determining adjacency. Wetlands present in such systems act generally as a single ecological

unit. A "wetland mosaic" refers to a landscape where wetland and non-wetland components are too numerous and closely associated to be appropriately delineated or mapped separately. These areas often have complex microtopography, with repeated small changes in elevation occurring over short distances. Tops of ridges and hummocks are often non-wetland but are interspersed with wetlands having hydrophytic vegetation, hydric soils, and wetland hydrology.

Under Justice Kennedy's standard, the following legal test for Clean Water Act jurisdiction applies: If a wetland is adjacent to a traditional navigable water or a non-wetland interstate water, a finding of adjacency is sufficient in and of itself to demonstrate that the wetland is subject to Clean Water Act jurisdiction. On the other hand, a finding that a particular wetland is adjacent to a jurisdictional waterbody other than a traditional navigable water or non-wetland interstate water is not sufficient in and of itself to establish Clean Water Act jurisdiction over that wetland. For the latter category of adjacent wetlands, in order to establish Clean Water Act jurisdiction, field staff, on a case-by-case basis, must determine whether the particular adjacent wetland, alone or in combination with similarly situated wetlands in that watershed, has a significant nexus with traditional navigable waters or non-wetland interstate waters (see discussion below).

A determination of *adjacency* is based on an evaluation of the relationship between a wetland and the nearest jurisdictional water, which includes consideration of both physical and ecological connections between those waterbodies. In contrast, a determination of *significant nexus* is a different inquiry, which is based on evaluating whether there is a significant nexus between that adjacent wetland (in combination with similarly situated adjacent wetlands in the watershed) and a traditional navigable water or a non-wetland interstate water.

As discussed in Section 3, the agencies generally consider all wetlands within the watershed that are adjacent to jurisdictional waters to be "similarly situated" waters "in the region." (Wetlands adjacent to non-jurisdictional waters are considered "other waters.") The relevant watershed is defined by the topographic area draining into the nearest traditional navigable water or interstate water. However, as with tributaries, field staff may utilize a smaller area for a significant nexus analysis where this is sufficient to establish the presence or absence of a significant nexus for adjacent wetlands within the watershed as a whole. When identifying other adjacent wetlands in the watershed to be considered in the significant nexus analysis, field staff may use resources such as direct observation or U.S. Geological Survey maps, aerial photography, or other reliable remote sensing information. Using such information, staff should include in the evaluation as many adjacent wetlands as is necessary to support and document the presence or absence of a significant nexus. Field staff are not required to identify or evaluate every adjacent wetland located within a particular watershed being assessed and are generally not expected to develop new information on the location of such wetlands. As with tributaries, field staff should use the best available information on the adjacent wetlands in the point of entry watershed, which may include scientific literature on the functions and effects of wetlands within the watershed generally and how those wetlands significantly affect the physical, chemical, or biological integrity of the traditional navigable waters or interstate waters. For affirmative determinations especially, consideration of a subset of adjacent wetlands may be sufficient, since including additional adjacent wetlands in the analysis would only establish a more significant nexus to the traditional navigable water or interstate water.

When evaluating significant nexus for adjacent wetlands, field staff should consider the many functions of waters such as sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat. In general, tributaries and their adjacent wetlands function as an integrated hydrologic system, and as a unit they may affect the amount of pollutants and floodwaters that reach the downstream traditional navigable waters or interstate waters.

Section 6: Other Waters

The "other waters" or "(a)(3) waters" provision of EPA's and the Corps regulations includes:

> All 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 use, degradation or destruction of which could affect interstate or foreign commerce. . . .[44]

The agencies recognize that Supreme Court decisions in *SWANCC* and *Rapanos* have identified limitations on the scope of (a)(3) waters that may be determined to be jurisdictional under the CWA. The agencies expect to further clarify the scope of waters subject to CWA jurisdiction, including jurisdiction over (a)(3) waters after *SWANCC* and *Rapanos,* as part of a notice and comment rulemaking. In the meantime, the agencies will make case-by-case, fact-specific determinations of jurisdiction under (a)(3) in the manner discussed below.

Physically Proximate Other Waters

EPA and the Corps will make fact-specific determinations of jurisdiction for other waters that are in close physical proximity to traditional navigable waters, interstate waters, or their jurisdictional tributaries, and that alone or in combination with similarly situated proximate other waters in the region significantly affect the chemical, physical, or biological integrity of traditional navigable waters or interstate waters. For purposes of this guidance, proximate other waters are non-wetland waters that would satisfy the regulatory definition of "adjacent" if they were wetlands. They include lakes, ponds, and other non-wetland waters that are bordering, contiguous, or neighboring to jurisdictional waters, including waters that are separated from jurisdictional waters by man-made dikes or barriers, natural river berms, beach dunes and the like. Such waters have many of the same functions and effects with respect to jurisdictional waters as adjacent wetlands. The agencies believe it is scientifically appropriate and consistent with Justice Kennedy's opinion to evaluate significant nexus for such waters in the same manner as for adjacent wetlands.

For purposes of the significant nexus analysis, all physically proximate other waters in the same point-of-entry watershed should be evaluated together as similarly situated waters in the region. This is appropriate for the same reasons as it is appropriate to evaluate all adjacent wetlands in the point-of-entry watershed together as similarly situated waters.

Other Waters that Are Not Physically Proximate to Jurisdictional Waters

Non-physically proximate other waters are isolated, intrastate, non-navigable waters and wetlands that would not meet the regulatory definition of "adjacent" with respect to jurisdictional waters. The agencies note that the (a)(3) provisions of our regulations remain in effect and that the SWANCC decision specifically addressed only the presence of migratory birds as a basis for asserting jurisdiction, and not the validity of the (a)(3) provisions generally. However, the agencies interpret Justice Kennedy's opinion as suggesting that the same significant nexus standard that he articulated for adjacent wetlands is appropriate for (a)(3) waters, and we have thus clarified above how this standard should be applied in the case of (a)(3) waters that are in close physical proximity to jurisdictional waters. At the same time, we recognize that for other waters that are geographically separated from jurisdictional tributaries, establishing a significant nexus may be more challenging. Thus, at this time, we are not providing specific guidance on making such determinations and are instead directing agency field staff to continue the current practice of referring determinations for non-physically proximate other waters to their respective Headquarters and obtaining formal project-specific approval before asserting or denying jurisdiction.

The general approach for determining significant nexus for such waters would be the same as discussed in Section 3. Because such waters may be widely scattered geographically, and physically remote from jurisdictional waters, field staff should generally conduct significant nexus analyses for such waters individually, unless there is a compelling scientific basis for treating a group of such waters as similarly situated waters in the same region. In accordance with the decision in *SWANCC*, consideration of use by migratory species is not relevant to the significant nexus determination for such waters.

The agencies emphasize that this document is guidance, which lacks the force of law; the agencies expect to proceed with notice and comment rulemaking to further clarify the regulatory definition of the term "waters of the United States." As a part of that process, we will further consider, based on a review of the scientific literature, how a significant nexus analysis should be conducted for non-physically proximate other waters.

Section 7: Waters Generally Not Jurisdictional

The scope of "waters of the United States" does not include all waters. EPA and the Corps previously have described in preambles to CWA regulations waters that the agencies generally do not consider to be waters of the U.S.[45] The agencies' position regarding these waters is unchanged. The categories of waters generally not "waters of the U.S." include:

- Wet areas that are not tributaries or open waters and do not meet the regulatory definition of wetlands.[46]

- Waterbodies excluded from coverage under the CWA by existing regulations.

- Waters that lack a significant nexus when one is required for jurisdiction.

- Artificially irrigated areas which would revert to upland if the irrigation ceased.

- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.

- Artificial reflecting pools or swimming pools excavated in uplands.

- Small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.

- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

- Groundwater drained through subsurface drainage systems.[xii]

- Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands (see Section 4).

Section 8: Documentation

EPA and Corps field staff should document in the administrative record the available information supporting a jurisdictional determination. In addition to location and other descriptive information regarding the water at issue, the record should include a clear explanation of the rationale for the jurisdictional conclusion, and include, as appropriate:

- Information leading to a conclusion that a water falls within a category considered in this guidance to be jurisdictional without the need to demonstrate a significant nexus;
- Information used to conclude that a water has a significant nexus when one is required for jurisdiction;
- Information supporting a conclusion that a water lacks a significant nexus, when one is required for jurisdiction; or
- Information supporting a conclusion that a water falls within one of the categories of geographic features generally considered non-jurisdictional.

In short, both affirmative and negative jurisdictional determinations should be well-documented, to ensure both public transparency and defensibility should a jurisdictional

[xii] A "subsurface" drainage system is an agricultural practice designed to drain subsurface water through a below ground pipe system in order to maintain the groundwater table below the root zone to facilitate crop production. The construction or maintenance of subsurface drain systems may require a CWA permit, if it involves discharges of dredged or fill material into waters of the U.S.

conclusion be challenged. The level of documentation may be greater for jurisdictional determinations associated with complex projects.

Other sections of this guidance discuss the findings necessary for particular categories of waters to be considered jurisdictional and/or to have a significant nexus. Information relevant to these findings can come from many sources, including but not limited to maps, aerial photography, soil surveys, watershed studies, local development plans, literature citations, and references from studies pertinent to the parameters being reviewed. Such information need not always be specific to the water whose jurisdictional status is being evaluated; regional and national studies of the same type of water or similarly situated waters can help to inform a jurisdictional analysis as long as they are applicable to the water being evaluated. Information derived from field observation is not required in cases where a "desktop" analysis can provide sufficient information to make the requisite findings. However, for more complex or difficult jurisdictional determinations, it may be important to supplement such information with field observation.

An important part of a jurisdictional analysis is the location and type of water under consideration, so as to readily determine if the jurisdictional status of similarly situated waters in the region has been previously determined. If so, the jurisdictional conclusion, rationale, and supporting information for a similarly situated water are directly relevant. As Justice Kennedy noted in *Rapanos*, where a significant nexus has been established for a particular wetland, "it may be permissible, as a matter of administrative convenience or necessity, to presume covered status for other comparable wetlands in the region."[47] Therefore, once the jurisdictional status for a particular water within a watershed has been established, field staff can apply the significant nexus analysis for that water to any subsequent determinations if they establish (and document) that the water at issue is the same type and in the same watershed as the jurisdictional water.

APPENDIX

DISCUSSION OF LEGAL AND SCIENTIFIC BASIS FOR GUIDANCE SECTIONS

The U.S. Supreme Court has addressed the scope of waters of the United States protected by the CWA in three cases. In *United States v. Riverside Bayview Homes, Inc.* (474 U.S. 121 (1985)), the Supreme Court held that wetlands adjacent to a traditional navigable water were properly considered to be "waters of the United States." In *SWANCC*, the Court addressed the question of CWA jurisdiction over isolated, non-navigable, intrastate ponds, and concluded that CWA jurisdiction could not be based solely on the presence of migratory birds. In *Rapanos*, the Court addressed CWA protections for wetlands adjacent to non-navigable tributaries, and issued five opinions with no single opinion commanding a majority of the Court. The plurality opinion, authored by Justice Scalia, stated that "waters of the United States" extended beyond traditional navigable waters to include "relatively permanent, standing or flowing bodies of water."[48] The plurality went on to clarify that relatively permanent waters "do not necessarily exclude" streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought, and seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months. The plurality opinion also asserted that only wetlands with a "continuous surface connection" to other jurisdictional waters are considered "adjacent" and protected by the CWA.[49] Justice Kennedy's concurring opinion took a different approach than Justice Scalia's. Justice Kennedy concluded that "waters of the United States" included wetlands that had a significant nexus to traditional navigable waters, "if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable'" (*id.* at 780). The four justices who signed on to Justice Stevens' opinion would have upheld jurisdiction under the agencies' existing regulations and stated that they would uphold jurisdiction under either the plurality or Justice Kennedy's opinion (*id.* at 810). Neither *SWANCC* nor the opinions in *Rapanos* invalidated any of the regulatory provisions defining "waters of the United States."

Section 1: Traditional Navigable Waters

Legal Basis

The Supreme Court has recognized that navigability is a flexible concept and "[e]ach application of [the *Daniel Ball* test] . . . is apt to uncover variations and refinements which require further elaboration."[50] EPA and the Corps will be guided by examples of the types of evidence found relevant and sufficient for a traditional navigable waters determination in court decisions, although these will be fact-specific determinations and not every type of evidence will be available or needed in every circumstance. Field staff have sought guidance in particular on how to determine whether a water is susceptible to being used for commercial navigation such that it is a traditional navigable water. The cases discussed below provide specific examples of the types of evidence courts have found sufficient to demonstrate such susceptibility.

In *FPL Energy Marine Hydro L.L.C. v. FERC*, a case involving the Federal Power Act, the U.S. Court of Appeals for the District of Columbia Circuit reiterated the fact that "*actual use* is not necessary for a navigability determination" and repeated earlier Supreme Court holdings that navigability and capacity of a water to carry commerce could be shown through "physical characteristics and experimentation."[51] In that case, the D.C. Circuit upheld a Federal Energy Regulatory Commission navigability determination that was based upon three experimental canoe trips taken specifically to demonstrate the river's navigability.[52] The navigability determination was affirmed although the stream had five sets of rapids, and all parties agreed that the stream has never been used for commercial traffic, that there was no evidence of recreational use of the stream, and that the only evidence indicating actual use of the stream came from the three trips made for the purpose of litigation.[53]

The U.S Court of Appeals for the Ninth Circuit has also implemented the Supreme Court's holding that a water need only be susceptible to being used for waterborne commerce to be navigable-in-fact. In *Alaska v. Ahtna*, Inc., the Ninth Circuit held that current use of an Alaskan river for commercial recreational boating is sufficient evidence of the water's capacity to carry waterborne commerce at the time that Alaska became a state.[54] It was found to be irrelevant whether or not the river was actually being navigated or being used for commerce at the time, because current recreational boating showed that the river always had the capacity to support navigation by the types of boats that were in use at the time of statehood.[55] Here, the stream was found to be navigable although the shallowest part of the river is just a foot deep during the low season; the river is customarily used, or is susceptible to use, by watercraft such as powerboats, 12-foot-long inflatable rafts, and motorized freight canoes and double-ended paddle canoes; hunters and fishermen travelled the river by boat in the past; most of the use of the river is recreational; and it is possible to take guided fishing and sightseeing trips on the river.[56]

Section 2: Interstate Waters

Legal Basis

The language of the CWA indicates that Congress intended the term "navigable waters" to include interstate waters without imposing a requirement that they be traditional navigable waters themselves or be connected to traditional navigable waters. The precursor statutes to the CWA always subjected interstate waters and their tributaries to federal jurisdiction.[xiii] The text of the CWA, specifically CWA section 303 that establishes ongoing requirements for interstate waters, in conjunction with the definition of navigable waters, provides clear indication of Congress' intent to protect interstate waters that were previously subject to federal regulation.

[xiii] See endnote 13. Section 2(d)(1) of the Water Pollution Control Act of 1948, 62 Stat. at 1156, stated:

> The pollution of interstate waters in or adjacent to any State or States (whether the matter causing or contributing to such pollution is discharged directly into such waters or reaches such waters after discharge into a tributary of such waters), which endangers the health or welfare of persons in a State other than that in which the discharge originates, is hereby declared to be a public nuisance and subject to abatement as herein provided.

Other provisions of the statute provide additional textual evidence of the scope of the primary jurisdictional term of the Act. Congress defined "navigable waters" in CWA section 502(7) to mean "the waters of the United States, including the territorial seas." Interstate waters are the waters of the several States and, thus, the United States. While the 1972 Act was clearly not limited to interstate waters, it was equally clearly intended to include interstate waters. Most importantly, there is a specific provision in the 1972 CWA establishing requirements for those interstate waters which were subject to the prior Water Pollution Control Acts. The CWA requires States to establish water quality standards for navigable waters and submit them to the Administrator for review, including "interstate waters." CWA section 303(a)(1) states:

> In order to carry out the purpose of this Act, any water quality standard applicable to *interstate waters* which was adopted by any State and submitted to, and approved by, or is awaiting approval by, the Administrator pursuant to this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972, *shall remain in effect*. . . .

(Emphasis added.) Thus, Congress intended continued protection of interstate waters.

While EPA and the Corps believe congressional intent is clear, the agencies also have a longstanding regulatory interpretation that interstate waters fall within the scope of CWA jurisdiction.[57] The agencies' interpretation was promulgated contemporaneously with the passage of the CWA and is consistent with the statutory and legislative history of the Act. Furthermore, the Supreme Court has never addressed the CWA's coverage of interstate waters, and its decisions in *SWANCC* and *Rapanos* do not question the jurisdictional status of interstate waters or impose additional jurisdictional requirements on interstate waters.

As noted above, the precursor statutes to the CWA always subjected interstate waters and their tributaries to federal jurisdiction. While Congress intended tributaries to interstate waters to be subject to the CWA, the statute does not define the extent of tributaries that are covered. In light of Justice Kennedy's opinion, the agencies believe it is reasonable to assert jurisdiction over tributaries, adjacent wetlands and other waters which have a significant nexus to interstate waters consistent with the framework established by Justice Kennedy in *Rapanos* for establishing jurisdiction over waters with a significant nexus to traditional navigable waters (see sections 4, 5, and 6 of this guidance for additional information). Justice Kennedy's standard seeks to ensure that waters Congress intended to subject to federal jurisdiction are indeed protected, both by recognizing that waters and wetlands with a significant nexus to covered waters have important beneficial effects on those waters, and by recognizing that polluting or destroying waters with a significant nexus can harm downstream covered waters.

Section 3: Significant Nexus

Legal and Scientific Basis

In *Rapanos*, Justice Kennedy provides an approach for determining what constitutes a "significant nexus" that can serve as a basis for statutory jurisdiction.[xiv] "The required nexus must be assessed in terms of the statute's goals and purposes. Congress enacted the law to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters,' 33 U.S.C. § 1251(a), and it pursued that objective by restricting dumping and filling in 'navigable waters,' §§ 1311(a), 1362(12)."[58] Justice Kennedy provided further guidance for determining whether wetlands should be considered to possess the requisite nexus in the context of assessing whether wetlands are jurisdictional: "if the wetlands, either alone or in combination with similarly situated [wetlands] in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"[59] While Justice Kennedy focused on adjacent wetlands in light of the facts of the cases before him, it is reasonable to utilize the same analysis for tributaries and other waters such as ponds, lakes and non-adjacent wetlands that are not themselves directly connected to a tributary system but may still have a significant nexus to a traditional navigable water or interstate water.

In determining which waters to consider "similarly situated" for purposes of analyzing whether they have a significant nexus "in combination" with the water at issue, it is reasonable to begin with the categories of waters the agencies identified in promulgating their definition of "water of the United States." For example, tributaries are similarly situated within the landscape because they are part of a stream network that provides flow to the downstream traditional navigable water or interstate water. Adjacent wetlands are similarly situated within the landscape because the agencies' definition is focused on their proximity to another water of the United States – "adjacent" is defined in regulations as bordering, neighboring or contiguous (see Section 5 for further discussion). Similarly, other waters ("(a)(3) waters") that are in close physical proximity to traditional navigable or interstate waters or their tributaries are similarly situated with respect to those waters in much the same way as adjacent wetlands. Justice Kennedy's standard allows the agencies to analyze whether all similarly situated waters in a region together have a significant nexus to the downstream traditional navigable water. With this standard, Justice Kennedy has recognized that even where it is difficult to demonstrate that a particular individual wetland adjacent to a small headwater tributary has a significant nexus to a traditional navigable water, the destruction of all such adjacent wetlands in a region could have a significant effect on the traditional navigable water and, thus, the CWA must protect those wetlands in order to protect the traditional navigable water. The same logic applies to tributaries and physically proximate other waters.

Waters should generally be considered "in the region" if they are within a watershed that drains to a traditional navigable water or interstate water, defined by the point at which a tributary system first enters a traditional navigable water or interstate water. Using a watershed as the framework for conducting significant nexus evaluations is scientifically supportable. Watersheds are generally regarded as the most appropriate spatial unit for water resource

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[xiv] Again, the four justices who signed on to Justice Stevens' opinion would have upheld jurisdiction under the agencies' existing regulations and stated that they would uphold jurisdiction under either the plurality or Justice Kennedy's opinion. Justice Kennedy concludes that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of jurisdiction constitutes a reasonable interpretation of "navigable waters" - "the connection between a nonnavigable water or wetland and a navigable water may be so close, or potentially so close, that the Corps may deem the water or wetland a 'navigable water' under the Act"; "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767.

management.[60] Anthropogenic actions and natural events can have widespread effects within the watershed that collectively impact the quality of the relevant traditional navigable water or interstate water.[61] For this reason, it is more appropriate to conduct a significant nexus determination at the watershed scale than to focus on a specific site, such as an individual stream segment. The watershed that contributes flow to the point of entry to a traditional navigable or interstate water is a logical spatial framework for the evaluation of the nexus. The functions of the contributing waters are inextricably linked and have a cumulative effect on the integrity of the traditional navigable water or interstate water. The size of that watershed can be determined by identifying the topographic area that drains to the nearest traditional navigable water or interstate water, and then using that point of entry watershed to conduct a significant nexus evaluation.[62]

Justice Kennedy's opinion provides guidance pointing to many functions of waters that might demonstrate a significant nexus, such as sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat.[63] Furthermore, Justice Kennedy noted that a hydrologic connection is not necessary to establish a significant nexus, because in some cases the lack of hydrologic connection would show the significance of a water to the aquatic system, such as retention of flood waters or pollutants that would otherwise flow downstream to the traditional navigable water or interstate water.[64] Finally, Justice Kennedy was clear that the requisite nexus must be more than "speculative or insubstantial"[65] in order to be significant.

Section 4: Tributaries

Legal and Scientific Basis

Tributaries Covered Under the *Rapanos* Plurality Standard

As noted above, jurisdictional determinations based on the plurality standard would have the support of the four justices joining the plurality opinion as well as the four dissenting justices. The plurality concluded that the agencies' regulatory authority should extend only to "relatively permanent, standing or continuously flowing bodies of water"[66] connected to traditional navigable waters, and to "wetlands with a continuous surface connection to" such relatively permanent waters.[67] "Relatively permanent waters" were described as waters that typically flow year-round except in times of drought, or waters that have a continuous flow at least seasonally. The plurality opinion emphasized that relatively permanent waters do not include tributaries "whose flow is '[c]oming and going at intervals . . . [b]roken, fitful.'"[68] Therefore, "relatively permanent waters" do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not have continuous flow at least seasonally.[xv]

[xv] Note that under the Kennedy standard, such waters may be jurisdictional where they have a significant nexus.

Moreover, waters that have had at least seasonal flow on a historic basis remain jurisdictional despite the fact that man-made diversions for irrigation, water supply or other reasons have caused a tributary, or portion thereof, to flow less than seasonally.[xvi]

Field staff have flexibility to determine what seasonal flow means in each particular case.[69] Seasonal flow can be the result of snow melt, seasonal patterns in precipitation, and seasonal fluctuations in ground water levels. In the arid west, stream discharges are driven by three large-scale weather patterns.[70] Precipitation produced by these weather patterns varies greatly for any given locality, but generally, precipitation shifts from winter in the north to summer in the south. The variation of precipitation in time, coupled with the highly variable topography of the arid west, results in spatially variable precipitation patterns.[71] For example, seasonal flow in most of New Mexico and large portions of Arizona and Colorado would be during the period of two months, July and August, when they normally receive between 30-50 percent of their annual precipitation as rain.[72] In some areas, snow melt drives stream flow, and seasonal flow is typically in the spring.[73] Seasonal patterns of flow may be less pronounced in the semi-arid Midwest, perhaps because of less seasonal precipitation patterns and relatively more vegetative cover.[74] In the east precipitation is more uniform but increased evapotranspiration during the growing season can reduce ground water levels and surface flows to create seasonal and ephemeral flows.[75]

Tributaries Covered Under the *Rapanos* Kennedy Standard

Justice Kennedy rejected the plurality's approach that only "relatively permanent" tributaries are within the scope of CWA jurisdiction. Instead, Justice Kennedy concluded that "Congress could draw a line to exclude irregular waterways, but nothing in the statute suggests it has done so"; in fact, he states that Congress has done "[q]uite the opposite."[76] Further, Justice Kennedy concludes, based on "a full reading of the dictionary definition" of "water," that "the Corps can reasonably interpret the Act to cover the paths of such impermanent streams."[xvii] Even in Justice Kennedy's rejection of Justice Stevens' opinion it is clear that he was specifically rejecting the broad scope of jurisdiction over wetlands without further analysis, and not specifically addressing jurisdiction over tributaries: "[T]he dissent would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote and insubstantial, that eventually may flow into traditional navigable waters. The deference owed to the Corps' interpretation of the statute does not extend so far."[77]

Elsewhere, Justice Kennedy suggests that it may be appropriate to assert jurisdiction over all tributaries with an ordinary high-water mark. Justice Kennedy described the Corps' standard

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[xvi] *See S. D. Warren Co. v. Maine Bd. of Envtl. Prot.*, 547 U.S. 370, 379 n.5 (2006)("[N]or can we agree that one can denationalize national waters by exerting private control over them.").

[xvii] 547 U.S. at 770. First, Justice Kennedy notes that the term "waters" can mean "'flood or inundation,'" according to the *Webster's Second* definition, and that these events are "impermanent by definition." *Id.* Second, even looking to the plurality's preferred dictionary definition of "waters," i.e., "'water "[a]s found in streams and bodies forming geographical features such as oceans, rivers, [and] lakes,"'" Justice Kennedy notes that "intermittent flow can constitute a stream." *Id.* (alteration in original). And finally, Justice Kennedy notes that the plurality's reference to the statement by the *Riverside Bayview* Court comparing "wetlands to 'rivers, streams, and other hydrographic features more conventionally identifiable as "waters"' . . . .could just as well refer to intermittent streams." *Id.* at 771 (citations omitted).

for asserting jurisdiction over tributaries: "[T]he Corps deems a water a tributary if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary high-water mark . . . ."[78] Justice Kennedy concluded that this standard "presumably provides a rough measure of the volume and regularity of flow."[79] In addition, if it is applied reasonably consistently, the Corps' existing standard for tributaries "may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act."[80] Thus, Justice Kennedy's opinion may reasonably be read as allowing the agencies to determine that a case-specific significant nexus determination is not necessary for tributaries possessing an ordinary high water mark, though it also indicates that he considers the presence of a significant nexus to be the appropriate test.

The agencies have decided that, given Justice Kennedy's indication that significant nexus is still the guiding standard, it is appropriate for purposes of this guidance to assert jurisdiction over tributaries utilizing the same standard Justice Kennedy articulated for adjacent wetlands. In establishing the significant nexus standard, Justice Kennedy recognized that upstream adjacent wetlands can have significant effects on the physical, chemical and biological integrity of downstream waters covered under the CWA. As a scientific matter, tributaries can, of course, have similar effects and it is reasonable to utilize the same standard for determining whether tributaries have a significant nexus to downstream covered waters. Through rule making, the agencies will further consider whether the existence of an ordinary high-water mark alone is sufficient to establish a significant nexus to downstream traditional navigable or interstate waters, without requiring a site-specific analysis, as Justice Kennedy invites in his opinion.

As noted in Section 3, it is reasonable to consider all tributaries in a watershed to be "similarly situated" for purposes of a significant nexus analysis because they contribute flow to the downstream traditional navigable water or interstate water and provide similar functions to those downstream waters. Further, Section 3 demonstrated that it is reasonable to consider the region for significant nexus analysis to be a watershed defined by the area draining into the nearest traditional navigable water or interstate water through a single point of entry.

The agencies' identification of the presence of an ordinary high water mark as one of the factors for considering a water to be a tributary for purposes of this guidance is consistent with Justice Kennedy's observation that an ordinary high water mark may be a reasonable measure of whether a tributary possesses a significant nexus with a traditional navigable water or interstate water. This observation, in turn, is supported by both the agencies' scientific judgment in the past and the scientific literature of the present. As the Corps stated in promulgating the definition of "waters of the U.S." in 1977 to include tributaries, "[t]he regulation of activities that cause water pollution cannot rely on . . . artificial lines, however, but must focus on all waters that together form the entire aquatic ecosystem. Water moves in hydrologic cycles, and the pollution of . . . part of the aquatic ecosystem . . . will affect the water quality of the other waters within that aquatic ecosystem."[81] For more than 30 years, EPA and the Corps have interpreted the CWA 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."[82] As Congress and the Supreme Court have recognized,

"'[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.'"[83]

A large volume of scientific literature documents the important functions that tributaries, including headwater streams, provide to downstream waters.[xviii] Headwater streams, which may include perennial, intermittent, and ephemeral streams, are the most common streams in the United States. Collectively, they determine the chemical, physical, and biological integrity of downstream waters, and provide many of the same functions as non-headwater streams.[84] Headwater streams reduce the amount of sediment delivered to downstream waters by trapping sediment from water and runoff.[85] Headwater streams are responsible for most nutrient cycling and removal, and thus transforming and changing the amount of nutrients delivered to downstream waters.[86] A close connection exists between the water quality of these streams and the water quality of downstream water bodies.[87] Activities such as discharging a pollutant into one part of the tributary system are well-documented to affect other parts of the system, even when the point of discharge is far upstream from the navigable water that experiences the effect of the discharge.[88] These streams provide habitat and protection for amphibians, fish, and other aquatic or semi-aquatic species living in and near the stream that may use the downstream waters, including traditional navigable waters, for other portions of their life stages.[89] They also serve as migratory corridors for fish. Tributaries can improve or maintain biological integrity and control water temperatures in the downstream waters. Headwater streams serve as a source of food materials such as insects, larvae, and organic matter to nourish the fish, mammals, amphibians, and other organisms in downstream streams, rivers, and lakes.[90] Disruptions in these biological processes affect the ecological functions of the entire downstream system.[91] Headwater streams help to maintain base flow in the larger rivers downstream, which is particularly important in times of drought. At the same time, the network of headwater streams can regulate the flow of water into downstream waters, mitigating low flow and high flow extremes, reducing local and downstream flooding, and preventing excess erosion caused by flooding.[92]

Section 5: Adjacent Wetlands

Legal and Scientific Basis

Adjacent Wetlands Covered under the *Rapanos* Plurality Standard

Under the plurality standard, wetlands that have a continuous surface connection with a relatively permanent, non-navigable tributary are jurisdictional without the need for a significant nexus finding. The plurality opinion indicates that "continuous surface connection" is a "physical connection requirement."[93] A continuous surface connection does not, however, require surface water to be continuously present between the wetland and the tributary.

Adjacent Wetlands Covered under the *Rapanos* Kennedy Standard

[xviii] For purposes of applying the current body of scientific literature to the questions created by the *Rapanos* Supreme Court decision, traditional navigable waters can be considered analogous to downstream waters. This is because the vast majority of traditional navigable waters are downstream of headwater streams.

Because the question in *Rapanos* was whether particular adjacent wetlands were "waters of the U.S.," Justice Kennedy's opinion focused on the standard for determining whether wetlands have the requisite nexus:

> With respect to wetlands, the rationale for Clean Water Act regulation is, as the Corps has recognized, that wetlands can perform critical functions related to the integrity of other waters—functions such as pollutant trapping, flood control, and runoff storage. 33 CFR § 320.4(b)(2). Accordingly, wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable." When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters."[94]

With respect to wetlands adjacent to traditional navigable waters, Justice Kennedy concluded that the agencies' regulation "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."[95] The agencies will apply Justice Kennedy's reasoning to conclude wetlands adjacent to non-wetland interstate waters are similarly jurisdictional without the need of demonstrating a significant nexus.

For wetlands adjacent to tributaries that have a significant nexus to a traditional navigable water or interstate water, however, absent more specific regulations, the agencies must establish that the wetland alone or in combination with other adjacent wetlands in the watershed has a significant nexus to a traditional navigable water or interstate water. Justice Kennedy provided some guidance as to the analysis necessary to conclude that a water has a sufficient nexus. Justice Kennedy's concern was that neither the Corps nor the reviewing courts applied the proper legal standard.[xix] Although evidence was presented in one of the consolidated cases that the wetlands were providing habitat, sediment trapping, nutrient recycling, flood peak diminution and reduction, and flow water augmentation, the Corps did not marshall this evidence to conclude that the wetlands had a significant nexus to downstream traditional navigable waters.[96] The administrative record in the other case noted the wetland's connection to wildlife habitat and water quality and "also noted that the project would have a major, long-term detrimental effect on wetlands, flood retention, recreation and conservation and overall ecology."[97] Justice Kennedy did not indicate that this evidence was irrelevant, in fact, he concluded that "[m]uch the same evidence" previously analyzed by the Corps could establish a significant nexus with traditional navigable waters, particularly with additional evidence about the connection between the wetlands and the navigable water.[98]

A hydrologic connection is neither determinative of nor required to show a significant nexus. Justice Kennedy noted that a "mere hydrologic connection should not suffice in all cases;

[xix] Justice Kennedy thought that in both the consolidated cases before the Supreme Court, "the record contains evidence suggesting the possible existence of a significant nexus according to the principles outlined above. Thus the end result in these cases and many others to be considered by the Corps may be the same as that suggested by the dissent, namely, that the Corps' assertion of jurisdiction is valid." 547 U.S. at 783.

the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood."[99] On the other hand, Justice Kennedy was also clear that a hydrologic connection between a wetland and a tributary is not required to establish a significant nexus: "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."[100]

Section 6: Other Waters

Legal and Scientific Basis

Other waters are those for which jurisdiction was previously asserted under section (a)(3) of the Corps' regulations, which provide for CWA jurisdiction over "[a]ll other waters . . . the use, degradation, or destruction of which could affect interstate or foreign commerce. . . ." These include isolated, non-navigable intrastate waters. This provision of the regulations was the focus of the *SWANCC* decision. In that case, the Court was considering the validity of the Corps' assertion of jurisdiction over ponds and mudflats under (a)(3). In rejecting the assertion of jurisdiction in that case, the Court held that "[i]t was the significant nexus between the wetlands and 'navigable waters' that informed our reading of the CWA in *Riverside Bayview Homes*."[101] Justice Kennedy further explained the *SWANCC* decision – and his understanding of when EPA and the Corps could assert jurisdiction over "other waters" – in his concurring opinion in *Rapanos*: "In *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers*, 531 U.S. 159 (2001) (*SWANCC*), the Court held, under the circumstances presented there, 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."[102] Because the Court in *SWANCC* was considering the validity of the Corps' assertion of jurisdiction over ponds and mudflats under (a)(3) of the Corps' regulations, it is reasonable to conclude that Justice Kennedy intends his significant nexus standard to apply to the "other waters" of this regulation.

An "other water" is jurisdictional only if it both has a significant nexus to a traditional navigable water or interstate water and meets the regulatory definition. One of the ways of demonstrating that a water is one "the use, degradation or destruction of which could affect interstate or foreign commerce" is through demonstration that the water has a significant nexus to a traditional navigable water or interstate water. If a water meets Justice Kennedy's significant nexus standard, the degradation or destruction of that water could harm the traditional navigable water or interstate water and therefore could affect interstate or foreign commerce.

While all adjacent wetlands are reasonably proximate to a jurisdictional water by regulation and, therefore, "similarly situated," the other waters provision of the regulations encompasses a wide-range of waters. For purposes of this guidance, the agencies have decided that it is appropriate to divide other waters into two classes, those that are physically proximate to traditional navigable or interstate waters or their tributaries, and those that are not. For the first group, it is reasonable to treat these in much the same manner as adjacent wetlands, since they stand in the same relationship to and serve many of the same functions as such wetlands with respect to the aquatic systems that they are near. For instance, physically proximate waters

can function to retain floodwaters, recharge groundwater, provide habitat for waterfowl and other species, and process and retain nutrients and pollutants that may otherwise enter tributaries; they may even be connected to a river during high floods and provide a protected habitat for eggs and young of many fish species, as well as provide refuge for spawning for some species.[103]

For the reasons articulated in Section 3 of this guidance, the agencies will interpret "in the region" for such proximate other waters to be the watershed boundary defined by the geographic area that drains to the nearest downstream traditional navigable or interstate water through a single point of entry.

In applying the significant nexus standard to such waters, it is important to note that Justice Kennedy concluded that a water may have a significant nexus even if it does not have a hydrologic connection to the traditional navigable water or interstate water: "Given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of a hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system."[104] This statement applies equally to proximate other waters. Thus, effects that should be considered include circumstances where proximate other waters trap pollutants such as nutrients or sediment, for example, or where they hold precipitation or snow melt, thereby reducing contamination or flooding of traditional navigable or interstate waters.

In contrast, applying the significant nexus standard to geographically isolated other waters is more challenging. Justice Kennedy recognized that physical proximity can be an important factor in the analysis of significant nexus.[xx] In light of the challenges in applying the significant nexus standard to geographically isolated other waters, the agencies have identified physical proximity as an important factor when conducting a significant nexus analysis for such waters.

The agencies believe that the significant nexus test articulated by Justice Kennedy is the right theoretical approach for assessing all other waters, isolated and proximate, but because of the greater practical difficulty of applying this standard to geographically isolated other waters, we are directing field staff to continue for now the current practice of referring determinations for non-physically proximate other waters to their respective Headquarters and obtaining formal project-specific approval before asserting or denying jurisdiction. Because such waters are often geographically dispersed and isolated from each other, as well as from other jurisdictional waters, it is also not clear at this time how such waters should be grouped for purposes of considering them "similarly situated" and "in the region." For this reason, until the agencies are able to further consider this issue through rule making, significant nexus determination will generally evaluate such waters individually, unless there is a compelling scientific basis for treating a group of such waters as similarly situated waters in the same region. In accordance with the decision in *SWANCC*, consideration of use by migratory species is not relevant to the significant nexus determination for such waters.

[xx] "Through regulations or adjudication, the Corps may choose to identify categories of tributaries that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations, are significant enough that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters." 547 U.S. at 780.

ENDNOTES

[1] The Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816. The 1972 legislation extensively amended the Federal Water Pollution Control Act (FWPCA), which was originally enacted in 1948. Further amendments to the FWPCA enacted in 1977 changed the popular name of the statute to the "Clean Water Act." *See* Pub. L. No. 95-217, 91 Stat. 1566; 33 U.S.C. 1251 note. The current FWPCA is codified at 33 U.S.C. §§ 1251-1387. This guidance will refer to provisions of the current act by relevant "CWA section."

[2] 531 U.S. 159 (2001).

[3] *Carabell v. U.S. Army Corps of Eng'rs,* 391 F.3d 704 (6th Cir. 2004); *United States v. Rapanos,* 376 F.3d 629 (6th Cir. 2004). After certiorari was granted, these cases were consolidated, and the resulting opinion cited as *Rapanos v. United States,* 547 U.S. 715 (2006).

[4] CWA section 101(a).

[5] While section 311 uses the phrase "navigable waters of the United States," EPA has interpreted it to have the same breadth as the phrase "navigable waters" used elsewhere in section 311, and in other sections of the CWA. *See United States v. Texas Pipe Line Co.*, 611 F.2d 345, 347 (10th Cir. 1979); *United States v. Ashland Oil & Transp. Co.*, 504 F.2d 1317, 1324-25 (6th Cir. 1974). In 2002, EPA revised its regulatory definition of "waters of the United States" in 40 C.F.R. part 112 to ensure that the actual language of the rule was consistent with the regulatory language of other CWA programs. *Oil Pollution & Response; Non –Transportation-Related Onshore & Offshore Facilities*, 67 Fed. Reg. 47,042 (July 17, 2002). A district court vacated the rule for failure to comply with the Administrative Procedure Act, and reinstated the prior regulatory language. *American Petroleum Ins. v. Johnson*, 541 F.Supp. 2d 165 (D. D.C. 2008). However, EPA interprets "navigable waters of the United States" in CWA section 311(b), in the pre-2002 regulations, and in the 2002 rule to have the same meaning as "navigable waters" in CWA section 502(7).

[6] For example, the CWA section 402 program regulates discharges of pollutants from "point sources" to waters of the United States, whether these pollutants reach jurisdictional waters directly or indirectly. The plurality opinion in *Rapanos* noted that "there is no reason to suppose that our construction today significantly affects the enforcement of §1342. . . . The Act does not forbid the 'addition of any pollutant *directly* to navigable waters from any point source,' but rather the 'addition of any pollutant *to* navigable waters.'" 547 U.S. at 743. Clean Water Act section 311(b)(1) provides: "[I]t is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States [or] adjoining shorelines . . . or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States." (Emphasis added.) "Discharge" is broadly defined in CWA section 311(a)(2) to include "any spilling, leaking, pumping, pouring, emitting, emptying or dumping," with certain enumerated exceptions, and is not limited to point source discharges.

[7] 33 C.F.R. § 328.3(a)(8); 40 C.F.R. § 230.3(s); 40 C.F.R. § 122.2 ("waters of the U.S.").

[8] CWA section 404(f); 40 C.F.R. § 232.3; 33 C.F.R. § 323.4.

[9] CWA section 402(l)(1) ("The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture. . . ."); CWA section 502(14)("[The] term [point source] does not include agricultural stormwater discharges and return flows from irrigated agriculture."); 40 C.F.R. § 122.3(f) (return flows from irrigated agriculture are excluded from the NPDES program); 40 C.F.R. § 122.2 (The term "point source" "does not include return flows from irrigated agriculture or agricultural storm water runoff.").

[10] *See*, *e.g.*, 33 C.F.R. § 328.3(a)(1); 40 C.F.R. § 230.3(s)(1); 40 C.F.R. § 122.2 ("waters of the U.S."(a)); 40 C.F.R. § 110.1 ("navigable waters" (a)).

[11] Rivers and Harbors Appropriation Act of 1899, § 10, 33 U.S.C. § 403.

[12] *See*, *e.g.*, 33 C.F.R. § 328.3(a)(2); 40 C.F.R. § 230.3(s)(2); 40 C.F.R. § 122.2 ("waters of the U.S."(b)), 40 C.F.R. §110.1 ("navigable waters" (b)).

[13] Water Pollution Control Act of 1948, § 10(e), 62 Stat. 1155, 1161.

[14] Field staff generally should use the Strahler method. In Strahler's method, a first-order stream has no tributaries, a second-order stream is formed by the joining of any two first-order streams, and a third order stream is formed by the junction of any two second-order streams. Arthur N. Strahler, "Quantitative Analysis of Watershed Geomorphology," *American Geophysical Union Transactions* 38 (1957): 913-920.

[15] 33 C.F.R. § 328.3(a)(5); 40 C.F.R. § 230.3(s)(5); 40 C.F.R. § 122.2 ("waters of the U.S."(e)).

[16] 33 C.F.R. § 328.3(a)(7); 40 C.F.R. § 230.3(s)(7); 40 C.F.R. § 122.2 ("waters of the U.S."(e)).

[17] 547 U.S. at 759.

[18] James M. Omernik, "The Misuse of Hydrologic Unit Maps for Extrapolation, Reporting and Ecosystem Management," *Journal of the American Water Resources Association* 39.3 (2003): 563-73.
[19] The country is divided and subdivided into successively smaller watersheds, and the U.S. Geological Survey has developed a standardized watershed classification system--the Hydrologic Unit System--to organize watershed boundaries in a nested hierarchy by size. A unique hydrologic unit code (HUC) consisting of two to twelve digits (based on the level of classification) identifies each watershed in the country. The system divides the country into 21 regions, and progressively smaller sub-regions, accounting units, cataloging units, watersheds, and sub-watersheds, with the Natural Resources Conservation Service delineating the boundaries for the smallest two levels. The 10-digit HUC, for instance, is the "watershed" level in the classification system. *See* United States, Department of Agriculture, Natural Resources Conservation Service, "Overview and History of Hydrologic Units and the Watershed Boundary Dataset," *Natural Resource Conservation Service*. Web. 25 Jan. 2011.; United States, United States Geological Survey, USGS Water-Supply Paper 2294*, Hydrologic Unit Maps* (Washington, D.C.: U.S. Government Printing Office, Paul R. Seaber, F. Paul Kapinos, and George L. Knapp, 1987).
[20] 33 C.F.R. § 328.3(e).
[21] Luna B. Leopold, M. Gordon Wolman, and John P. Miller, *Fluvial Processes in Geomorphology* (San Francisco: W.H. Freeman and Company, 1964).
[22] Nyle C. Brady and Ray R. Weil, *The Nature and Properties of Soils*, 13th Edition (Upper Saddle River, NJ: Prentice Hall).
[23] Luna B. Leopold, *A View of the River* (Cambridge: Harvard University Press, 1994) 3.
[24] United States, U.S. Environmental Protection Agency, EPA/600/R-06/126: *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater Streams* (Washington D.C.: U.S. Environmental Protection Agency, Ken M. Fritz, Brent R. Johnson, and David M. Walters, 2006) 5.
[25] *See*, *e.g.*, 33 C.F.R. § 328.3(a)(2), (5); 40 C.F.R. § 230.3(s)(2)(5).
[26] Richard B. Alexander, *et al.*, "The Role of Headwater Streams in Downstream Water Quality," *Journal of the American Water Resource Association* 43.1 (2007): 41-59; Stephen R. Carpenter, *et al.*, "Nonpoint Pollution of Surface Waters with Phosphorous and Nitrogen," *Ecological Applications* 8.3 (1998): 559-68; Dana W. Kolpin, *et al.*, "Pharmaceuticals, Hormones and Other Organic Wastewater Contaminants in U.S. Streams: 1999-2000: A National Reconnaissance," *Environmental Science and Technology* 36.6 (2002): 1202-1211.
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[28] Generally, only the very large streams and rivers in the U.S. are monitored with stream gages for flow and the U.S. Geological Service maintains a network of only 7500 stream gages. United States, USGS, Fact Sheet 2009-3020, *National Stream Flow Information Program Implementation Status* Report (March 2009). Smaller streams often do not have gages located on them, and not only would it be costly to monitor flow at sites like small headwater streams that are not currently gaged (Ken M. Fritz, Brent R. Johnson, and David M. Walters, "Physical Indicators of Hydrologic Permanence in Forested Headwater Streams." *Journal of the North American Benthological Society* 27.3 (2008): 690-704), monitoring studies can take one to two years (United States, U.S. EPA, EPA 600/R-06/126, *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater Streams* (Cincinnati, Ohio: U.S. EPA Office of Research and Development, National Exposure Research Laboratory, Fritz *et al*., 2006)).
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[32] *Id.*
[33] 547 U.S. at 779-80.

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[45] 51 Fed. Reg. at 41,217; 53 Fed. Reg. at 20,765.
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[47] 547 U.S. at 782.
[48] *Id.* at 739.
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[50] *United States v. Appalachian Elec. Power Co.,* 311 U.S. 377, 406 (1940).
[51] *FPL Energy Marine Hydro L.L.C. v. FERC*, 287 F.3d at 1157 (internal quotation omitted).
[52] *Id.* at 1157-59.
[53] *Id.* at 1157.
[54] *Alaska v. Ahtna, Inc.,* 891 F.2d 1401, 1405 (9th Cir. 1989).
[55] *Id.* at 1404.
[56] *Id.* at 1402-03.
[57] The term "waters of the United States" is defined by regulation to include "all interstate waters including interstate wetlands." 33 C.F.R. § 328.3(a)(2), (5); 40 C.F.R. § 230.3(s)(2)(5).
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