Clean Water Rule Comment Compendium
Topic 5: Significant Nexus

The Response to Comments Document, together with the preamble to the final Clean Water Rule, presents the responses of the Environmental Protection Agency (EPA) and the Department of the Army (collectively "the agencies") to the more than one million public comments received on the proposed rule (79 FR 22188 (Apr. 21, 2014)). The agencies have addressed all significant issues raised in the public comments.

As a result of changes made to the preamble and final rule prior to signature, and due to the volume of comments received, some responses in the Response to Comments Document may not reflect the language in the preamble and final rule in every respect. Where the response is in conflict with the preamble or the final rule, the language in the final preamble and rule controls and should be used for purposes of understanding the scope, requirements, and basis of the final rule. In addition, due to the large number of comments that addressed similar issues, as well as the volume of the comments received, the Response to Comments Document does not always cross-reference each response to the commenter(s) who raised the particular issue involved. The responses presented in this document are intended to augment the responses to comments that appear in the preamble to the final rule or to address comments not discussed in that preamble. Although portions of the preamble to the final rule are paraphrased in this document where useful to add clarity to responses, the preamble itself remains the definitive statement of the rationale for the revisions adopted in the final rule. In many instances, particular responses presented in the Response to Comments Document include cross references to responses on related issues that are located either in the preamble to the Clean Water Rule, the Technical Support Document, or elsewhere in the Response to Comments Document. All issues on which the agencies are taking final action in the Clean Water Rule are addressed in the Clean Water Rule rulemaking record.

Accordingly, the Response to Comments Document, together with the preamble to the Clean Water Rule and the information contained in the Technical Support Document, the Science Report, and the rest of the administrative record should be considered collectively as the agencies' response to all of the significant comments submitted on the proposed rule. The Response to Comments Document incorporates directly or by reference the significant public comments addressed in the preamble to the Clean Water Rule as well as other significant public comments that were submitted on the proposed rule.

This compendium, as part of the Response to Comments Document, provides a compendium of the technical comments about significant nexus submitted by commenters. Comments have been copied into this document "as is" with no editing or summarizing. Footnotes in regular font are taken directly from the comments.

Topic 5. SIGNIFICANT NEXUS

5.0. GENERAL

Following is a general summary of the overall practices regarding Clean Water Act (CWA) jurisdiction that have been employed by the agencies; the effects of certain Supreme Court decisions on the program; an explanation of the agencies' "significant nexus" standard; a general summary of the comments provided by the public on "significant nexus;" the agencies' responses; and case specific comments and responses.

Agency Summary Response

Introduction:

Congress enacted the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The agencies' longstanding regulations define "waters of the United States" for purposes of the Clean Water Act, and the Supreme Court has addressed the scope of "waters of the United States" protected by the CWA in three cases. The significant nexus standard evolved through those cases. *See* e.*g*., 40 CFR § 110.1 and 33 CFR § 323.3.

In *United States* v. *Riverside Bayview Homes,* 474 U.S. 121 (1985) (*Riverside Bayview*), which involved wetlands adjacent to a traditional navigable water in Michigan, the Court, in a unanimous opinion, deferred to the Corps' ecological judgment that adjacent wetlands are "inseparably bound up" with the waters to which they are adjacent, and upheld the inclusion of adjacent wetlands in the regulatory definition of "waters of the United States." *Id*. at 134. The Court observed that the broad objective of the CWA to restore and maintain the integrity of the Nation's waters "incorporated a broad, systemic view of the goal of maintaining and improving water quality …. Protection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution, for '[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.' In keeping with these views, Congress chose to define the waters covered by the Act broadly." *Id.* at 132-33 (*citing* Senate Report 92-414). The Court also recognized that "[i]n determining the limits of its power to regulate discharges under the Act, the Corps must necessarily choose some point at which water ends and land begins. Our common experience tells us that this is often no easy task: the transition from water to solid ground is not necessarily or even typically an abrupt one. Rather, between open waters and dry land may lie shallows, marshes, mudflats, swamps, bogs — in short, a huge array of areas that are not wholly aquatic but nevertheless fall far short of being dry land. Where on this continuum to find the limit of 'waters' is far from obvious." *Id*. The Court then deferred to the agencies' interpretation: "In view of the breadth of federal regulatory authority contemplated by the Act itself and the inherent difficulties of defining precise bounds to regulable waters, the Corps' ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act." *Id.* at 134. *See* Preamble to the Final Rule Section III.

The issue of CWA jurisdiction over "waters of the United States" was addressed again by the Supreme Court in *Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (*SWANCC*). In *SWANCC*, the Court (in a 5-4 opinion) held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not by itself a sufficient basis for the exercise of federal regulatory authority under the CWA. The *SWANCC* Court noted that in *Riverside Bayview* it had "found that Congress' concern for the protection of water quality and aquatic ecosystems indicated its intent to regulate wetlands 'inseparably bound up' with the 'waters of the United States'" and that "it was the significant nexus between the wetlands and 'navigable waters' that informed our reading of the CWA" in that case. *Id.* at 167. *SWANCC* did not invalidate any parts of the regulatory definition of "waters of the United States." *See* Preamble to the Final Rule Section III.

Five years after *SWANCC*, the Court again addressed the term "waters of the United States" in *Rapanos* v. *United States*, 547 U.S. 715 (2006) (*Rapanos*). *Rapanos* involved two consolidated cases in which the CWA had been applied to wetlands adjacent to non-navigable tributaries of traditional navigable waters. All Members of the Court agreed that the term "waters of the United States" encompasses some waters that are not navigable in the traditional sense. A four-Justice plurality in *Rapanos* interpreted the term "waters of the United States" as covering "relatively permanent, standing or continuously flowing bodies of water . . .," *id.* at 739, that are connected to traditional navigable waters, *id.* at 742, as well as wetlands with a "continuous surface connection . . ." to such water bodies, *id*. (Scalia, J., plurality opinion). The *Rapanos* plurality noted that its reference to "relatively permanent" waters did "not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought," or "*seasonal* rivers, which contain continuous flow during some months of the year but no flow during dry months . . . ." *Id.* at 732 n.5 (emphasis in original). *See* Preamble to the Final Rule Section III.

Justice Kennedy concurred that the cases should be remanded for further decision making, and stated that "to constitute 'navigable waters' under the Act, a water or wetland must possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id*. at 759 (*citing SWANCC*, 531 U.S. at 167, 172). Justice Kennedy concluded that "[t]he 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)." *Id.* at 779. He concluded that wetlands possess the requisite significant nexus if the wetlands "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" 547 U.S. at 780. Justice Kennedy's opinion notes that such a relationship with navigable waters must be more than "speculative or insubstantial." *Id*. at 780. *See* Preamble to the Final Rule Section III.

While Justice Kennedy's opinion focused on adjacent wetlands in light of the facts of the cases before him, his opinion is clear that a significant nexus is the basis for jurisdiction to protect non-navigable waters and wetlands under the CWA (*Id*. at 759), and there is no indication in his opinion that the analytical framework his opinion provides for determining significant nexus for adjacent wetlands is limited to adjacent wetlands. In addition, the four dissenting Justices in *Rapanos*, who would have affirmed the court of appeals' application of the agencies' regulation, also concluded that the term "waters of the United States" encompasses, *inter alia*, all tributaries and wetlands that satisfy "either the plurality's standard or that of Justice Kennedy." *Id.* at 810 & n.14 (Stevens, J., dissenting). Neither the plurality nor the Kennedy opinion invalidated any of the current regulatory provisions defining "waters of the United States." *See* Preamble to the Final Rule Section III.

The key to the agencies' interpretation of the CWA is the significant nexus standard, as established and refined in Supreme Court opinions: waters are "waters of the United States" 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, interstate waters or the territorial seas. *See* Technical Support Document at Sections I and II.

Significant nexus is not purely a scientific determination and neither is the agencies' interpretation of the scope of "waters of the United States." While a significant nexus determination is primarily weighted in the scientific evidence and criteria, the agencies also consider the statutory language, the statute's goals, objectives and policies, the case law, the agencies' technical expertise and experience when interpreting the terms of the CWA including "waters of the United States." *See* Preamble to Final Rule at Section III and Technical Support Document at Section II.

The final rule reflects the judgment of the agencies in balancing the science, the agencies' expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public health, consistent with the law. In the rule, the agencies determine that tributaries, as defined ("covered tributaries"), and adjacent waters, as defined ("covered adjacent waters"), have a significant nexus to downstream traditional navigable waters, interstate waters, and the territorial seas and therefore are "waters of the United States." In the rule, the agencies also establish that defined sets of additional waters may be determined to have a significant nexus on a case-specific basis: (1) five specific types of waters that the agencies conclude are "similarly situated" and therefore must be analyzed "in combination" in the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas when making a case-specific significant nexus analysis; and (2) waters within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas, or waters within 4,000 feet of the high tide line or ordinary high water mark of traditional navigable waters, interstate waters, the territorial seas, impoundments or covered tributaries. The rule establishes a definition of significant nexus, based on Supreme Court opinions and the science, to use when making these case-specific determinations. *See* Preamble to the Final Rule Section III and Technical Support Document Sections I and II.

Under the significant nexus standard, waters possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" *Rapanos* at 780. Several terms in this standard were not defined. In this rule the agencies interpret these terms and the scope of "waters of the United States" based on the goals, objectives, and policies of the statute, the scientific literature, the Supreme Court opinions, and the agencies' technical expertise and experience. Therefore, for purposes of a significant nexus analysis, the agencies have determined (1) which waters are "similarly situated," and thus should be in analyzed in combination, in (2) the "region," for purposes of a significant nexus analysis, and (3) the types of functions that should be analyzed to determine if waters significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. These determinations underpin many of the key elements of the rule and are reflected in the definition of "significant nexus" in the rule. *See* Preamble to Final Rule at Section III and Technical Support Document at Sections I and II.

The agencies determined that it is reasonable to consider waters as "similarly situated" where they perform similar functions that affect downstream waters and function together within the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial sea. Since the focus of the significant nexus standard is on protecting and restoring the chemical,

physical, and biological integrity of the nations' waters, the agencies interpret the phrase "similarly situated" in terms of whether particular waters are providing common, or similar, functions for downstream waters such that it is reasonable to consider their effect together. Regarding covered tributaries and covered adjacent waters, the agencies define each water type such that functions provided are similar and the waters are situated so as to provide those functions together to affect downstream waters. The science demonstrates that covered tributaries provide many common vital functions important to the chemical, physical, and biological integrity of downstream waters, regardless of the size of the tributaries. The science also supports the conclusion that sufficient volume, duration, and frequency of flow are required to create a bed and banks and ordinary high water mark. The science also supports the conclusion that tributaries function together to affect downstream waters. The agencies conclude that covered tributaries with a bed and banks and ordinary high water mark are similarly situated for purposes of the agencies' significant nexus analysis. For covered adjacent waters, the science demonstrates that these waters provide many similar vital functions to downstream waters, and the agencies defined adjacent waters with distance boundaries to ensure that the waters are providing similar functions to downstream waters and the waters are located comparably in the region such that the agencies' reasonably judged them to be similarly situated. For waters for which a case-specific determination is required, the agencies have determined that some waters in specific regions are similarly situated; for other specified waters, the determination of whether there are any other waters providing similar functions in a similar situation in the region must be made as part of a case-specific determination. *See* Preamble to Final Rule at Sections III and IV and Technical Support Document at Section II. *See also* Section 5.3 Agency Summary Response.

Assessing the functions of identified waters in combination is consistent not only with Justice Kennedy's significant nexus standard, but with the science. Scientists routinely combine the effects of groups of waters, aggregating the known effect of one water with those of ecologically similar waters in a specific geographic area, or to a certain scale. This is because the chemical, physical, and biological integrity of downstream waters is directly related to the aggregate contribution of upstream waters that flow into them, including any tributaries and connected wetlands. As a result, the scientific literature and the Science Report consistently document that the health of larger downstream waters is directly related to the aggregate health of waters located upstream, including waters such as wetlands that may not be hydrologically connected but function together to ameliorate the potential impacts of flooding and pollutant contamination from affecting downstream waters. *See* Preamble to the Final Rule Section III and Technical Support Document at Section II. *See also* Section 5.3 Agency Summary Response.

Since Justice Kennedy did not define the "region," the agencies determined that the single point of entry watershed is a reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard. A single point of entry watershed is the drainage basin within whose boundaries all precipitation ultimately flows to the nearest single traditional navigable water, interstate water, or the territorial sea. The agencies determined that because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their long-term health, the watershed is a reasonable and technically appropriate way to identify the scope of waters that together may have an effect on the chemical, physical, or

biological integrity of a particular traditional navigable water, interstate water, or territorial sea. The watershed includes all streams, wetlands, lakes, and open waters within its boundaries. Using the watershed that flows to the nearest single traditional navigable water, interstate water, or territorial sea is consistent with court decisions that these waters are the ultimate focus of CWA protections. Using the single point of entry watershed ensures that any analysis of significant nexus is appropriately connected to these touchstone waters. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II. *See also* Section 5.1 Agency Summary Response and Section 5.2 Agency Summary Response.

Because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their integrity, using a watershed as the framework is scientifically supportable. Watershed are generally regarded as the most appropriate spatial unit for water resource management. Anthropogenic actions and natural events can have widespread effects within the watershed that collectively impact the integrity and quality of the relevant traditional navigable water, interstate water, or the territorial sea. The functions of the contributing waters are inextricably linked and have a cumulative effect on the integrity of the downstream traditional navigable water, interstate water, or the territorial sea. For these reasons, it is more appropriate to conduct a significant nexus analysis at the watershed scale than to focus on a specific site, such as an individual stream segment. *See* Proposal Appendix A, Scientific Analysis, 79 Fed. Reg. 22246 (April 21, 2014), Science Report and Technical Support Document. Concluding that the watershed is the reasonable and appropriate region for purposes of a significant nexus analysis is also consistent with the agencies' long standing practice and experience. In light of the scientific literature, the longstanding approach of the agencies' implementation of the CWA, and the statutory goals underpinning Justice Kennedy's significant nexus framework, the watershed draining to the nearest traditional navigable water, interstate water, or the territorial sea, is the appropriate "region" for significant nexus analysis. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II. *See also* Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response and Section 5.4 Agency Summary Response.

Finally, Justice Kennedy was clear that to be covered, waters must significantly affect the chemical, physical or biological integrity of a downstream navigable water and the requisite nexus must be more than "speculative or insubstantial." *Rapanos* at 780. The agencies define significant nexus in precisely those terms. Under the rule, a "significant nexus" is established by a showing of a significant chemical, physical, or biological effect. In characterizing the significant nexus standard, Justice Kennedy stated: "[t]he 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. It is clear that Congress indeed the CWA to "restore and maintain" all three forms of 'integrity," 33 U.S.C. § 1251(a), so if any one is compromised then that is contrary to the statute's stated objective. It would subvert the objective if the CWA only protected waters upon a showing that they had effects on every attribute of the integrity of a traditional navigable water, interstate water, or the territorial sea. *See* Preamble to Final Rule at Section III and Technical Support Document at Section I.

In the rule's definition of "significant nexus," the agencies identify the functions that waters provide that can significantly affect the chemical, physical or biological integrity of traditional navigable waters, interstate waters and the territorial seas. In identifying the functions to be considered, the agencies were informed by the goals of the statute and the available science. Among the means to achieve the CWA's objective to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, Congress established an interim national goal to achieve wherever possible "water quality which provides for the protection and propagation of fish, shellfish, wildlife and recreation in and on the water." CWA §101(a)(2). Functions to be considered for the purposes of determining significant nexus are sediment trapping; nutrient recycling; pollutant trapping, transformation, filtering, and transport; retention and attenuation of floodwaters; runoff storage; contribution of flow; export of organic matter; export of food resources; and provision of life-cycle dependent species located in traditional navigable waters, interstate waters, or the territorial seas. The effect of an upstream water can be significant even when a water, alone or in combination, is providing a subset or even just one of the functions listed. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II.

Summary of comments in this section:

1. Many commenters stated that the proposal adopted a new jurisdictional standard based on the concept of "significant nexus" without saying why this was an appropriate standard. Other commenters questioned why the agencies concluded that Justice Kennedy's concurring *Rapanos* opinion is the soundest basis on which to proceed when no other Justice joined it.

2. Some commenters stated that the rule asserts expansive jurisdiction that is beyond the commerce authority Congress exercised in enacting the CWA. Some commenters stated that rather than analyzing and defining jurisdiction based on the extent of the federal government's authority under the Commerce Clause, the primary justification for the proposed rule was the significant nexus that the agencies claimed all tributaries, all adjacent waters, and many other waters have with traditional navigable waters, interstate waters, and the territorial seas. These commenters believe that under the rule more waters than just those that actually impact commerce will fall under CWA jurisdiction because they have a significant nexus with a traditional navigable water, interstate water, or the territorial seas.

3. Many commenters stated that the proposal expands the agencies' current jurisdiction under the CWA, and they opposed such an expansion. These commenters expressed concern that under the proposal, all waters that are not jurisdictional by rule may be evaluated on a case-specific basis and that nothing is left out of the "other waters" category. These commenters believed that the proposal pulls in too many waters, many of which they believe should be left to the states to regulate.

4. Some commenters questioned the proposal's determination that all "tributaries" and "adjacent waters" have a "significant nexus" to traditional navigable waters, interstate, waters, and the territorially seas, and are therefore categorically jurisdictional by rule.

5. Many commenters focused on how the proposal's definition of "significant nexus" would be applied on a case-specific basis for "other waters." In general, commenters expressed concern that leaving "other waters" subject to a case-specific significant nexus analysis failed to provide certainty for the regulated community. They also expressed concern that case-specific determinations are time-consuming and costly. Additionally, a number of commenters questioned why there was even a need for case-specific determinations. These commenters believed the scope of waters jurisdictional by rule under the proposal was already broad enough to cover the waters that they believed the CWA should protect.

6. Many commenters stated that the proposal's definition of "significant nexus" did not track Justice Kennedy's language in *Rapanos*. They questioned whether it was reasonable to apply the significant nexus standard to non-wetland waters when Justice Kennedy's opinion was focused on wetlands and the functions that wetlands provide to downstream traditional navigable waters, interstate waters, and the territorial seas. Additionally, a number of commenters expressed concern over what they viewed as the agencies expanding Justice Kennedy's standard by stating that a water has a significant nexus if that water, either alone or in combination with other similarly situated water in the region, significantly affects the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or territorial seas. These commenters believed that in order to have a significant nexus, a water must significantly affect all three integrities – chemical, physical, and biological.

7. Many commenters stated that defining "significant," within the definition of "significant nexus," as an effect that is "more than speculative or insubstantial" is too vague and provides no guidance or certainty to landowners. These commenters expressed concern that whether an effect is significant is up to the judgment of each Corps District or EPA official responsible for making the determination and that more specificity is needed regarding the type and scope of evidence required to document a significant nexus. Many commenters thought the agencies should adopt quantitative metrics such as quantity of flow and distance to a traditional navigable water in order to more objectively measure the significance of effects. Commenters also wondered how many factors are needed to establish significance, and stated that examples of what would and would not be considered "significant" would help.

8. Many commenters also expressed concern that proposal's interpretation that a significant nexus exists whenever impacts are more than speculative or insubstantial, ignores the traditional meaning of the word "significant" as "important" or "having or likely to have a major effect." These commenters stated that there is a range of effects that are more than "speculative or insubstantial" and yet do not reach the threshold of "significant." These commenters also stated that although the proposal identifies factors that could be evidence of a significant nexus, it provides no guidance on when the presence of these factors rises to the level of significance, which seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard.

<u>Summary response to comments in this section:</u>

1. The agencies' utilize the significant nexus standard, as articulated by Justice Kennedy's opinion in *Rapanos* and informed by the unanimous opinion in *Riverside Bayview* and the

plurality opinion in *Rapanos* which all recognize that the CWA and the agencies must identify the scope of CWA jurisdiction "on this continuum to find the limit of 'waters,'" *Riverside Bayview* at 134, to interpret the scope of the statutory term "waters of the United States." While the Courts of Appeals are split on the proper interpretation of *Rapanos,* none has adopted the position that the agencies cannot rely on Justice Kennedy's standard or that jurisdiction exists only where both the plurality's and Justice Kennedy's standards are satisfied. The Technical Support Document at Section I provides a detailed explanation of the *Rapanos* decision and other relevant case law as well as the basis for the agencies' use of the significant nexus standard. *See* Preamble to the Final Rule Section III and Technical Support Document at Section I.

2. The final rule does not exceed the federal government's authority under the Commerce Clause to regulate traditional navigable waters, interstate waters, or the territorial seas or to regulate waters that have a significant nexus to traditional navigable waters, interstate waters or the territorial seas. Justice Kennedy explicitly addressed Constitutional concerns in *Rapanos*, stating "[i]n SWANCC, by interpreting the Act to require a significant nexus with navigable waters, the Court avoided applications - those involving waters without a significant nexus – that appeared likely as a category, to raise constitutional difficulties and federalism concerns." *Rapanos* at 776. With respect to the significant nexus standard, Justice Kennedy concluded "[t]his interpretation of the Act does not raise federalism or Commerce Clause concerns sufficient to support a presumption against its adoption. To be sure, the significant nexus requirement may not align perfectly with the traditional extent of federal authority. Yet in most cases regulation of wetlands that are adjacent to tributaries and possess a significant nexus with navigable waters will raise no serious constitutional or federalism difficulty…" *Rapanos* at 782-783. *See* Technical Support Document at Section I.

3. The agencies do not agree with the commenters who stated that the proposal expands the agencies' jurisdiction under the CWA. The proposal did not cover any new types of waters that have not historically been covered under the CWA and is consistent with the Supreme Court's more narrow reading of Clean Water Act jurisdiction. The scope of waters covered by the CWA and this rule today is considerably smaller than the scope of waters historically covered prior to the 2001 and 2006 Supreme Court decisions. To address the concern that the "other waters" category would allow the agencies to regulate virtually any water, the final rule places limits on which waters could be subject to a case-specific significant nexus determination, in recognition that case-specific analysis of significant nexus is resource-intensive and based on the body of science that exists. The agencies have greatly reduced the extent of waters subject to this individual review by carefully incorporating the scientific literature and by utilizing agency expertise and experience to draw boundaries. The final rule establishes two exclusive circumstances under which case-specific evaluations will be made to determine whether or not a water has a "significant nexus", and is therefore a "water of the United States": First, there are five subcategories of waters – Prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – that the agencies conclude are "similarly situated" for purposes of a significant nexus determination and must be analyzed "in combination" when making a case-specific significant nexus analysis. Second, there are waters for which the agencies have made no conclusions with respect to which waters are "similarly situated" but for which a case-

specific significant nexus analysis may be undertaken. The rule establishes that case-specific determinations may be made for waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (a)(5). The agencies fully support efforts by States and tribes to protect under their own laws any additional waters, including locally special waters that may not be within the Federal interests of the CWA as interpreted in this final rule. *See* Preamble to Final Rule at Sections III and IV and Technical Support Document at Sections I, II and IX.

4. The final rule takes the same approach as the proposal in its treatment of tributaries and adjacent waters as categorically jurisdictional by rule. In the rule, the agencies determine that: (1) covered tributaries, in combination with other covered tributaries located in a watershed that drains to a traditional navigable water, interstate water, or the territorial seas, significantly affect the chemical, physical, and biological integrity of that water; and (2) covered adjacent waters, in combination with other covered adjacent waters located in a watershed that drains to a traditional navigable water, interstate water, or the territorial seas, significantly affect the chemical, physical, and biological integrity of that water.

   The agencies determine based on their scientific and technical expertise that waters meeting the definition of "tributary" in a single point of entry watershed are similarly situated and have a significant nexus because they significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, and the territorial seas. The agencies limited the tributaries that are "waters of the United States" to those that have both a bed and banks and another indicator of ordinary high water mark. That limitation served as a reasonable basis to consider covered tributaries similarly situated because those physical characteristics indicated sufficient flow that the covered tributaries are performing similar functions and located such that they are working together in the region to provide those functions to the nearest traditional navigable water, interstate water, or the territorial seas. Justice Kennedy noted that the requirement of a perceptible ordinary high water mark for tributaries, a measure that had been used by the Corps, "may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated water to constitute navigable waters under the Act." *Rapanos*, 547 U.S. at 781, *see also id.* at 761. The science supports this. The agencies analyzed the Science Report and other scientific literature to determine whether tributaries to traditional navigable waters, interstate waters, or the territorial seas have a significant nexus to constitute "waters of the United States" under the Act such that it is reasonable to assert CWA jurisdiction over all such tributaries by rule. Covered tributaries have a significant impact on the chemical, physical, or biological integrity of waters into which they eventually flow – for CWA purposes, traditional navigable waters, interstate waters and the territorial seas. Thus, in the rule, the agencies assert CWA jurisdiction over all covered tributaries as defined. Those covered tributaries are "waters of the United States" without the need for further analysis. *See* Preamble to the Final Rule at Sections III and IV and Technical Support Document at Sections II and VII. *See also* Response to Comments Compendium Topic 8 – Tributaries and Topic 9 – Science.

   Similarly, based on the agencies' review of the scientific literature and the law, the agencies determine that covered "adjacent" waters, as defined, have a significant nexus and are

"waters of the United States." The scientific literature, including the Science Report, consistently supports the conclusion that covered adjacent waters provide similar functions and work together to maintain the chemical, physical, and biological integrity of the downstream traditional navigable waters, interstate waters, and the territorial seas because of their hydrological and ecological connections to, and interactions with, those waters. Science demonstrates that this functional connectivity is particularly evident where adjacent waters are located within the floodplain of traditional navigable water, interstate water, the territorial seas, tributary, or impoundment to which they are adjacent or are otherwise sufficiently proximate to waters with no floodplain, such as lakes and ponds. Location within the floodplain and proximity ensure that the aquatic functions performed by covered adjacent waters are effectively and consistently provided to downstream waters. The agencies conclude that all waters meeting the definition of "adjacent" in the rule are similarly situated for purposes of whether they have a significant nexus to a traditional navigable water, interstate water or territorial sea. Based on a review of the scientific literature, the agencies concluded that these bordering, contiguous, or neighboring waters provide similar functions and work together to significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. Because the definition of "adjacent" considers both the functional relationships and the proximity of the waters (i.e., those that are located near traditional navigable waters, interstate waters, the territorial seas, impoundments, and covered tributaries), interpreting the term "similarly situated" to include all covered adjacent waters, as defined in the rule, is reasonable and is informed by the science and is a reasonable interpretation of the scope of the statute. The geographic proximity of and "adjacent" water relative to the traditional navigable waters, interstate waters, the territorial seas, impoundments, and covered tributaries is indicative of the relationship to it, with many of its defining characteristics resulting from the movement of materials and energy between the categories of waters. Further, the scientific literature supports that waters, including wetlands, ponds, lakes, oxbow lakes, and similar waters, that are "adjacent," as defined the rule, to traditional navigable waters, interstate waters, the territorial seas, impoundments, and covered tributaries, are integral parts of stream networks because of their ecological functions and how they interact with each other, and with downstream traditional navigable waters, interstate waters, or the territorial seas. Based on the science and their technical expertise and experience, the agencies determine it is appropriate to protect all adjacent waters as defined in the rule, because those waters are functioning as an integrated system with the downstream traditional navigable waters, interstate waters, or the territorial seas and significantly affect such downstream waters. Consequently, these waters are "adjacent" and therefore "waters of the United States" under the CWA. Covered adjacent waters are "waters of the United States" without the need for further analysis. *See* Technical Support Document, Sections II and VIII, and Preamble to Final Rule Sections III and IV. See also Response to Comments Compendium Topic 3 – Adjacent Waters and Topic 9 – Science.

5. In response to comments that leaving "other waters" subject to a case-specific significant nexus analysis failed to provide certainty for the regulated community and that such determinations are time-consuming and costly, the final rule places limits on the waters that are subject to a case-specific analysis. The rule identifies two exclusive circumstances under which a significant nexus determination is made on a case-specific basis to determine

whether waters are a "water of the United States." First, there are five subcategories of waters – Prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – that the agencies conclude must be analyzed "in combination" when making a case-specific significant nexus analysis. Second, there are waters for which the agencies have made no conclusions with respect to which waters are "similarly situated" but for which a case-specific significant nexus analysis may be undertaken. The rule establishes that case-specific determinations may be made for waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (a)(5). The rule provides for case-specific determinations under more narrowly targeted circumstances based on the agencies' assessment of the importance of certain specified waters to the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II and IX. See also Section 5.0 Agency Summary Response, Introduction and Response to Comments Compendium Topic 9 – Science.

6. With respect to comments arguing the significant nexus standard should not be applied to non-wetlands, the agencies concluded that based on the statute, its goal and objectives, and the Supreme Court case law, the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetland waters as well. While Justice Kennedy's *Rapanos* opinion focused on adjacent wetlands in light of the facts of the cases before him, his opinion is clear that he does not conclude that the significant nexus analysis only applies to adjacent wetlands as he explicitly states "the connection between a *non-navigable 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." *Rapanos* at 767 (emphasis added). *See* Technical Support Document, Section I and Preamble to Final Rule at Section III.

   The agencies disagree with the commenters who stated that in order to have a significant nexus a significant nexus, a water must significantly affect all three integrities – chemical, physical, and biological. In characterizing the significant nexus standard, Justice Kennedy stated: "[t]he 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. It is clear that Congress intended the CWA to "restore and maintain" all three forms of "integrity," 33 U.S.C. § 1251(a), so if anyone is compromised then that is contrary to the statute's stated objective. It would subvert the objective of the CWA only protected waters upon a showing that they had effects on every attribute of the integrity of a traditional navigable water, interstate water, or territorial sea. *See* Technical Support Document at Section I.

7. The final rule does not establish quantifiable metrics for waters subject to a case-specific significant nexus analysis. Neither Justice Kennedy's opinion nor any Circuit Court to address this issue required metrics or quantification of the waters' effects on the downstream chemical, physical or biological integrity. As noted in the Technical Support Document Section I, the Circuit Courts have held that the term "significant" as used by Justice Kennedy

was not intended to require statistical significance. *See* Technical Support Document at Section I.

While the final rule does not establish quantitative metrics, it does now identify the specific functions that waters can provide that can significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, and the territorial seas. The agencies have provided more detail in the definition of significant nexus as to the functions to be considered for the purposes of determining significant nexus: sediment trapping, nutrient recycling, pollutant trapping transformation, filtering and transport, retention and attenuation of floodwaters, runoff storage, contribution of flow, export of organic matter, export of food resources, or provision of life-cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas. These functions are consistent with the agencies' scientific understanding of the functioning of aquatic ecosystems. A water does not need to perform all of the functions listed in paragraph (c)(5) of the rule to have a significant nexus. Depending upon the particular water and the functions it provides, if a water, either alone or in combination with similarly situated waters, performs just one function, and that function has a significant impact on the integrity of a traditional navigable water, interstate water, or the territorial seas, that water would have a significant nexus. *See* Technical Support Document at Section I and II, Preamble to the Final Rule Sections III and IV and Response to Comments Compendium Topic 9 – Science.

8. The agencies' definition of the term "significant nexus" in the rule is consistent with the language in *SWANCC* and *Rapanos*, and with the goals, objectives, and policies of the CWA. The definition reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. Justice Kennedy was clear that to be covered, waters must significantly affect the chemical, physical, or biological integrity of a downstream navigable water and that the requisite nexus must be more than "speculative or insubstantial," *Rapanos*, at 780. The agencies define significant nexus in precisely those terms. Under the rule, a "significant nexus" is established by a showing of a significant chemical, physical, or biological effect. Justice Kennedy stated: "[t] required nexus must be assess in terms of the statue's goals and purpose. Congress enacted the [CWA] to 'restore and maintain the chemical, physical, and biological integrity of the Nation's water' …" *Rapanos* at 779. It is clear that Congress intended the CWA to "restore and maintain 'all three forms of "integrity," 33 U.S.C. § 1251(a), so if any one is compromised that that is contrary to the statute's stated objective. It would subvert the objective if the CWA only protected waters upon a showing that they had effects on every attribute of the integrity of a traditional navigable water, interstate water, or the territorial sea. In the rule's definition of "significant nexus," the agencies identify the functions that waters provide that can significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters and the territorial seas. Functions to be considered for the purposes of determining significant nexus are sediment trapping; nutrient recycling; pollutant trapping, transformation, filtering, and transport; retention and attenuation of floodwaters; runoff storage; contribution of flow; export of organic matter; export of food resources; and provision of life-cycle dependent aquatic habitat (such a foraging, feeding, nesting breeding, spawning, use as a nursery area) for

species located in traditional navigable waters, interstate waters, or the territorial seas. The effect of an upstream water can be significant even when a water, alone or in combination, is providing a subset, or even just one, of the functions listed. *See* Preamble to Final Rule at Sections III and IV and Technical Support Document at Sections I and II.

Specific Comments

Tennessee Valley Association (Doc. #17470)

5.1 Significance is an Indefinite Basis for the Proposal. The Proposal creates a new jurisdictional standard based wholly on the concept of "significant nexus" with no explanation as to why this is the appropriate basis for the standard. It also fails to adequately define what constitutes a "significant nexus" which is similarly lacking in the Connectivity Report. This is a major shortcoming since the concept is fundamental to establishing jurisdiction.

At the heart of the issue is the fact that "significant" is a subjective term. In attempting to explain the concept of "significant nexus" Justice Kennedy stated, "Wetlands possess the requisite nexus… 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..." Rapanos, 547 U.S. at 780.

In our opinion, to utilize a component of the term (i.e., "significantly") in defining a term ("significant") is effectively "chasing your tail". In an effort to provide a more definitive description the Agencies have further defined significant as "more than speculative or insubstantial". Nevertheless, "significant" remains a nebulous concept since what is "significant" or "more than insubstantial" to one person may or may not be so to another. As a result, the "significant nexus" premise should be thoroughly defined in order to substantiate the basis for the Proposal and allow for jurisdictional determinations that are definitive and uncontroversial. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 1, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II and Section 5.4 Agency Summary Response.

Alaska State Legislature, Alaska Senate Leadership (Doc. #7494.1)

5.2 Expansion of Clean Water Act ("CWA") jurisdiction is opposed, particularly in cases where "some measure" of a "significant connection" to "downstream water quality" cannot clearly be established.

Although clarity is welcomed as it relates to definitions under the CWA,[1] expansion of CWA jurisdiction is opposed and contrary to US Supreme Court precedent.[2]

[1] The 2014 proposal may engender high-level debate similar to what occurred in 2011. Both critics and supporters of the 2011 proposed guidance urged the agencies to revise and replace regulations that define "waters of the United States."

[2] Rapanos v. United States, 126 S.Ct. 2208, 547 U.S. 715 (2006). A review of the proposed language in EPA-HQOW-2011-0880 reveals more inclusive definitions (beyond the current rules), including: all tributaries of a traditional navigable water, interstate water, the territorial seas or impoundment; all waters, including wetlands,

Under Rapanos v. United States, to establish CWA jurisdiction, there needs to be "some measure" of a "significant connection" to "downstream water quality."[3] Mere hydrologic connection will not be enough in all cases.[4] The "connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood."[5]

Unfortunately, "significant nexus" is not a defined, scientific term. Instead it is interpreted by the agencies. Functions that might demonstrate "significant nexus" include retention of flood waters and sediment trapping. (p. 2)

In the proposed rules, the agencies state that hydrologic connection is not necessary to demonstrate a "significant nexus."

Why?

Because, allegedly, the function may be demonstrated even in the absence of a connection.

We object to that interpretation.

Adopting a rule where "function may be demonstrated even in the absence of a connection" creates even more regulatory uncertainty. If adopted (and assuming no modification) the CWA has evolved well past the original intent of the legislation. The theoretical jurisdiction of the agencies would be, nearly, all encompassing. (p. 2-3)

<u>Agency Response:</u> See Section 5.0 Agency Summary Response, summary response to comments 3 and 8, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at

adjacent to a traditional navigable water, interstate water, or territorial seas, impoundment or tributary ; and on a case-specific basis, other waters, including wetlands , provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a traditional navigable water, interstate water or the territorial seas.

[3] See Rapanos, 126 S.Ct. at 2250-2251 ,547 U.S. at 784-785.

[4] Id.

[5] Id.

ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

5.3 We urge the agencies to provide definitions and/or metrics (such as a minimum number of functions) for terms such as "other waters," "quantifiable flow rates," "significant nexus," or "shallow subsurface connection."

For example: Both "significant nexus" and "shallow subsurface connection" are critical to the proposed regulations. Both terms should have structured, precise definitions.

We submit the following definition for "significant nexus":

> There must be a continuous, substantial hydrologic linkage in order to establish a significant nexus, and, minimally, a significant connection to downstream water quality.

Otherwise: At what quantifiable level does mere connection become significant? (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 3, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 4 – Other Waters. The final rule does not include a provision defining neighboring based on shallow subsurface flow, though such flow may be an important factor in evaluating a water on a case-specific basis under paragraph (a)(8) as appropriate. For purposes of a case-specific significant nexus analysis under the rule, a shallow subsurface hydrologic connection is lateral water flow over a restricting layer in the top soil horizons, or a shallow water table which fluctuates within the soil profile, sometimes rising to or near the ground surface.**

Attorney General of Texas (Doc. #5143.2)

5.4 The Rulemaking Adopts a Subjective Test That Will Arrogate to the Federal Government Unheralded Power Over Privately Owned Land. The State of Texas remains perplexed by the federal agencies' continued reliance on Justice Kennedy's "significant nexus" test in asserting Clean Water Act jurisdiction. From a practical standpoint, the test is vague

and provides no guidance or certainty to landowners. The federal agencies assert that the goal in passing this proposed rulemaking is to provide predictability, clarity, and consistency; yet, nothing could be further from the truth. The Rule establishes a test for jurisdiction that has no observable qualities and was developed by a single justice in the concurrence of one case. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary responses to comments 1, 3, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Pennsylvania Department of Environmental Protection, Office of Water Management (Doc. #7985)

5.5 Terms like "significantly", "speculative" or "insubstantial" are too subjective. A scientifically defensible definition of significant, based on water quality assessment, health standards, etc. is necessary. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 - Science.

5.6 Significant nexus – Delete the "case-specific basis" for other waters. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. The agencies have retained the language "case-specific basis" in the final rule for (a)(7) and (a)(8) waters. These waters are not jurisdictional by rule and will be evaluated through a case-specific analysis under the significant nexus standard articulated in the final rule. By not determining that any one of the waters available for case-specific analysis is jurisdictional by rule, the agencies are recognizing the gradient of connectivity that exists and will assert jurisdiction only when that connection and the downstream effects are significant.

Texas Department of Transportation (Doc. #12757)

5.7 We are concerned that "significant nexus" is defined as something that "significantly affects" traditional navigable waters, but there is no description of the word "significant" except that it has to be "more than speculative or insubstantial." This could lead to the interpretation that anything that is "more than speculative or insubstantial" is, or should be considered, "significant." This is a very low bar for the word "significant," would make it virtually impossible for the regulated public to anticipate whether a water or ditch is jurisdictional, and could lead to substantial debate if an effect is more than speculative or insubstantial but is determined to be insignificant.

Recommendations: We request that the "speculative or insubstantial" language be removed from the rule and addressed only in the preamble. If it is retained in the text of the rule, we request the rule specifically clarify that not every effect that is more than "more than speculative or insubstantial" is necessarily significant. (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comment 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response.**

WA Dept. of Ecology (Doc. #13957)

5.8 Washington requests that the rule, preamble or guidance should be amended to provide more specificity on what is needed to document a significant nexus. Washington supports the use of remote sensing to identify similarly situated classes of waters when making significant nexus determinations as well as the use of single point of entry watershed s and eco regions to identify "in the region" where waters are "similarly-situated." Using the watershed and eco region in significant nexus determinations will allow states and the Corps and EPA to accommodate the variety of landforms and systems across the country. (p. 3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II and IX. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response and Section 5.3 Agency Summary Response.**

Commonwealth Pennsylvania Department of Agriculture (Doc. #14465)

5.9 The proposed rule as drafted creates more confusion than it clarifies. PDA is disappointed in the proposed rule's lack of clarity due to ambiguous or undefined terms and phrases. Terms and phrases throughout the proposal are left undefined, or the definition is left so ambiguous that farmers will be left wondering, with no possible way of determining, whether waters on their property will be jurisdictional or not. The proposed rule only increases confusion. For example, the "significant nexus" is the lynchpin concept of the agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II. See also Section 5.4 Agency Summary Response.**

North Carolina Department of Environment and Natural Resources (Doc. #14984)

5.10 Reconsideration or deletion of the definition of "significant nexus," which is effectively meaningless because of its generality. The inclusion of imprecise phrases such as "alone or in combination with other similarly situated waters in region," "sufficiently close together" to be "evaluated as single landscape unit" makes it clear that the Federal Agencies want maximum latitude to pull into their jurisdiction virtually any piece of property from which water drains ultimately to navigable waters. Much of this property, which may or may not affect the chemical, physical and biological integrity of waters in

any significant way, should be left to the states to appropriately regulate. Subjecting such property to federal regulation and permitting expands the power of the Federal Agencies and allows them to virtually displace normal and historical state functions of land use planning and water resource development. 33 CFR 328.3(c)(7), 40 CFR 110.1(3)(vii), 40 CFR 112.2(3)(vii), 40 CFR 116.3(3)(vii), 40 CFR 117.1 (i)(3)(vii), and 40 CFR 122.2(c)(7). (p. 7-8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 3, 7 and 8, Preamble to the Final Sections III and IV and Technical Support Document Sections I and II. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, Section 5.4 Agency Summary Response and Response To Comments Compendium Topic 9 – Science.

Tennessee Department of Environment and Conservation (Doc. #15135)

5.11 The SAB recommends EPA clarify in its general communications and in the preamble to the final rule that "significant nexus" is a legal term, not a scientific term.

Comment: We couldn't agree more-the term "significant nexus" is a legal term created by the judicial system. Therefore, the approach used in the proposed rule (i.e., the aggregation of influence, effect and connections across a watershed) to result in the categorical jurisdiction of some waters is troubling given the limited understanding and agreement as to the actual meaning and importance of the legal term. It is also a problem when trying to understand the approach used in the proposed rule and still provide meaning to the term "navigable" as used by Congress in the CWA. (p. 13)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response.

Southern Ute Indian Tribe Growth Fund (Doc. #15386)

5.12 Definitions should be provided for significant, speculative and insubstantial. (p. 10)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Office of the Governor, State of Utah (Doc. #16534)

5.13 Significant Nexus Test As Applied to "Other Waters" Fails To Provide Certainty. The Proposed Rule proposes to include as jurisdictional "other waters, including wetlands" that are not adjacent to core waters but which may be hydrologically connected to core waters. Under the Proposed Rule this would be accomplished when "other waters" are found to be connected under the "significant nexus" test identified by Justice Kennedy in the *Rapanos* decision. However, this approach is fraught with problems both inherently and as applied to specific circumstances.

First, the Proposed Rule does not meaningfully quantify the magnitude of the term "significant." The Proposed Rule states that a significant nexus exists if there is more than an insubstantial or speculative effect on the chemical, physical or biological integrity on core waters. Dictionaries define "significant" to mean "considerable", "important", "substantial", "meaningful", or "very large." EPA should avoid qualitative language such as the term "significant" in favor of specific standards. The state suggests "significant" could be quantified at 15% of the contributing flow or pollutant loading. In other words, if a non-adjacent water or wetland contributes greater than 15% of the flow or pollutant loading to a down-gradient jurisdictional water, then the "significant nexus" test would be satisfied. If not, the non-adjacent water or wetland would not be considered to have a significant nexus to the down-gradient jurisdictional water and the former would be deemed non-jurisdictional. This would remove the uncertainty that surrounds whether "other waters" would be jurisdictional. A provision could be included in the rule for the Army, or others, to make a case for jurisdiction even when the isolated water or wetlands contribute less than 15% of the flow to the jurisdictional water. But the burden of proof would be on the Army to rebut the presumption that flow or pollutant loading less than 15% is not significant. The Army could reasonably deal with those outliers and bring much greater certainty to the jurisdictional determinations of "other waters." (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response and Response to Comments Topic 9 – Science.

5.14 Second, the Proposed Rule expands the language in Rapanos by substituting the word "and" with "or." Justice Kennedy writes a "significant nexus" exists only where the wetlands, "alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable'"[6] In contrast, the Proposed Rule would direct the EPA and Army to determine a significant nexus exists when "a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." (emphasis added). While Justice Kennedy elucidates a test that requires affect on the chemical, physical and biological integrity of downstream core waters, the Proposed Rule would only need an effect from one of these aspects for the water to be determined as having a significant nexus, and thus fall under EPA and Army jurisdiction. The Proposed Rule therefore fails the language of Justice Kennedy's test. (p. 5)

Agency Response: See response Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Section I.

5.15 Third, the Proposed Definition for significant nexus contains terms with far reaching implications. The Proposed Rule defines significant nexus in part as "a water, including

[6] Rapanos, at 780 (emphasis added).

wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section)."[7] Under the Proposed Rule, waters are similarly situated when they "perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit....[8] This standard will require a wide-ranging geographic analysis to determine the jurisdictional status of a single wetland. Applying this type of standard on a case-by-case basis is inherently time-consuming and expensive. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 5, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II. See also Agency Summary Responses for Sections 5.1, 5.2, 5.3 and 5.4.

5.16 The preamble to the Proposed Rule attempts to address these concerns by providing broad guidelines for determining whether waters are "similarly situated." However, even with these guidelines, there is considerable room for case-by-case determinations that will require extensive factual investigations. If EPA and the Army choose to follow the option to make certain determinations regarding the application of the "significant nexus" standard to specific categories of waters, any such determinations should be made through notice-and-comment rulemaking, not guidance, and any determinations would need to be supported by sound science. (p. 5-6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.3 Agency Summary Response. The agencies will continue a transparent review of the science, and learn from on-going experience and expertise as the agencies implement the rule. If evolving science and the agencies' experience lead to a need for action to alter the jurisdictional categories, any such action will be conducted as part of a rule-making process. See also Response to Comments Compendium Topic 13 Process Concerns and Administrative Procedures.

Oxford Township Board of Trustees, Erie County Ohio (Doc. #7834)

5.17 The Oxford Township Board of Trustees is concerned that the agency's proposed interpretation of "significant nexus" is vague and can lead to the assertion of jurisdiction over waters not previously designated under the Clean Water Act. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 7 and 8, Preamble to the Final Rule Sections III

[7] 79 Fed. Reg. 22263. "(7) Significant nexus. The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to-their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section."
[8] *See* 79 Fed. Reg. 22263.

and IV and Technical Support Document Sections I and II. See also Agency Summary Responses for Sections 5.1, 5.2, 5.3 and 5.4.

City of Escondido (Doc. #11116)

5.18 What does "significant nexus" mean? That does not provide a clear definition. The significant nexus should be revised to "same depth, width and physical properties." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Agency Response to Comments Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

City of Stockton, California (Doc. #15125)

5.19 "Significant nexus" should be defined in science-based terms to determine whether "other waters "are sufficiently linked to waters of the U.S. The rule defines significant nexus as any connection that is "more than speculative or insubstantial." We are alarmed that the rule proposes to categorically consider all "other waters" within our ecoregion – as well as most of the rest of the state – as having a significant nexus and foregoing any case-by-case determination, thus ensuring that every water feature in our county that is not expressly exempted by this rule would be regulated as a water of the U.S. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 7 and 8, Section 5.1 Agency Summary Resposne, Section 5.2 Agency Summary Response, and Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV, and Technical Support Documents Sections I, II. VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

Los Angeles Department of Water and Power (Doc. #15238)

5.20 The Agencies request comments on how to determine whether or not a significant nexus exists.[9] However, significant nexus is a non-scientific term and should not be used for a WOUS determination. Removing the term "significant nexus" and replacing it with quantifiable impact would alleviate confusion. As the Scientific Advisory Board (SAB) explained: "The definition of significant nexus used in the Proposed Rule is scientifically flawed and does not employ modern concepts of scientific significance and statistical inferences[10]." One of the elements of significant nexus is that of species movement alone could define a water as jurisdictional. Removing "significant nexus" will also be helpful in clarifying that the CWA regulates water quality of navigable waters, not the movement of species. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. Additionally, species movement between a water and a downstream traditional navigable water, interstate water, or the territorial seas may be integral to the biological integrity of

[9] 79 Federal Register, 22194
[10] SAB Rule Review, at 95.

the downstream water and thus may be sufficient to establish a significant nexus. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.21 LADWP recommends that the Proposed Rule be modified to: (…)

- Remove the term significant nexus and replace with quantifiable impact. (p. 8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Idaho Association of Counties (Doc. #15525)

5.22 (…) [T]he proposed regulations regarding "significant nexus" would benefit from specific and concrete benchmarks. Again, the Counties applaud the effort to codify abstract "legalese" into workable and certain regulations. As suggested by Governor Otter, the Counties recommend that the proposed rule include quantifiable standards and measures regarding what constitutes a "significant" effect that is "more than speculative or insubstantial" as laid out in proposed 40 C.F.R. 230.3(u)(7). (p. 3-4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

Snowmass Water and Sanitation District (Doc. #16529)

5.23 *Effects Threshold* – The proposed rule defines a "significant effect" as an effect that is "more than speculative or insubstantial."[11] This is a very low threshold, particularly when assessed in the aggregate. *We recommend that, if this rule goes forward, it be revised to provide a more commonsense definition of "significant" that includes a measure of importance or meaningful influence.* (p. 8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Kaweah and Tule Water Managers (Doc. #16544)

5.24 The proposed rule is not specific enough regarding the term "significant". It defines the term "significant nexus" as a "water, including wetlands, either alone or in combination with other similarly situated waters in the region, that significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." The proposed rule also states "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close

[11] Definition of "Waters of the United States" under the Clean Water Act, 79 Fed. Reg. at 22196 (proposed amendment to 33 C.F.R. § 328.3(c)(7)).

together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section."

The rule does not state what when a chemical, physical or biological effect, caused by the contributing water body, may be considered significant, and when it may not, leaving the conclusion that ANY such effect may be considered significant. The Kaweah and Tule Commenters suggest that additional qualifiers should be added, including that the significant effects must be continual and long lasting, actual (as opposed to theoretical), and more than ephemeral in nature. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Section 5.1, Section 5.2, Section 5.3, Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

City of Palo Alto, Office of the Mayor and City Council (Doc. #16799)

5.25 "Significant nexus" should be defined in science-based terms to determine whether "other waters" are sufficiently linked to waters of the U.S. The rule defines significant nexus as any connection that is "more than speculative or insubstantial." (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Agency Summary Responses for Section 5.1, Section 5.2, Section 5.3, and Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Department of Public Works, County of San Diego, California (Doc. #17920)

5.26 The rule should clarify that the significant nexus standard will only be applied to Traditionally Navigable Waters, rather than to any category of Waters of the U.S. Under existing regulations and case law, the significant nexus standard has been interpreted by local federal agency representatives to apply not only to areas that drain to Traditionally Navigable Waters, but also to areas that drain to tributaries or other Waters of the U.S. The County requests that the new rule define the interpretation consistent with Justice Kennedy's explanation of the SWANCC decision 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.' 547 U.S. at 759". The proposed rule as currently written does not define what type of Water of the U.S. the area with a significant nexus must drain into to be considered jurisdictional. Therefore, the rule should clarify that the significant nexus standard is only applied to areas draining to Traditionally Navigable Waters, rather than to any category of Waters of the U.S.

> EXAMPLE: If clarification is not provided, jurisdictions will continue to make inconsistent interpretations of the rule. This is a critical point because, in practice, water will always flow toward drainages, which flow into other drainages, then to tributaries, rivers, and finally the ocean. The jurisdictional "line" of connectivity can infinitely be drawn further and further up the watershed unless the rule clearly defines that the significant nexus standard is applicable when connectivity is being shown to a Traditionally Navigable Water, and not a tributary. (p. 8-9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response and Section 5.4 Agency Summary Response.

5.27 The significant nexus determination should be applied consistent with the language in the Rapanos decision and retain the use of "and". The agencies acknowledge in referencing Rapanos, Justice Kennedy concluded that wetlands are Waters of the U.S. "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." In the Proposed Rule, the agencies propose to apply the "Kennedy standard" when determining significant nexus for "adjacent waters" and "other waters." Consistent with the "Kennedy standard," the agencies conclude that all "adjacent waters" meet the significant nexus test owing to a combination of physical, chemical and biological connections. However, the agencies propose to deviate from the Kennedy standard in their approach to "other waters" by determining that effects on either the chemical, biological, or physical integrity will be sufficient to establish significant nexus. In the agencies proposed rule, the word "and" from Justice Kennedy's quote was swapped with the word "or," which clearly has a drastically different meaning. By using the word "and," the significant nexus standard is held to a higher and more realistic threshold of needing to show three types of affects to the integrity of the downstream navigable water. On the other hand, using the word "or" greatly diminishes the need for a clear influence as it only requires one of the three affects to occur. The County requests that the new rule be revised to define interpretation of the significant nexus standard consistent with Justice Kennedy's opinion, including use of the word "and" when referring to the effect on the chemical, physical, and biological integrity.

> EXAMPLE: If the rule is determined using chemical, physical, or biological integrity as the threshold, the scope of potential Waters of the U.S. could be much broader. A biological connection could be determined for areas where birds perch temporarily during migrations, or seeds are dispersed along a momentary flow. This could cause puddles, potholes, and small ponds to be considered significant by determination. By remaining consistent with Kennedy's interpretation of chemical, physical, and biological integrity, a more defined focus of what is considered significant could be identified, addressed, and managed. (p. 9)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 4, 5, 6, 7, 8, Sections 5.1, 5.2, 5.3, 5.4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section I, II, VII, VIII and

IX. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Maui County (Doc. #19543)

5.28 EPA should provide a definition of "significant." Justice Kennedy's "significant nexus" test is a determination based on applicable science to be made by the EPA, Corps, and states authorized to issue NPDES permits; however, the EPA does not provide a definition of "significant." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 4, 5, 6, 7, 8, Sections 5.1, 5.2, 5.3, 5.4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section I, II, VII, VIII and IX. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

5.29 The proposed rule should address the type and scope of evidence required to determine "significance" in terms of significance to the water quality of the navigable water, especially for "other waters" that could be jurisdictional under the proposed rule. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 4 – Other Waters.

Virginia Association of Counties (Doc. #15178)

5.30 The Connectivity Report did not expressly discuss the notion of significance, it being a legal term and not a scientific one in this context. Moreover, the definition provided in the Proposed Rule does not help as it equates "significant" with "significantly affects" the chemical, physical, or biological integrity of a jurisdictional water, never explaining what the root term "significant" means. The Proposed Rule goes on to say that "for an effect to be significant, it must be more than speculative or insubstantial", but it does not put forward any threshold for deciding what is not speculative or insubstantial. As the SAB Peer Review recommends, "EPA should recognize that there is a gradient of connectivity" in the context of how tributaries (perennial, intermittent, and ephemeral) affect downstream waters. EPA should identify how it will determine where along this gradient connectivity moves from insignificant to significant.

> The definition of "significant nexus" is especially problematic when it comes to the "other waters" and the case-specific analyses needed to determine jurisdiction. The Proposed Rule would be less subject to litigation if the definition of "significant nexus" included a tangible methodology to make the job of the Corps Districts more straightforward and transparent when it comes to deciding what is not speculative or insubstantial. (p. 6-7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX.

Oklahoma Municipal League (Doc. #16526)

5.31 What is an "insignificant" nexus under the "significant nexus" definition? (p. 5)

Agency Response: See Section 5.0 Agency Summary Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

U.S. Chamber of Commerce (Doc. #14115)

5.32 The Agencies propose that any chemical, physical, or biological effect on jurisdictional waters not thought to be "speculative or insubstantial" will be considered "significant." The practical result of the Agencies' approach is that, if any effect exists, it is deemed significant. This expansion of federal authority is totally unjustified and lacks a rational basis. The concept of a "significant nexus" historically arose in the narrow context of wetlands areas that actually abutted – and were therefore "inseparably bound up with" – traditionally navigable waters. Now, the Agencies proposal would require an esoteric inquiry into whether an isolated water could theoretically have an impact on – or be impacted by – any other water within a region of indeterminate size. The meaning of "significant nexus" in the context of chemical, physical, and biological effects will likely occupy the federal courts for decades to come.

> What is a "Significant Nexus?" The Agencies' proposed definition of "significant nexus" unjustifiably ensures that virtually any impact on downstream waters will be deemed significant. Coupled with the "cumulative effects" approach and the likelihood that a single water will determine the jurisdictional fate of small waters spread over vast areas that are deemed to be "similarly situated," the agencies' proposal effectively leaves nothing out of the "other waters" category. (p. 26-27)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response, and Response to Comments Compendium 4 – Other Waters.

California Building Industry Association et al. (Doc. #14523)

5.33 The Proposed Rule categorically determines that all (a)(1) through (a)(6) waters, with particular focus on "tributaries," as defined, and all "adjacent waters," as defined, have a significant nexus to traditional navigable waters, and therefore are jurisdictional waters of the United States "by rule". *Proposed Rule* at 22,204-05; 22,209-10. And to be perfectly clear, the Proposed Rule asserts that *any and all features*, no matter how remote and no matter how infrequently containing any appreciable flow of water, that can be argued to fit the vast and circular definitions of the Proposed Rule, do without exception possess a constitutionally sufficient significant nexus to a traditional navigable water, and no process for individualized inspection or consideration need be provided. See id. at 22,188-89. (p. 22-23)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 1, 4, and 5 and Section 5.4 Agency Summary Response, Preamble to the Final Rule and Technical Support Document Sections I,

II, VII and VIII. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Compendium Topic 4 – Other Waters and Compendium Topic 8 – Tributaries.

5.34 The Proposed Rule's Deferral of Determining Core Variables Makes Advance Determinations of Significance Impossible. The Proposed Rule defines "significant nexus" as follows:

> Significant nexus. The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a ''water of the United States'' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section."
>
> Proposed Rule, 79 Fed. Reg. at 22,263.
>
> We articulate our concern with the vagueness and ambiguity of the various definitional terms in the Proposed Rule above. But even accepting the terminology for argument's sake, the Proposed Rule fails to put actual context and specificity to core variables that are essential to any analysis of significance, rendering any effort to establish categorical significance in advance impossible. (p. 23)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5, 7 and 8, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I, II, VII and VIII. See also Response to Comments Compendium Topic 3 Adjacent Waters and Compendium Topic 8 Tributaries.

5.35 While the Connectivity Report focuses on the presence or absence of any identifiable "nexus" between the feature over which the agencies seek to assert jurisdiction and any (a)(1) – (a)(3) water (e.g., hydrologic connectivity or sediment retention, *see Proposed Rule* at 22,214), the Proposed Rule is absolutely silent as to quantifying or otherwise considering the significance of the identified indicator. The draft Connectivity Report has already come under scrutiny and criticism for its failure to incorporate considerations of significance.[12] (p. 24)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Section 5.4 Agency Summary Response,

[12] See Waters Advocacy Coalition, "Comments on the U.S. EPA Draft Report: Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of Scientific Evidence," Docket No. EPA-HQ-OA-2013-0582, at 6-7 (Nov. 6, 2013) (incorporated by reference herein).

Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

5.36 Without significance, there is no "significant nexus." Whether based upon deferral of essential variables in quantifying significance or lack thereof or an express refusal to consider critiques on the failure to consider significance or whether significant nexus is even an appropriate test, the Proposed Rule's assertion that the Agencies' advance review of significant nexus is not a sufficient justification for the sweeping categorical jurisdiction the Proposed Rule would impose. (p. 26)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3. 4, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII and VIII. See also Section 5.4 Agency Summary Response.

Corporate Environmental Enforcement Council, Inc. (Doc. #14608)

5.37 After *Rapanos*, "significant nexus" has become the determinative factor in whether a water is jurisdictional. As part of this rulemaking, the Agencies' proposed to define "significant nexus" as follows.

> 40 CFR 122.2(c): (7) Significant nexus - The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this definition), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition.
>
> Embedded in this lengthy, 138-word definition are a number of vague and unbounded concepts. What does it mean to be "sufficiently close together" and how will this be measured? How broad is a "region" and what does it encompass? What qualifies as an effect that is more than "speculative or insubstantial"? Does an effect qualify as significant if it only impacts the biological function of a TNW but not its chemical or physical integrity? What are "similar functions" and how will they be measured or quantified? We respectfully submit that the Agencies' definition of "significant nexus" raises more questions than answers. (p. 5-6)

Agency Response: See Section 5.0 Agency Summary Responses, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Greater Houston Partnership (Doc. #14726)

5.38 The definition of *significant nexus* in the proposed rule differs from how Supreme Court Justice Kennedy defined the term. The rule allows the agencies to assert federal

jurisdiction is an evaluated water significantly *affects the chemical, physical,* or *biological integrity of a* [jurisdictional] *water.* Justice Kennedy indicated that the agencies could assert jurisdiction if the evaluated water significantly *affects the chemical, physical, and biological integrity of a* [jurisdictional] *water.* GHP suggests that the rule be modified to match Justice Kennedy's definition. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section I.

Golf Course Superintendents Association of America et al. (Doc. #14902)

5.39 The proposed rulemaking creates confusion instead of clarity. For example, the "significant nexus" is the lynchpin concept of the Agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Cooperative Network (Doc. #15184)

5.40 The incorporation of new terminology such as "significant nexus" and the corresponding subjective method to classify these features is a serious error. This will lead to a situations where the definition of areas as jurisdictional under WOTUS, despite that it may be dry land in some instances, will not be easily understood by legal and regulatory professionals, let alone many of the people this law would impact. Consequently, these proposed actions will set the stage for a barrage of frivolous litigation that will be based on the ambiguity of new terminology and the subjective interpretation of what features are a WOTUS. A disastrous result will be tying up co-ops' limited resources to protect areas that the U.S. Supreme Court has arguably ruled are not WOTUS and will not result in quantifiable environmental benefits. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5, 7 and 8, Preamble III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

Aluminum Association (Doc. #15388)

5.41 The Proposed Rule uses the concept of a "significant nexus" to delineate WUS. The Proposed Rule defines a "significant nexus" to "mean that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water…) …significantly affects the chemical, physical, or biological integrity of a water identified as a "waters of the United States" under proposed part 401.11(1)(i)-(iii). For an effect to be significant, it must be more than speculative or insubstantial…"

> This definition is so broad that it may include any feature, pond, or any other water area that may overflow during normal operation that receives storm water or process wastewater comingled with storm water that is monitored at an outfall downstream of the feature through a series of pipes or ditches. The purposes of these features may be water storage, solids settling, or water reuse. These should not be considered WUS, however, the Proposed Rule's definition is so broad and vague as to create the possibility of a "significant nexus" being found for these waters, which are not currently within the CWA jurisdiction. Any proposal must include provisions to ensure that these types of features, including their associated piping and ditches, which are needed for wastewater treatment and enhancement of water quality, are allowed to perform that function, without unnecessary regulatory requirements. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5, 7 and 8, Preamble to the Final Rule Sections III and IV. See also Response to Comments Compendium 7 – Features and Waters Not Jurisdictional and Technical Support Document Sections I and II.

Dow Chemical Company (Doc. #15408)

5.42 EPA and the USACE's proposed rule has added new definitions which add confusing new interpretation challenges and unsuccessfully attempt to "clarify" Clean Water Act (CWA) jurisdiction through a list of exemptions to each definition. (…)

> As an example, consider the Agencies' attempts the definition of "significant nexus." Significant nexus is not a scientific term and is subject to broad interpretation. The ability to define 'significant' (which in and of itself is a subjective term), sets this criteria to be a subjective evaluation based on personal interpretation. This creates the scenario for wide variability in the application of this term in determining whether an area is jurisdictional based on the "nexus" and whether it is significant. This terminology and basis for jurisdictional determination does not clarify jurisdiction but rather adds more ambiguity to jurisdictional the determinations. The significant nexus is not a scientific term and is subject to broad interpretation even with the scientific paper upon which it is based. The ability to determine 'significant' which in and of itself is a subjective term, sets this criteria to be a subjective evaluation based on personal interpretation. This creates the scenario for wide variability in the application of this term in determining whether an area is jurisdictional based on the "nexus" and whether it is significant. This terminology and basis for jurisdictional determination does not clarify the Waters of the U.S. but rather gives more ambiguity to the determination (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

Council of Industrial Boiler Owners (Doc. #15410)

5.43 The definition of "significant nexus" is not itself a scientific term. The relationship that waters can have to each other and connections to downstream waters that affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas is not an "all or nothing" situation. The existence of a connection, or to use the words of Justice Kennedy, a *nexus*, does not by itself establish that it is a ''significant" nexus. The rule's proposed definition of "significant nexus" provides no concrete basis on which a person could assess whether indeed there is a "nexus" or whether it is "significant." By expanding the definition of waters of the United States the Agencies have expanded the definition of navigable waters, thereby expanding the jurisdiction of federal agencies and creating complications with state programs that regulate classes of waters.

> Following the *Rapanos* decision, waters analysis has been governed by agency guidance setting forth the significant nexus test as requiring an
>
> [a]ssess[ment of] the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they [alone or in combination with other similarly situated wetlands adjacent to the tributary] significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.[13]
>
> Under the proposed rule, all tributaries of navigable waters and all waters adjacent to those tributaries are presumed to have a significant nexus and are per se jurisdictional. The proposed rule goes on to provide that waters not per se jurisdictional may still be jurisdictional if "on a case-specific basis…alone, or in combination with other similarly situated waters…located in the same region, [they] have a significant nexus" (79 Fed. Reg. 22189) to a traditionally navigable or interstate water or the territorial seas. Under the case-by-case definition, with its aggregate impact language, any water (however isolated) could conceivably be defined as having a significant nexus with a federal water, and thereby be jurisdictional. This uncertainty puts CIBO member facilities at risk of violating their Clean Water Act permits because facilities would not have prior knowledge of what water is regulated and what is not. (p. 3-4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response.

Association of Equipment Manufacturers (Doc. #16901)

5.44 The proposed rulemaking creates confusion instead of clarity. For example, the "significant nexus" is the lynchpin concept of the agencies' proposed rule, but the rule

[13] EPA and US Army Corps of Engineers December 2, 2008 Guidance "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States," p. 8 (available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf).

provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Section 5.4 Agency Summary Response.

Minnkota Power Cooperative, Inc. (Doc. #19607)

5.45 One of the main issues regarding clarity is that the Agencies do not provide any information on what constitutes a "significant" nexus. A key to a valid rule would be establishment of a reasonable definition of significant nexus. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Sections 5.1, 5.2, 5.3 and 5.4.

Southern Nevada Home Builders Association (Doc. #3251)

5.46 Furthermore, the new proposed rules do not stop at the de facto regulation of "tributaries", they also provide that other waters may also be determined to be "jurisdictional waters" on a case-by-case basis, if those waters alone, or in combination with other similarly situated waters (including wetlands) located in the same region, have a "significant nexus" to a TNW, interstate water or the territorial sea. The term "significant nexus" is defined to mean that a water body, "either alone or in combination with other similarly situated waters in the region ..., significantly affects the chemical, physical or biological integrity of [a jurisdictional water]." And for an effect to be "significant," it need only be "more than speculative or insubstantial." Given the foregoing examples, it is nearly impossible to imagine how these definitional changes may be interpreted or used to do anything but expand jurisdiction under the CWA to include waterways and areas not previously subject to regulation by the EPA or Army Corps of Engineers. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 3, Preamble Sections III and IV and Technical Support Document at Sections I, II, VII, and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 7 - Features and Waters Not Jurisdictional.

The Elm Group, Inc. (Doc. #9688)

5.47 The significant nexus analysis states that "Justice Kennedy was clear that waters with a significant nexus must significantly affect the chemical, physical, or biological integrity of a downstream navigable water and that the requisite nexus must be more than speculative or insubstantial" yet there is no definition or direction as to what is considered significant affect. The new rule should provide clear threshold criteria (i.e.,

quantifiable or qualitative) of what is considered a significant affect, recognizing that "significant" in a technical context usually is defined using statistical methods. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II. See also Section 5.4 Agency Summary Response.

Portland Cement Association (Doc. #13271)

5.48 *The case-by-case significant nexus test is unnecessary and unclear.* In addition to the broad range of waters that the rule would deem as "always jurisdictional," it would also include the option of finding individual other waters as jurisdictional using a case-by case significant nexus test. This case-by-case test is both unnecessary and, as it has been for the past eight years, too opaque to be functional. The Agencies should not permanently adopt the test into regulation.

> The case-by-case test is unnecessary. The Agencies have been using a case-by-case significant nexus test for the past eight years that is substantially the same as the one presented in the proposed rule. However, they have not been using it in the shadow of the wide range of "always jurisdictional" waters presented in the proposed rule.
>
> In short, in light of the waters covered by the "always significant" portion of the rule, it is not clear how "other waters" can be covered by the case-by-case analysis and still be deemed to have a "significant nexus" to downstream navigable waters. By definition, these case-by-case "other waters" "significantly affect[] the chemical, physical, or biological integrity" of a downstream water but, by exclusion, (1) do not contribute flow to it (2) are not in the water's floodplain and (3) are not in the riparian area of the water. Since a riparian area is one bordering any water where surface or groundwater "directly influence the ecological processes and plant and animal community structure in that area" or "influences the exchange of energy and material" with the water, this means that these other waters must significantly affect the
>
> - biological integrity of a downstream water without directly influencing the ecological processes and plant and animal community structure in the area or
> - chemical or physical integrity of a water without contributing flow to it, being proximate enough to it that is in its floodplain, or effecting the transfer of energy or material with it
>
> The Agencies have failed to explain how this is possible. This is true even if you take these other waters in the aggregate. In short, the case-by-case test is not needed, since the first portion of the test (the "always jurisdictional waters") is so broad. (p. 24-25)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, and 5, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also

Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response, Response to Comments Compendium Topic 4 – Other Waters and Topic 9- Science.

5.49 The case-by-case test is unclear. Moreover, by retaining the significant nexus test in light of the expansive definition of tributary and the newly robust term adjacent, the Agencies have created confusion as to what other waters may have a "significant nexus." The term must exist for some waters, but it is unclear which ones they are.

> Presumably, these are waters that are individually insignificant but are significant in the aggregate, since this is the only real distinction between the "always jurisdictional" and "case- by-case jurisdictional waters (as discussed in Section IV.d.). But this formulation both (1) requires a significant expansion of the significant nexus test (see section IV.c.4., indicating that the "always jurisdictional" waters are in some place more expansive than even the current case-by-case waters) and (2) is completely dependent on the scope of the aggregated waters.
>
> Inherently ambiguous in this test are the terms "similarly situated" and, as they have been since 2006, "chemical, physical, [and] biological integrity."
>
> The Agencies provide little guidance as to what waters are "similarly situated", Referring to them as those that
>
> > perform similar functions and are located sufficiently close together or. . . are sufficiently close together to sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological interiority
>
> of a core water.[14] This clarification provides no clarity, stating only that "similarly situated" means "sufficiently close together." The Agencies implicitly acknowledge as much by stating that "[h]ow these 'other waters' are aggregated for a case-specific significant nexus analysis depends on the functions they perform and their spatial arrangement within the "region" or watershed." Thus, the case-by-case test would include a case by-case analysis of the proper scope of aggregation.
>
> This statement also shows the confusion inherent between the rule's analysis of "similarly situated" waters and those in the same "region." This is seen more fully where the Agencies specifically seek comment on what wetlands should be viewed as "similarly situated." Under one method, they state that they might "identify ecological regions (ecoregions) which contain 'other waters' that are ''similarly situated'."[15] "The Agencies expect that determining all 'other waters' within an ecoregion to be similarly situated would result in these 'other waters' being determined to have a significant nexus and being found jurisdictional."[16] One approach would use Level III ecoregions, of which there are only 105 in the United States.[17] In other words, notwithstanding the definition of "region" as the watershed that drains to the nearest core water, the Agencies could still carve the

[14] 79 Fed. Reg. 22200.
[15] Id. at 22215.
[16] Id.
[17] Id.

country into only 105 areas, in which almost all the waters would be "similarly situated."

Such an interpretation of similarly situated is improper, as it leads the term "region" without meaning. Only similarly situated wetlands in a region can be aggregated under the Agencies' interpretation of Justice Kennedy's test. Stating that wetlands are similarly situated if they are in the same region reads the term 'region" out of the definition. Thus, 'similarly situated" must mean something other than physical proximity. The agencies should not adopt a rule under which the terms "similarly situated" and "region' both refer to geographic areas. (p. 25-26)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response. See also Response to Comments Compendium Topic 9 – Science.

5.50 The Agencies should not adopt into regulation a case-by-case process. At the core, however, we believe that the Agencies should not utilize a case-by-case test and should not adopt the significant nexus test. As describe above, on the margins, where jurisdictional is questionable, case-by-case tests provide no certainty to the regulated community, require the unnecessary expenditure of resources (time and money) of both the regulated community and the regulators, and enhances the potential for litigation. PCA strongly believes that the proposed rule should increase clarity and therefore decrease case-by-case analyses.

The Agencies should also resist the opportunity to enshrine the significant nexus test into law. It is an awkward solution to a difficult problem and cementing it in place will only lead to future uncertainty, litigation and the inefficient use of permitting resources, both of the Agencies and of the regulated community.

As the Agencies have acknowledged, the test is not a scientific one. Nor is it based on the language of the Act. It is a judicial construct, posited by one Justice, and as such is a legal solution to a policy question. It is a terribly awkward solution at that. It requires the analysis by multiple scientific disciplines (for the examination of physical chemical and biological connectivity), focuses on resources other than the ones at issue (in aggregating significance with other wetlands), and requires extensive (and excessive) regulatory discretion (in requiring a finding of "significance" and a "similar" situation). In short, it is neither an efficient nor an effective regulatory structure.

The Agencies should not adopt the significant nexus test because it is unwieldy, impractical, too subjective and will cause the unnecessary expenditure of extensive time and money from both the regulated community and the regulators. (p. 26-27)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX.

El Dorado Holdings, Inc. (Doc. #14285)

5.51 *"And" vs "or"*: In his concurring opinion in *Rapanos*, Justice Kennedy opined that non-navigable waters could be regulated if they "significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable'." 547 U.S. at 780 (emphasis added). In the current jurisdictional guidance being employed by the agencies (as amended in December 2008[18]), the agencies consistently refer to assessing impacts to the physical, chemical and biological integrity of a TNW. For example, on the very first page of the existing guidance, in a box entitled "Summary of Key Points," the agencies state as follows:

> A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical AND biological integrity of downstream traditional navigable waters.
>
> (emphasis added). The phrase "chemical, physical and biological integrity" is used repeatedly in the existing guidance (on pages 1, 8, 9 and 10), whereas the phrase "chemical, physical or biological integrity" is not used once.
>
> In the proposal, however, the agencies define "significant nexus" with respect to impacts on the chemical, physical "or" biological integrity of a TNW or interstate water. See proposed 33 C.F.R. § 328.3(c)(7). If the agencies are intending to base the revised rule on Justice Kennedy's concurring opinion, they should adhere closely to that opinion (and their own existing interpretation of that opinion), rather than adopting a different (lower) standard for jurisdiction without providing a reasoned basis for doing so.
>
> Recommendation: The word "or" should be changed to "and" in any final regulatory definition of "significant nexus." (p. 35-36)

Agency Response: **See Section 5.0 Agency Summary Response, summary response comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Section I.**

West Valley Planned Communities (Doc. #18906)

5.52 The definition of "significant nexus" does not include any criteria for establishing whether there is a nexus between particular waters and interstate or traditionally navigable waters and whether such nexus is "significant." Rather, the criteria is subjective and left to the discretion of field-level staff of the EPA and Army Corps, many of whom often lack the technical expertise to avoid making an arbitrary determination with respect to whether a particular water feature is within the jurisdiction of the CWA. Objective criteria should be developed and include support by a revised scientific connectively report that has been appropriately peer-reviewed and subject to public comment. (p. 2-3)

[18] Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States, accessible at: http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II. See Response to Comments Compendium Topic 9 – Science.**

CEMEX (Doc. #19470)

5.53 The proposed rule would sweep in many marginally aquatic areas that only have a remote and insubstantial impact on traditional navigable waters. In effect, the rule removes "significant nexus" and replaces it with "any nexus." (p. 2)

Agency Response: **See Section 5.0 Introduction and summary responses to comments 3, 5, 7, and 8, Preamble Sections III and IV and Technical Support Document Sections I and II. See Response to Comments Compendium Topic 9 – Science.**

National Association of Home Builders (Doc. #19540)

5.54 The Agencies have Relied on a Problematic Definition of "Significant" and an Inappropriate Application of the "Significant Nexus" Test.

> The proposed rule alters the definition of "waters of the United States" based on several new definitions as well as a significant shift in the legal justification the Agencies use to base jurisdiction. Under current guidance, the Agencies base jurisdiction upon the scope of their authority under the Commerce Clause of the U.S. Constitution. The Supreme Court has thrice agreed that the term "waters of the United States" extends beyond traditional navigable waters.[19] However, the Court has also emphasized that "the qualifier 'navigable' is not devoid of significance."[20] In *SWANCC*, the Court held that jurisdictional determinations based on the "Migratory Bird Rule" would "invoke the outer limits of Congress' power" under the Commerce Clause.[21] The Court unanimously agreed that the Agencies could not assert CWA jurisdiction on the sole basis of use of a water by migratory birds.
>
> Although the Agencies continue to cite the Commerce Clause in the preamble, the proposed rule changes the basis for jurisdiction in a botched attempt to align with Justice Kennedy's concurring opinion in Rapanos. Rather than analyzing and defining jurisdiction based solely on the extent of the federal government's ultimate authority under the Commerce Clause, the primary justification for the proposed rule is the presumed "significant nexus" the Agencies claim all "tributaries," all "adjacent waters," and many "other waters" (either alone or in combination with similarly situated waters) have with traditional navigable waters, interstate waters, and the territorial seas. In an effort to justify these claims, however, the Agencies fail to define the word "significant" and have misapplied Justice Kennedy's significant nexus test to cover more waters. In the end, this represents a sea change (no pun intended) in the underlying jurisdictional analysis. Given the Agencies'

[19] Riverside Bayview, 474 U.S. at 133; SWANCC, 531 U.S. at 167; Rapanos, 547 U.S. at 751.
[20] Rapanos, 547 U.S. at 731.
[21] SWANCC, 531 U.S. at 172, 173.

> assertion that all broadly defined "tributaries" (including most ditches), all broadly defined "adjacent waters," and many "other waters" (individually or collectively) have a significant nexus with traditional navigable waters, interstate waters, or the territorial seas, many more waters will fall under jurisdiction of the CWA compared to those that actually impact interstate commerce. Indeed, by changing the means by which jurisdiction is determined, the Agencies are substantially and unlawfully expanding the jurisdictional scope of the Act. (p. 35-36)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 2, 3, 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3, 5.4, Preamble Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

5.55 What's more, the Agencies assert that the significant nexus that establishes federal jurisdiction can be based on the movement of not only water but also animals and plants between waters, irrespective of the transport of pollutants and the potential of those pollutants to significantly affect the chemistry, biology, and physical properties of navigable waters. (p. 36)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Section 5.4, Preamble Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.56 The Agencies emphasize that the "categorical finding of jurisdiction for tributaries and adjacent waters was . . . based on . . . a determination that the nexus, alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA, and caselaw."[22] Unfortunately, this is not true. The "significant nexus" definition provided in the proposed rule is, in fact, inconsistent with both the objective of the CWA and Justice Kennedy's "significant nexus" test in Rapanos. Equally problematic, the Agencies cannot point to any science quantifying the point at which a connection becomes "significant," as described in Section VI. b. i. 4 and Section IX. b. ii. (p. 36)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 3, 4, 5, 7 and 8, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

5.57 The Agencies Rely on an Inadequate and Flawed Definition of "Significant" to Apply Justice Kennedy's "Significant Nexus" Test.

> In the proposed rule, EPA and the Corps rely primarily on Justice Kennedy's significant nexus standard to assert jurisdiction over all "tributaries," all "adjacent waters," and, on a case-by-case basis, "other waters," either alone or in combination. Despite their misguided reliance on Justice Kennedy's test, the

[22] 79 Fed. Reg. at 22,189.

Agencies propose a definition for "significant nexus" that is inadequate, not based on science, and inappropriately equates the term "significant" with merely "more than speculative or insubstantial." (p. 36)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.58 The Agencies Inappropriately Equate "Significant" with Simply "More Than Speculative or Insubstantial."

For the first time, the Agencies provide a regulatory definition for "significant nexus":

> "The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3)), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3). For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3)."[23]

Justice Kennedy provided that if the impact of a wetland on a traditional navigable water is "speculative or insubstantial" that wetland is not within the jurisdiction of the Agencies.[24] On the other end of the spectrum, the significant nexus test requires that the Agencies prove that the wetland in question has a significant chemical, physical, and biological effect on a traditional navigable water to fall within CWA jurisdiction.[25] Although the proposal states "[f]or an effect to be significant, it must be more than speculative or insubstantial,"[26] NAHB submits that there is a range of effects that are more than "speculative or insubstantial" and yet do not reach the threshold of "significant" (Fig. 1). Indeed, the proposed definition of "significant nexus" does not provide sufficient parameters to ensure limited use.

[23] Id. at 22,199, 22,200.
[24] *Rapanos*, 547 U.S. at 780.
[25] *Id*.
[26] 79 Fed. Reg. at 22,263.

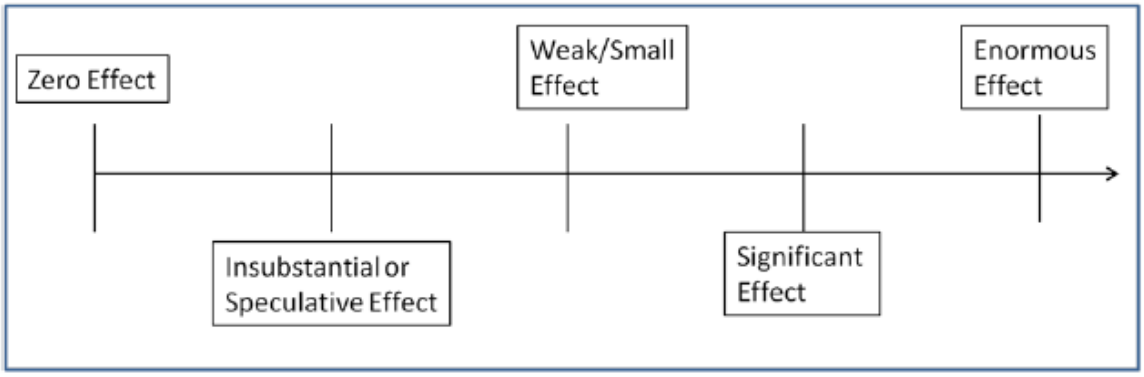

Figure 1. A range of effects exists along a gradient from zero effect to an enormous effect.

> For example, a wetland could have a small effect on a traditional navigable water, but that effect would not rise to one that is significant. Under the Agencies' definition, such a wetland would be jurisdictional. This is incorrect because a small effect is not a significant one. By equating the term "significant" with "more than insubstantial or speculative," the government misinterprets Justice Kennedy's Rapanos opinion. If the government wants to use Justice Kennedy's decision to define "waters of the United States," it must do so correctly. Therefore, the Agencies should explain that only wetlands that "significantly affect the chemical, physical, and biological integrity"[27] of a traditional navigable water are jurisdictional under the CWA. They have not done so here. (p. 37-38)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comment 1, 3, 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Documents Section I and II. See also Response to Comments Compendium Topic 9 – Science.**

5.59 The Definition of "Significant Nexus" is Circular and Inadequate.

> According to the proposed "significant nexus" definition, a water has a significant nexus if it significantly affects the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or territorial sea. This construction is circular – a *significant* nexus *significantly* affects the integrity of a downstream water. This does *not* provide clarity and violates the principle of providing new and useful information. The definition fails to adequately define significant. As a result, the regulated community is left without bright lines to know under what circumstances a nexus is "significant" and under what circumstances a nexus is not "significant." Furthermore, the definition of "significant nexus" provides no guide posts on how it will be applied by the Agencies.[28] (p. 38)

[27] *Rapanos*, 547 U.S. at 717.

[28] In the Comprehensive Environmental Response Compensation and Liability Act of 1980, Congress defined "owner or operator" as an owner or operator. This circular definition and lack of precision has caused confusion since CERCLA was enacted. See e.g. Long Beach Unified School District v. Dorothy B. Godwin California Living Trust, 32 F.3d 1364, 1368 (9th Cir. 1994) (asserting that circular definition of "owner or operator" is as helpful as "defining 'green' as 'green'").

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comment 5, 7, and 8, Sections 5.1, 5.2, 5.3, 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II. See Response to Comments Compendium Topic 4 – Other Waters, Topic 9 – Science.

5.60 EPA's Science Advisory Board (SAB) has voiced concerns about the inadequacy of the "significant nexus" definition provided in the proposed rule. SAB panel member Dr. Duncan Patten stated that the "[u]se of 'significantly' in the definition of 'significant nexus' is bothersome and there is little or no explanation (science or legal) of what 'significant effect' means."[29] Dr. Mark Murphy of the SAB panel commented, "The term 'significant' still needs better clarity. Non-technical significance is a vague concept, whether legally or politically approached. It is never defined in the proposed rule other than to say that it's not 'speculative' or 'insubstantial.'"[30]

> Clearly, the definition of "significant nexus" provided by the Agencies is inadequate. Based on this flawed definition, the "significant nexus" test will be applied inconsistently and will result increased uncertainty for the Agencies, the states, and the regulated community, including NAHB's members. The Agencies must go back to the drawing board to define "significant nexus" more clearly, in a more scientifically meaningful context, and in a way that can be easily and consistently replicated. (p. 38)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX. See Response to Comments Compendium Topic 9 – Science.

Louisiana Cotton and Grain Association (Doc. #12752)

5.61 Significant nexus, according to the proposed rule, "means that a water, including wetlands, either alone, or in combination with other similarly situated waters in the region, significantly affects the chemical, physical or biological integrity" of a TNW, interstate water, or territorial sea. "For an effect to be significant, it must be more than speculative or insubstantial." While the rule lists "factors" that can be evidence of chemical, physical or biological connectivity,[31] it fails to explain how they are weighted and how many factors are needed to establish "significance." Once again, this opens the door for arbitrary enforcement and in no way provides clarity as to what waters will be jurisdictional. Even more troubling is the proposed rule's assertion that a "hydrologic connection is not necessary to establish a significant nexus..."[32] With that statement, the EPA and the Corps have given themselves the ability to find a significant nexus in virtually every situation. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8, Preamble to the Final Rule Sections III

[29] 8/14/14 SAB Comments on the Proposed Rule at 68.
[30] *Id.* at 57.
[31] 79 Fed. Reg at 222 14.
[32] Id. at 22213.

and IV and Technical Support Document Sections I and II. See also Sections 5.1, 5.2, 5.3 and 5.4 and Response to Comments Compendium Topic 9 – Science. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

5.62 The proposed rule further states that "waters are similarly situated where they perform similar functions and are located sufficiently close together or when they are sufficiently close to a water of the United States so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water ... (emphasis added)." Once again, the agencies conveniently fail to define "perform similar functions." What type of functions will be deemed "similar?" How many "similar functions" are needed to reach the threshold of becoming "similarly situated?' How and when will a landowner be notified of this? This appears to be another open-ended definition that will enable the agency representative to arbitrarily decide whether or not the water at issue performs similar functions and would therefore be jurisdictional. How close is "sufficiently close?" Ten feet? Five-hundred feet? One mile? (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction, and Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters.**

5.63 "In the same region" is defined as the watershed that drains to the nearest TNW, interstate water or territorial sea.[33] The Boeuf Watershed, for example, covers nearly 3,000 square miles from Arkansas to Louisiana.[34] As written, the proposed rule would allow the EPA and the Corps to group so-called "similarly situated waters" as a "single landscape unit" to find a significant nexus – which does not require a hydrologic connection – over every wet feature in the Boeuf watershed, which covers 13 counties and parishes across the two states. It is beyond reasonable comprehension how the agencies believe that these loose terms within the proposed rule provide consistency and clarity to landowners regarding what waters are jurisdictional. (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction, and Response to Comments Section 5.1 and 5.2, Preamble to the Final Rule Sections III and IV Technical Support Document Sections I, II, VII, VIII and IX.**

Newmont Mining Corporation (Doc. #13596)

5.64 Amend the definition of "significant nexus" in (c)(7) to read: "The term significant nexus means that a water, including adjacent wetlands, ~~either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section)~~, significantly affects the chemical, physical or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. ~~For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section~~. A significant nexus analysis must assess the flow characteristics and functions of a water and the functions performed by all wetlands adjacent to the water to determine if they significantly affect the chemical, physical and biological integrity of a downstream traditional navigable water. Where an ephemeral drainage or intermittent stream has no adjacent wetlands, the Agency will consider the flow characteristics and functions of only the drainage or stream itself in determining whether it has a significant effect on the chemical, physical and biological integrity of downstream traditional navigable waters. For purposes of significant nexus analysis, the drainage or stream will be deemed the entire reach of the stream that is the same order (i.e., from the point of confluence, where two lower order streams meet to form the stream or drainage, downstream to the point that such stream enters the higher order stream). Principal considerations when evaluating a significant nexus include the volume, duration, and frequency of the flow of a water, the proximity of the traditional navigable water, and annual evaporation and precipitation rates in the area. Ephemeral drainages in areas where the evaporation rate exceeds the precipitation

[33] Id. at 22212.
[34] http://watersgeo.epa.gov/mwm/?layer=LEGACY_WBD&feature=8050001&extraLayers=nu11

rate, as well as small washes and ephemeral or intermittent streams characterized by low volume, infrequent, or short duration flow, will generally not be considered to have a significant nexus to a downstream traditional navigable water." (p. 40-41)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

The Mosaic Company (Doc. #14640)

5.65 Mosaic disagrees with the assertion that "significant" is not a scientific term. Scientists, and particularly statisticians, water resource, and water quality professionals, have a variety of statistical metrics at their disposal to determine when, where, and to what extent environmental variables affect each other and the strength of the relationship between them. A very basic example is the use of a confidence interval to verify statistical significance of one variable's effect on another. This provides quantifiable assurance that a variable or variables are influencing another. While the metrics that would be required to determine a threshold of "significance" sufficient to establish jurisdiction here would be more involved and complicated, the premise that significance cannot be quantified is erroneous. (p. 19)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Section II. See also Response to Comments Compendium Topic 9 - Science.

5.66 The agencies should advance scientifically defensible and quantifiable methods for determining "a measure of significance" that can be used to determine when a given water has the ability to significantly affect the chemical, biological, and physical integrity of traditional navigable waters.

- This is a necessary step to apply Justice Kennedy's standard accurately.
- The proposed rule must provide a quantifiable definition of "relatively permanent waters" that determines when a tributary connection meets the standard for "significance".
- Small, intermittent, and ephemeral conveyances should require case-by-case analysis to determine significant nexus and should not be jurisdictional by rule.
- Quantifiable metrics for determining the presence of subsurface connections and their influence on TNW are necessary to establish significant nexus. (p. 33)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

Hawkes Company (Doc. #15057)

5.67 The Proposed Rule Confuses Rather than Clarifies. The new rule proposes the use of Justice Kennedy's concurring opinion in Rapanos v. United States.[35] In that opinion, Kennedy proposes a "significant nexus" test. The proposed rule incorporates this test into the definition, proposing that waters with a "significant nexus" to traditional navigable waters ways are also "waters of the United States." In the rule, "significant nexus" is defined as "a water including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (1)(i) through (iii)." This standard does not clarify an individual's understanding of the rule, because there is no way of quantifying the value of the term "significant."[36] Organizations like the Western States Water Council have urged the agencies to quantify the term "significant," so it does not extend jurisdiction beyond what is reasonable. As written, "significant" could be read to consider every connection as a "significant" one, which would vastly expand the agencies' jurisdiction. By avoiding a solid rule for excluding categories of geographically isolated wetlands, for example, small ponds or wetlands not located within floodplains or Riparian areas, the federal government has essentially claimed any water that "might" have a "significant nexus." This creates a strong policy reason for the Corps and EPA to establish jurisdictional exclusions that would avoid the need for a "significant nexus" analysis.[37] (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and responses 3, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comments Compendium Topic 4 – Other Waters, Topic 7 – Features and Waters Not Jurisdictional, and Topic 9 – Science.

American Petroleum Institute (Doc. #15115)

5.68 The agencies assert that a "significant nexus" is any impact that is more than "speculative or insubstantial."[38] This interpretation dispenses with any possibility that a wetland may fall somewhere on the spectrum between significant and insubstantial. Are there no wetlands that have a *moderate* impact on navigable waters? The agencies' binary approach to defining significance is undermined by its statements elsewhere that there is a continuous gradient of significance among waters.[39] When Justice Kennedy wrote of wetlands that have a "speculative or insubstantial" impact on navigable waters, he was simply illustrating the opposite end of the spectrum of significance from those waters that have a significant nexus. The agencies cite to nothing in the Rapanos opinion to support that notion that Justice Kennedy understood waters to fall in one of only two categories.

[35] Rapanos v. United States (547 U.S. 715, 62 ERC 1481 (2006)).
[36] Amena H. Saiyid, Agencies Choose Science Over Metrics For Water, Wetlands 'Significant Nexus' Test, Bloomberg Law (Mar. 31, 2014).
[37] Id.
[38] 2014 Proposed Rule, 79 Fed. Reg. at 22,213, 22,262; see also id. at 22,264 (regulatory definition of significant nexus requires it to be "more than speculative or insubstantial").
[39] 2014 Proposed Rule, 79 Fed. Reg. at 22,193 ("The existence of a connection, a nexus, does not by itself establish that it is a 'significant nexus.' There is a gradient in the relation of waters to each other[.]")

In fact, his opinion is replete with statements recognizing the spectrum of impacts that various wetlands may have on navigable waters. (p. 19-20)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II and IX. See Response to Comments Compendium Topic 4 – Other Waters, Topic 7 – Features and Waters Not Jurisdictional, and Topic 9 – Science.

5.69 The agencies also fail to define what is "speculative or insubstantial." Terms with this level of indeterminacy cannot give landowners any meaningful guidance on whether their lands contain jurisdictional waters. In practical application, this standard would allow permitting authorities to exercise unfettered and standardless discretion to decide whether a landowner's water body is jurisdictional. This hardly demonstrates the agencies' professed goal to give clarity and certainty to those who would be subject to this regulation.

> The 2014 Proposed Rule fundamentally misapplies the significant nexus test in other ways. The 2014 Proposed Rule subtly but significantly changes the requirement to show "chemical, physical, and biological" effects on navigable waters to instead show "chemical, physical, or biological effects."[40] Until now, the significant nexus test has been met when the subject water "significantly affects the chemical, physical, and biological integrity of other covered waters more readily understood as navigable."[41] The 2014 Proposed Rule's preamble uses the term "and" repeatedly in its discussion of Justice Kennedy's significant nexus test in Rapanos, as well as in its review of the scientific literature, the legal analysis, and the discussion of the agency's scientific and technical expertise. Yet, in some sections, the preamble rephrases Justice Kennedy's test, selectively claiming, for example, that "Justice Kennedy was clear that waters with a significant nexus must significantly affect the chemical, physical, or biological integrity of a downstream navigable water[.]"[42] Under the newly-proposed regulatory language that defines "significant nexus" for the first time and incorporates it into the regulation of "other waters," a water only needs to "significantly affect[] the chemical, physical or biological integrity" of a jurisdictional water.[43] (p. 20)

Agency Response: See Section 5.0, Agency Summary Response, Introduction and summary responses to comments 5, 6, 7 and 8; Preamble to the Final Rule Sections III and IV, Technical Support Document at Sections I, II, and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science. See also Response to Comments Compendium Topic 4 – Other Waters.

[40] 2014 Proposed Rule, 79 Fed. Reg. at 22,263 (proposed definition of significant nexus in 33 C.F.R. § 328.3(c)(7)).
[41] 2008 Guidance at 1 (significant nexus standard based upon whether water in question will "significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters" (emphasis added)), 2-3 (same, quoting Justice Kennedy's opinion), 8 (same), 10 (same). This is consistent with the Clean Water Act itself. See 33 U.S.C. § 1251(a).
[42] 79 Fed. Reg. at 22,213 (emphasis added).
[43] 79 Fed. Reg. at 22,270 (definition of "significant nexus" in proposed 33 C.F.R. § 232.2(3)(vii) uses phrase "chemical, physical, or biological integrity" (emphasis added) and definition of "waters of the United States" in proposed section 33 C.F.R. § 232.2(1)(vii) incorporates that significant nexus test).

New Mexico Mining Association (Doc. #15158)

5.70 Not surprisingly, this flawed proposal exceeds EPA and the Corps' authority under the Clean Water Act, which only authorizes EPA and the Corps to regulate the "waters of the United States." This statutory term has been interpreted by the Supreme Court to mean either "traditional navigable waters'' or other bodies of water that have a "significant nexus" to such waters. To have a significant nexus, the water body at issue must "significantly affect" the chemical, physical and biological integrity of navigable waters in a manner that is more than speculative and insubstantial. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 2, 3, 7, 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II.

Independent Petroleum Association of New Mexico (Doc. #15653)

5.71 The 'significant nexus' standard must be based on science to expand the Corps Jurisdictional authority. The term 'significant nexus' is the heart of lPANMs concern in the new expanded definition of 'water of the United States' to include 'other waters' which encompass more than wetlands. In the proposal, the term "significant nexus" is defined as "a water including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affected the chemical physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition". The agencies further explain that "[F]or an effect to be significant, it must be more than speculative or insubstantial." Id. at 22263. However, in their analysis for this proposal, agencies immediately move away from the opening statement regarding the need for substantial evidence of a nexus stating that "significant nexus" is not itself a scientific term." *Id*, at 22193. Subsequent references to the term indicate the agencies believe the their significant nexus analysis is nothing more than ecologic rationale. *Id.* at 22204. In determining whether 'other waters' would be regulated as 'waters of the United States' this proposal does not provide regulated entities examples of 'other waters' *Id.* at 22212. Indeed, under the agencies proposal, all waters that are not already jurisdictional by category are evaluated under a "significant nexus" standard even if they have not been shown to perform critical functions such as pollutant trapping, flood control, and runoff storage. Instead the proposal would allow the agencies to complete a case specific analysis as to whether the waters at issue maybe evaluated as a single landscape with regard to their effect on the chemical, physical, or biological integrity, whether they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States". IPANM would submit that the analysis invited by the proposal for assessment of various types of waters within the proposed 'waters of the United states' definition clearly expands the agencies' jurisdiction well beyond the scope of either the plurality or the significant nexus standard posed in the *Rapanos* case. (p. 9-11)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 and 7, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III

and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Coeur Mining, Inc.(Doc. #16162)

5.72 The proposed rulemaking creates confusion instead of clarity. For example, the "significant nexus" is the lynchpin concept of the Agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

Dominion Resources Services, Inc. (Doc. #16338)

5.73 (…) [W]hile the "significant nexus" concept is a key component of the proposed rule, the rule provides no metrics or criteria for how to measure "significance" of effects. The proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance. Without clarification, the rule could be interpreted to suggest that the mere presence of any of these factors is sufficient to satisfy the significant nexus standard. (p.6)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 7 and 8, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Decision Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

Pennsylvania Aggregates and Concrete Association (Doc. #16353)

5.74 The proposed rule misconstrues the significant nexus standard and errors in its application of the significant nexus standard, which would result in significantly larger number of jurisdictional waters than Justice Kennedy's Rapanos opinion. The proposed rule states that it is reasonable to utilize the same standard for non-wetland waters, but does not explain why it is reasonable to apply the significant nexus test to tributaries and non-wetland waters that may not be serving the same functions for those traditional navigable waters as the wetlands functions will serve. Justice Kennedy's later interpretation of the significant nexus standard indicates that the standard cannot be applied to non-wetlands, but the proposed rule does so.

Additionally, the proposed rule fails to quantify significance or even explain when chemical, physical, or biological effects would be a significant nexus.

The agencies should revise the proposed standard so that effects must be "important" or "substantial" to satisfy the significant nexus standard. As written in the proposed rule, it is impractical for routine regulatory determinations. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 6, 7, and 8, Sections 5.1 and 5.2 Agency Summary Responses, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Lafarge North America (Doc. #16555)

5.75 The proposed rule would sweep in many marginally aquatic areas that only have a remote and insubstantial impact on traditional navigable waters. In effect, the rule appears to move beyond the concept of "significant nexus" and replace it with essentially "any nexus." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5, 7 and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Barrick Gold of North America (Doc. #16914)

5.76 (…) [T]he agencies propose a catchall category of "other waters," under which the jurisdictional status of waters that somehow escape the overly broad definitions of tributary and adjacent waters would be determined on a case-by-case basis, if a "significant nexus" to traditional navigable waters, interstate waters or the territorial seas can be established. 79 Fed. Reg. at 22,211. The proposed rule's articulation of what waters exhibit a "significant nexus" provides no certainty and leaves the ultimate scope of the definition of "waters of the United States" to be decided later, whether in guidance, in individual jurisdictional determinations, or in litigation. The proposed rule would not increase certainty regarding the agencies' jurisdiction.

> Importantly, the "significant nexus" concept underlies all of the agencies' proposals regarding the inclusion of tributaries, adjacent waters and other waters as "waters of the United States." As addressed below, Barrick believes the agencies have taken the "significant nexus" concept far beyond any reasonable reading of the text from which it was taken – Justice Kennedy's concurring opinion in Rapanos – and thus have proposed a rule that is inconsistent with the judicial guidance that inspired it. The agencies have proposed a definition of "significant nexus" that is so vague that it could be interpreted to mean almost anything. In fact, the agencies interpret the term inconsistently within the proposed rule. See infra Section III. Taken together, these problems with the proposed rule negate whatever certainty might have been delivered with a narrower proposed rule more in line with Rapanos and other Supreme Court cases. (p. 11)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 3, 4, 5, 7 and 8, Preamble to the Final Rule,

Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Agency Summary Responses for Sections 5.1, 5.2, 5.3 and 5.4.

5.77 Barrick appreciates the difficulty the agencies face in clarifying their Clean Water Act jurisdiction. The Supreme Court has removed what apparent certainty existed before *SWANCC*, and has failed to provide useful guidance that would assist the agencies in reestablishing appropriate boundaries. *Rapanos*, far from giving direction, demonstrated disarray among the nation's premier jurists regarding the appropriate reach of the Act. Optimally, Congress would step in now to clarify its intentions regarding the scope of Clean Water Act jurisdiction, and the constitutional basis of such authority. However, a congressional remedy is unlikely. As things stand, the agencies must conduct rulemaking, if at all, based on the direction they have from the Supreme Court. In that light, it is not clear why the agencies concluded Justice Kennedy's concurring *Rapanos* opinion would be the soundest basis upon which to proceed. No other Justice joined it. The plurality dismissed it harshly, and the dissenting justices rejected it as well. Its central idea – the significant nexus – is not a statutory or regulatory term, but a phrase employed by the Supreme Court, not in any holding, but in a narrative describing a previous holding. Compounding the issue, the agencies have defined the term "significant nexus" so vaguely that it has no discernible meaning. The proposed rule's definition of "significant nexus" as the *sine qua non* of Clean Water Act authority under these circumstances is a tenuous basis for defensible rulemaking. (p. 11-12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Decision Document Sections I and II.

5.78 The Agencies' Proposed Definition of "Significant Nexus" Is Impermissibly Vague. Even if the agencies could defend their embrace of the "significant nexus" concept as consistent with Supreme Court precedent, the proposed rule fails to articulate a "significant nexus" standard that is understandable and usable by the regulated community. As proposed, "[t]he term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region …, significantly affects the chemical, physical, or biological integrity of [traditional navigable waters, interstate waters or territorial seas]." 79 Fed. Reg. at 22,263. In other words, according to the agencies, the nexus is significant if it is "significant." The definition is a logical tautology; it is a formula that is true in every possible interpretation. On those grounds alone it fails as a valid regulation. Neither the definition nor other parts of the proposed rule provide any objective measure or criterion by which to establish "significance." Significance pursuant to this rule would be in the judgment of each Corps District or EPA official who is responsible for making the determination. A concept this basic to the agencies' proposed regulatory scheme must be defined more precisely in order to be valid. Indeed, the definition is so vague that the agencies will likely struggle to enforce any controversial jurisdictional determination made under it without running afoul of the fair notice doctrine. *See General Electric Company v. EPA*, 53 F.3d 1324 (D.C. Cir. 1995).

> The only qualification the agencies could muster to cabin this vague test is that "[f]or an effect to be significant, it must be more than speculative or insubstantial." 79 Fed. Reg. at 22,263. The language comes directly from Justice Kennedy's

Rapanos opinion. But this explanatory language does not provide the substance the definition of "significant nexus" is lacking. With this language as the only qualifier, the definition could be read to mean that any nexus that is more than speculative or insubstantial is "significant." Thus, in the proposed rule, the agencies have been able to articulate only what is not a significant nexus. They have failed to define adequately what constitutes a significant nexus in a way that is useful to regulated entities or agency decision-makers. The definition is too vague to support *per se* jurisdiction over every tributary and adjacent water in the United States, and too lacking in objective criteria to produce consistent and reasonable case-by-case determinations. Where expansive views of Commerce Clause authority once underlay the agencies' broad assertion of Clean Water Act jurisdiction, the "significant nexus" concept would now operate under the proposed rule to justify similarly broad jurisdiction over "waters" remote from any traditionally navigable water. Regardless of the analysis used, such broad authority is not provided for by the Clean Water Act. *SWANCC*, 531 U.S. at 173-174. (p. 12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 2, 4, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX.

5.79 (…) The agencies' assertion of jurisdiction over all tributaries and adjacent waters are not grounded in fact-finding, but rather rely on generalizations made in the Connectivity Report about the functions of stream systems drawn from numerous scientific studies undertaken for various purposes, all unrelated to the proper scope of jurisdiction under the Clean Water Act. It is not necessary to quarrel with the purposes and findings of these studies to conclude they are inadequate as a basis for Clean Water Act jurisdiction. The agencies' proposed definition of the term significant nexus – and the other definitions and regulatory determinations in the proposed rule that rely upon it – extend jurisdiction over features that are remote from any navigable-in-fact water, that carry minimal flows, and that may never actually contribute flow at all to any traditional navigable water, interstate water or territorial sea. These are all factors that Justice Kennedy warned may place waters beyond the reach of the Clean Water Act. Such features cannot reasonably be viewed as "navigable waters" as the term is defined in the Clean Water Act. (p. 16)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Compendium Topic 3 - Adjacent Waters, Topic 4 - Other Waters, Topic 7 - Features and Waters Not Jurisdictional, Topic 8 - Tributaries, and Topic 9 – Science.

5.80 The "Significant Nexus" Definition is Flawed (…) Because "other waters" would be assessed on a case-by-case basis, this section of the preamble contains the most extensive discussion of the "significant nexus" concept that underpins the entire rule. 79 Fed. Reg. at 22,211 – 14. The agencies reveal here an expansive view of what can constitute a "significant nexus" that could result in broader jurisdiction than existed under the

"migratory bird rule" which was rejected as too broad in *SWANCC*. The agencies propose:

- Significant nexus can be established for a single water or for aggregated "similarly situated" waters. 79 Fed Reg. at 22,211 (discussed below).
- Significant nexus depends upon the size of the water feature and its distance from the traditional navigable water. 79 Fed. Reg. at 22,214.
- Where waters are aggregated, the "density" of the waters is a relevant factor. *Id.*
- Significant nexus can depend upon functions of waters, alone or aggregated, including:
  - sediment trapping
  - nutrient recycling
  - pollutant trapping and filtering
  - retention or attenuation of flood waters
  - runoff storage
  - export of organic matter
  - export of food resources, and
  - provision of aquatic habitat. 79 Fed. Reg. at 22,213.

- Significant nexus does not depend upon a hydrologic connection. Either the absence or the presence of a hydrologic connection can be the basis of jurisdiction. Id.
- The significant nexus can be based on physical, chemical or biological "connectivity." 79 Fed. Reg. at 22,214. In each case, numerous factors – mentioned but not explained in detail – can be evidence of connectivity.

The proposed rule does not provide any structure or process for making the nexus determination, other than that there will be an administrative record and that the record will contain a "clear rationale" for the nexus determination. Id. There are no metrics, no reliable or objective way to organize or rank the factors, or to measure significance. The implication is that any evidence of "connectivity" will result in a significant nexus determination. Where waters are aggregated, the agencies acknowledge that aggregation presumably always will result in a significant nexus determination. 79 Fed. Reg. at 22,215. Thus, an aggregation decision is tantamount to an assertion of jurisdiction over waters in an entire region (or even larger area, as discussed below). (p. 22-23)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Section 5.3 Agency Summary Response and summary response to comment 2, and Section 5.4 Agency Summary**

Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Compendium Topic 3 - Adjacent Waters, Topic 4 - Other Waters, Topic 7 - Features and Waters Not Jurisdictional, Topic 8 - Tributaries, and Topic 9 – Science.

5.81 And most perplexing, "connectivity" that establishes a significant nexus may be the lack of any hydrologic connection between the water in question and the traditional navigable water.[44] This idea in the proposed rule comes directly from dictum in Justice Kennedy's Rapanos opinion: "A hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water or the territorial seas." See 79 Fed. Reg. at 22,213 – 14. The agencies' reasoning here exposes a basic flaw in its "other waters" proposal, and in the entire proposed rule. In the case of tributaries and adjacent waters, the agencies have determined that a significant nexus exists categorically, but in each case, there should be evidence of a hydrologic connection of some kind.[45] For the first time in discussing "other waters," the agencies propose the idea that a significant nexus can be the absence of a hydrologic connection. However, the basis of agency decision-making in all three categories is the "significant nexus." See 79 Fed. Reg. at 22,194 – 06. The agencies cannot interpret the same term in the same rulemaking to mean one thing for some categories of waters, but something else for other categories. The consistent and clear use of terminology in a proposed rule should be a fundamental requirement in rulemaking; without such consistency, there can be no rational basis for the proposed rule. (p. 23)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, 5, 7, and 8, Agency Summary Responses Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. The agencies use the term "significant nexus" consistently throughout the rule. For tributaries and adjacent waters, the science supports the agencies' determination that these waters should be categorically jurisdictional because they have significant chemical, physical, and biological connections to and effects on traditional navigable waters, interstate waters, or the territorial seas. While (a)(7) and (a)(8) waters are not categorically jurisdictional, the science and the agencies experience and expertise indicate that these waters can have significant chemical, physical, and biological connections to and effects on traditionally navigable waters, interstate waters, or the territorial sea, which is why they are subject to case-specific "significant nexus" determinations under the final rule.

In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, in some cases the lack of a

[44] See 79 Fed. Reg. at 22,213 – 14.

[45] Tributaries must "contribute flow." See 79 Fed. Reg. at 22,201. Neighboring "adjacent waters" by definition have hydrologic connections via riparian areas, floodplains, confined surface connections or shallow underground connections. 79 Fed. Reg. at 22,207 – 08.

hydrologic connection would be a sign of the water's function in relationship to the traditional navigable water, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

5.82 Despite these problems, the agencies could address many of Barrick's concerns with the proposed rule by taking the following actions: (…)

- Modify the definition of "significant nexus" to include objective measures of significance, such as quantity of flow, frequency of flow, and distance to traditional navigable waters. (p. 29)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comment 7 and 8, Section 5.3 Agency Summary Response and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Independent Petroleum Association of New Mexico (Doc. #16915.1)

5.83 The 'significant nexus' standard must be based on science to expand the Corps Jurisdictional authority The term 'significant nexus' is the heart of IPANMs concern in the new expanded definition of 'water of the United States' to include 'other waters' which encompass more than wetlands. In the proposal, the term "significant nexus" is defined as "a water including wetlands, either alone or in combination with other

similarly situated waters in the region, significantly affected the chemical physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition". The agencies further explain that "[F]or an effect to be significant, it must be more than speculative or insubstantial." Id. at 22263. However, in their analysis for this proposal, agencies immediately move away from the opening statement regarding the need for substantial evidence of a nexus stating that "significant nexus" is not itself a scientific term." Id. at 22193. Subsequent references to the term indicate the agencies believe the their significant nexus analysis is nothing more than ecologic rationale. Id. at 22204. In determining whether 'other waters' would be regulated as 'waters of the United States' this proposal does not provide regulated entities examples of 'other waters' Id. at 22212. Indeed, under the agencies proposal, all waters that are not already jurisdictional by category are evaluated under a "significant nexus" standard even if they have not been shown to perform critical functions such as pollutant trapping, flood control, and runoff storage. Instead the proposal would allow the agencies to complete a case specific analysis as to whether the waters at issue maybe evaluated as a single landscape with regard to their effect on the chemical, physical, or biological integrity, whether they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States". IPANM would submit that the analysis invited by the proposal for assessment of various types of waters within the proposed 'waters of the United states' definition clearly expands the agencies' jurisdiction well beyond the scope of either the plurality or the significant nexus. (p. 9-11)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 and 7, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Independent Petroleum Association of America, et al. (Doc. #18864)

5.84 The Term "[S]ignificant [N]exus" Is A Legal Term That Is Being Held Solely To A Broad Application of Existing Scientific Analyses Resulting In An Unlawful Regulatory Definition.

The term "significant nexus" means that "a water including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this definition), significantly affected the chemical physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition. For an effect to be significant, it must be more than speculative or insubstantial." *Id.* at 22263. The agencies immediately move away from the opening statement of the Executive Summary to the proposal stating that "significant nexus" is not itself a scientific term." *Id.* at 22193. Losing sight of the application of the concept of "significant nexus" within the context of the law, the agencies refer to their significant nexus analysis as an ecological rationale. *Id* at 22204. The significant

nexus test proposed is an improper and unlawful focus upon a selected science of "relative strength of influence" in combination with loosely defined ecological factors.

As described in the proposal, other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition. The analysis invited by the proposal for assessment of various types of waters within this definition is quite detailed and provides a very good example of the unlawful reach beyond the CWA goals of protecting "navigable waters." Specifically, the proposal requires the following analysis:

- "[W]etlands" are normal circumstance wetlands, therefore it would be a factual question as to what would constitute normal. If the goal is to regulate all waters, the decision as to what is normal would be determined based upon the factors that would default to a larger area which would lead to a more encompassing area for the purpose of a significant nexus interpretation.
- "[S]imilarly situated waters." The proposal provides the significant nexus test must consider a water "alone or in combination with similarly situated waters." This language invites a regulatory decision to combine waters in a manner that has not been typical for the CWA regulatory programs. Further guidance is offered in the definition that provides "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a water of the United States, so that they can be evaluated in a single landscape unit ... "The stated goal is that of creating a "landscape unit" to assess the water's effect on the chemical, physical, or biological integrity of the TNW. The definition suggests a "landscape unit" is to be created by the regulator and it will constitute one of the following:

  (1) waters that perform similar functions and located sufficiently close together; or

  (2) waters that are sufficiently close to a "water of the United States."

  The regulator is invited to gather different, although similar, waters that are "sufficiently close" to develop a "landscape unit." The collection of waters for the purpose of determining the significant nexus provides for an inclusive identification of waters (to include separate water bodies) that are protected.

  Then, cautioning against speculative or insubstantial conclusions about effect on those waters, the definition asks, "what is the chemical, physical or biological influence on integrity." Finally, once that analysis is completed one may then determine "significant nexus." This labored analysis creates a presumption of gathering waters to identify a map of protected "water of the United States." That resulting map is expansive and therefore predicts a more frequent determination of "significant nexus." The proposed definition of "waters of the United States" has embedded within its defined terms a regulatory determination that is a remarkable

expansion from the regulatory definition that exists today, and is in direct contravention to the statutory and Supreme Court case law. (p. 24-25)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5, 7 and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Marcellus Shale Coalition (Doc. #18880)

5.85 The "significant nexus" is the fundamental concept of the agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus, but provides no guidance on when the presence of these factors rise to the level of significance; instead the proposed rule suggests that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Oregon Cattlemen's Association (Doc. #5273.1)

5.86 …[t]he phrase "significant nexus" is not in any of the provisions of the CWA; rather, it was first used by the Supreme Court in SWANCC in its interpretation of its earlier holding in Riverside Bayview. SWANCC, 531 U.S. at 184 (citing Riverside Bayview, 474 U.S. at 134. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 1, Preamble to the Final Rule Section III and Technical Support Document Section I.

Cattle Empire (Doc. #8416)

5.87 The proposed rule also creates a new proposed definition of "significant nexus". This term was created by USSC justices and since has been used to determine if "other waters" fall under the jurisdiction of the EPA or USACE since 2006. The preamble, FR 22193 states that "significant nexus" is not itself a scientific term. Why is EPA just now defining this term? What scientific information is EPA/USACE basing this definition on? The proposed definition of "significant nexus" is ambiguous at best leaving us to wonder how on earth a regulator would go about proving a "significant nexus" existed between "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a

'water of the United States'..." Who gets to decide what "sufficiently close" means? Could it be the information is contained in the "EPA's Office of Research and Development draft peer-reviewed synthesis of published peer-reviewed scientific literature discussing the nature of connectivity and effects of streams and wetlands on downstream waters" (FR pg 22190), otherwise known as the "Report"? We will address the issue of the "Report" later on in these comments. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 3, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Indiana State Poultry Association (Doc. #13028.1)

5.88 As proposed, the agencies either have authority over water directly by definition or through establishing a "significant nexus" to the waters under the expanded definitions. By allowing the agencies to establish a "significant nexus" in each situation, nearly all water can be defined as under the agencies' authority. Furthermore, if regulators are not pursuing that perspective directly, there are third parties who will be prepared to force these issues in the courts. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Farm Credit West (Doc. #13060)

5.89 … the Associations are very concerned about the following aspects of the proposed rule and the impact this could have to agriculture: …

Creates a case-by-case significant nexus test for remote waters and wetlands (the "other" waters) that is so broad that few remote water and wetlands will fall outside of the definition of WOTUS. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Rose Acre Farms (Doc. #14423)

5.90 The proposed rule also fails to adequately define the word "significant" in relation to "significant nexus". Rather than giving any clarification it uses a circular argument basically saying that a significant nexus is a nexus that is significant or substantial. This provides no guidance whatsoever to either landowners or those enforcing the regulation on a case-by-case basis. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Kansas Agriculture Alliance (Doc. #14424)

5.91 While U.S. Supreme Court decisions allow for waters that have a significant nexus to TNW to be included in WOTUS, the agencies have exceeded their authority in defining the term and interject an unreasonable amount of speculation that provides less, not more, certainty to the regulated community. To provide clarity, the agencies should adopt the *Rapanos* pluralities' definition that significant nexus applies only to waters adjacent to TNW that have a physical connection to the water that exhibits a relatively permanent flow to the TNW. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

5.92 The agencies go on to state that a significant nexus can be found by examining a "water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." Not only does this definition provide no objective measure for the regulated community to determine jurisdiction, it expands on Justice Kennedy's definition of significant nexus.[46] Kennedy required that a significant nexus contain a chemical, physical, and biological effect on the integrity of a TNW. The agencies have completely ignored this all important conjunction and illegally expanded its jurisdiction. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5 , 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary

[46] 79 Fed. Reg. at 22263.

Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

North American Meat Association and American Meat Institute (Doc. #14454)

5.93 The "Significant Nexus" Standard Overreaches. The proposed rule provides that any effect on jurisdictional waters not thought to be "speculative or insubstantial" will be considered "significant." The agencies propose that, if there is any effect, it is significant. This concept expands federal authority beyond the breaking point and is unjustified. The "significant nexus" concept came about in a narrow context involving wetlands areas that abutted, and "inseparably bound up with," traditionally navigable waters. The proposal, however, would require an analysis of whether an isolated water could theoretically affect, or be affected by, any other water within a region of indeterminate size. Because the proposed definition of "significant nexus" unjustifiably ensures that virtually any impact on downstream waters will be deemed significant it should be withdrawn. (p. 8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5 , 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

California Association of Winegrape Growers (Doc. #14593)

5.94 Faced with the large uncertainty of an undefined "significant nexus" test and the attendant risk of overbroad ad hoc applications of that standard, Justice Kennedy's opinion in Rapanos does appear to provide a few guiding principles as follows[47]:

1. The wetland, tributary, or other potential "water of the United States" must have a "significant nexus" to an actual "navigable water" in the "traditional sense" (that is, in the sense of a water that is "navigable in fact" and in some way connected to interstate commerce).
2. The must be an actual "hydrologic connection," in addition to any ecological or chemical connection, and this connection must be more than "speculative" or "insubstantial."
3. For the connection to be a "significant nexus," it must "significantly affect" some water of the United States, whereas the "significance" of a connection must be assessed in terms of the central "goals and purposes" of the Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

[47] All arguments taken from, and based upon Justice Kennedy's opinion in Rapanos pp. 779-786.

4. In asserting and exercising their jurisdiction, the agencies must make a factual "showing" sufficient to establish the existence of a "significant nexus" and "necessary to avoid unreasonable application of statute" in light of the "potential overbreadth of the Corps' regulations," including especially the constitutional risks associated with the federalism and Commerce Clause-related concerns raised in SWANCC.
5. To be "reasonable," such an assessment must not be based on "an undue degree speculation" and must "identify substantial evidence supporting [the agency's] claims."
6. In addition to "substantial evidence supporting [the agency's claims]" (or, rather, as a part of that "substantial evidence"), the factual record and documentation in every case must include consideration of "factors relevant to the jurisdictional inquiry" sufficient to "permit application of the appropriate legal standard," or in Justice Kennedy's view whether there is a "significant nexus with navigable waters."

Therefore, when making jurisdictional determinations, the Agencies must incorporate the above points from Justice Kennedy's opinion regarding "reasonable" findings. In addition, any formal rulemaking should incorporate these above factors. (p. 8-9)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 2, 3, 4, 5, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

5.95 The Proposed Rule disregards Justice Kennedy's test for significant nexus by consistently substituting "or" for "and." (See Guidance, pp. 7, 13.) This improper revision not only disregards Justice Kennedy's "significant nexus" test, it also disregards the stated purpose of the CWA. Such arbitrary substitutions lower the threshold for finding a nexus and vastly expand jurisdictional determinations. Further, a finding of chemical, physical, and, biological integrity of covered waters must be based on sound science. The Proposed Rule makes no mention of appropriate scientific findings that are needed to conclude the chemical, physical, and biological integrity of the covered water is significantly affected. (p. 12)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5, 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

National Council of Farmer Cooperatives (Doc. #14597)

5.96 We also note that the term "significant nexus" fails to have any meaning as it is used in the proposed rule. The definition is circular (stating, essentially, that a significant nexus is a nexus that is significant) and it will not support objective determinations of jurisdiction. The Agencies should work with the science community to explore more substantively the gradient in effects that exists between nonnavigable and navigable waters, recognizing that in the final analysis it will be the Agencies' policy call as to how to craft that science into a meaningful definition for that term. But given how arbitrary the definition is now, we do not believe the courts will grant the Agencies' deference in its use. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Indiana Corn Growers Association (Doc. #14933)

5.97 Of great alarm to Indiana farmers in the WOTUS rule is the new theory of "significant nexus." Under the proposed rule, all "tributaries," "impoundments" of tributaries, and all wetlands and wet areas "adjacent" to these tributaries are defined as WOTUS. The existence of this so-called "significant nexus" would give the Agencies' jurisdiction over these waters without consideration of each unique characteristic and occurrence. Unfortunately, there is little clarity as to how these definitions are created.

> It can be argued that, under the proposed rule, all tributaries, whether they flow after significant rainfall, a few weeks of the year during a season, or during all seasons are categorically WOTUS. These subjective standards would also be used to define case-by-case whether "other" remote, isolated wetlands or wet areas fall under the jurisdiction of WOTUS. We believe there should be objective measures for defining "significant nexus" and how a remote "other" water is defined. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 7 – Features and Waters Not Jurisdictional, Topic 8 Tributaries, and Topic 9 – Science.

National Corn Growers Association (Doc. #14968)

5.98 Proposed Definition of Significant Nexus is Arbitrary in its Nature and Applicability--Furthermore, even in the proposed rule's incorrect conceptualization of significant nexus in terms of chemical, physical or biological effects, the Agencies' did not draw upon

science, scientific inquiry, or some other reasonably objective process to establish some meaningful standards by which "significance" or "substantial" can be judged. As a result, the proposed significant nexus standard is highly arbitrary. The proposed rule states that significant nexus means that "a water, including wetlands, either alone or in combination with other similarly situated waters in the region…significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial." (See 79 FR 22263, April 21, 2014). In effect, this definition says the nexus is significant if it is significant and substantial.

> This is basically meaningless and in effect it is a simple binary standard; if there is a connection, it is significant, and if no connection it is not. The rule defines significance tautologically. As such this standard does not merit the traditional deference the courts give to the Agencies on matters of the reasonable application of science. (p. 19)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

United Egg Producers (Doc. #15201)

5.99 What Does "Significant" Mean? The proposed rule fails to give any meaning to the word "significant" in the phrase "significant nexus." It says, in effect, that a significant nexus is a nexus that is significant or substantial. This is highly arbitrary and has already led to unlawful decisions in the proposed rule (e.g. all tributaries are categorically jurisdictional) and will lead to subjective, unlawful decisions in the case-by-case decisions in the field. We strongly encourage the Agencies to work with the scientific community to investigate the degree of effects of individual non-navigable water on the navigability characteristics of the downstream navigable waters. With that, the Agencies could develop a reasonable, well-informed and more objective definition of significant nexus that does not define itself in a circular fashion. Should the Agencies not agree on this question of giving navigability meaning, we still strongly encourage them to work with the science community to help the Agencies specify in meaningful terms what are significant or substantial chemical, physical or biological effects. Either way, in failing to define the term significant in meaningful fashion, the door is left wide open for costly and disruptive citizen litigation. This definitional issue must be addressed. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5, 7 and 8, See Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Jensen Livestock and Land LLC (Doc. #15540)

5.100 Jensen Livestock and Land LLC are deeply disappointed in the agencies refusal to define clearly when the significant nexus test is satisfied. For a livestock producer, the vague definition provided by the agencies does not provide an adequate test that a producer can apply on the ground. According to the proposed rule significant nexus means that a water "either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(3) of this section. For an effect to be significant it must be more than speculative or insubstantial." (emphasis added)[48] Unfortunately, instead of putting Justice Kennedy's "significant nexus" test into an objective form that landowners could understand and readily apply, the agencies simply are attempting to put his words directly into the regulation, with one key exception/expansion. It is ironic that the agencies continue to state that the decisions in Rapanos are unclear and confusing, and yet put those words into their proposal verbatim and argue that it is providing clarity. It was unclear when Justice Kennedy wrote them, and the agencies have not done their job of taking those words and putting them in a form that the regulated public can use in the "real world." (p. 21)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5, 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

5.101 As it stands, Jensen Livestock and Land requests the agency remove the following words from their definition of significant nexus: "either alone or in combination with other similarly situated waters in the region (i.e. the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(3) of this section." To make the definition reflect the plurality decision and provide clarity the definition should recognize that the water needs a physical connection, which makes the feature indistinguishable from a water identified in paragraphs (a)(1) through (3).[49] For analysis purposes, additional clarity can also be realized by clarifying where a water feature begins and ends. We would suggest that a water feature is a discreet area that conveys or contains water, which starts and stops each time the conveyance intersects with a tributary of the conveyance or merges with another conveyance, wetland, or impoundment.

> Jensen Livestock and Land LLC believe this definition is a key term that the agencies were charged to further define, and their lack of completion of this task renders this proposed rulemaking useless. The agencies should withdraw the proposed rule, work with the regulated public on providing a definition that is clear, understandable, and also comports with the Supreme Court decisions. Then, and

[48] Proposed Rule at 22211-13.

[49] Rapanos, at 37 (J. Scalia, wetlands are waters of the United States if they bear the "significant nexus" of physical connection, which makes them as a practical matter indistinguishable from waters of the United States.").

only then, should the agencies re-propose such a rule for public comment. (p. 21-22)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science. The Agency has finalized the rule – see Response to Comments Compendium Topic 13 – Process Concerns and Administrative Procedures.**

Peltzer & Richardson, LC (Doc. #16360)

5.102 The proposed rule is not specific enough regarding the term "significant". It defines the term "significant nexus" as a "water, including wetlands, either alone or in combination with other similarly situated waters in the region, that significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." The proposed rule also states "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section."

The rule does not state what when a chemical, physical or biological effect, caused by the contributing water body, may be considered significant, and when it may not, leaving the conclusion that ANY such effect may be considered significant. The Kaweah and Tule Commenters suggest that additional qualifiers should be added, including that the significant effects must be continual and long lasting, actual (as opposed to theoretical), and more than ephemeral in nature. (p. 4)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

North Dakota Farmers Union (Doc. #16390.1)

5.103 The proposed rule turns on the concept significant nexus. The Agencies define the term to mean "that a water, including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3). For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the

chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3)." We are concerned that the Agencies, basing the proposed rule on Justice Kennedy's concurring opinion in Rapanos, have gone beyond Justice Kennedy's language. Rapanos v. U.S., 547 U.S. 715 (2006). First, the Rapanos language brings wetlands into the "navigable water" category if they "significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" Rapanos, 547 U.S. at 780. By only requiring one component to demonstrate the requisite nexus, the Agencies have expanded the definition. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Section I.

The Walker River Irrigation District (Doc. #16567)

5.104 Moreover, it is not at all clear that Justice Kennedy ever intended the significant nexus analysis which he articulated with respect to wetlands, should be applied to tributaries to interstate waters which did not meet the traditional navigable water test. The Kennedy concurrence requires there be a "significant" nexus. The water in question must "significantly affect the chemical, physical and biological integrity of other covered waters." The proposed rule stands that requirement on its head by providing that everything that is "not speculative or insubstantial" is "significant." (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 6, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, III, IV, VII, VIII and IX.

Missouri Corn Growers Association (Doc. #16569)

5.105 According to EPA officials, the primary objective of both the proposed rule and the draft connectivity report is to bring clarity to the Clean Water Act's jurisdiction of regulated waters. This is partly in response to Supreme Court rulings that addressed when such waters are jurisdictional. Specifically, in the Supreme Court's 2006 Rapanos v. United States ruling, the justices split over what test to use for determining jurisdiction. Justice Antonin Scalia ruled in the court's plurality decision only "relatively permanent waters" that hold a "continuous surface connection" to traditionally navigable water can be considered jurisdictional. While Justice Anthony Kennedy ruled in a concurring opinion that waters that share a "significant nexus" to navigable waters can be regulated under the law.

> The proposed rule adopts the Kennedy test, defining "significant nexus" as a connection that "significantly affects the chemical, physical, or biological integrity" of a jurisdictional water body. In using this standard, the proposed rule asserts blanket default jurisdiction over virtually all tributaries as well as wetlands and waters located in floodplains and riparian areas.
>
> Congress and the Supreme Court intended there to be a limit on the federal reach of waters subject to the Federal Clean Water Act. However, the EPA has chosen not to set limits on its reach nor define or quantify what a "significant" connection or nexus is thereby declaring all connected waters, by default, to be jurisdictional.

This rationale does not follow the Supreme Court decision and we request EPA remove the "nexus" provision of the rule. With the inclusion of the nexus test in the proposed rule, EPA not only has expanded jurisdiction, but has done so relying only on the minority opinion of the Supreme Court in the Rapanos case. We believe the proposed WOTUS rule, through its use of the nexus test and the "Ordinary High Water Mark" criteria, will extend jurisdiction to waters well beyond what was contemplated under Justice Scalia's plurality opinion in Rapanos. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 2, 3, 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3, 5.4. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4, Other Waters, Topic 8 – Tributaries and Topic 9 – Science.

Montana Stockgrowers Association (Doc #16937)

5.106 Our organizations have concerns over the process of how the significant nexus test will be applied in the field. For a livestock producer, the lack of clear process provided in the rule, does not provide an adequate test that a producer can apply on the ground. We are also concerned with the ambiguity of the term "significant" in significant nexus, as being, "For an effect to be significant it must be more than speculative or insubstantial." We request the agencies remove the following words from their definition of significant nexus: "either alone or in combination with other similarly situated waters in the region (i.e. the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(3) of this section." We recommend a definition that reflects the plurality decision of Rapanos and provides clarity, which recognizes that the water needs a physical connection and makes the feature indistinguishable from a water, identified in paragraphs (a)(1) through (3). Rapanos, at 755 (J. Scalia, wetlands are waters of the United States if they bear the "significant nexus" of physical connection, which makes them as a practical matter indistinguishable from waters of the United States."). (p. 9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 1, Section 5.1, 5.2, 5.3 and 5.4, Preamble Sections III and IV and Technical Support Document Sections I and II.

Iowa Soybean Association (Doc. #17115)

5.107 The rule treats the significant nexus language as if it is the law of the land rather than the opinion of one Supreme Court Justice. The rule contains no definition of significant nexus but does define a tributary as a landscape feature where water channels leave a mark on the land and eventually reach a navigable water. This would often include water running off a field in a rainfall event, even though that runoff is considered sheet flow. Congress did not intend for sheet flow to be regulated. Yet through the new tributary definition and the significant nexus language, farm fields with wet areas can be pulled into jurisdiction. We're also concerned that the agencies intend to aggregate the flow from several fields (owned by several farmers) to create significant nexus. (p. 1-2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Schroeder Law Offices, P.C. (Doc. #18873)

5.108 "Significant Nexus" is not defined with particularity. Depending on how far the EPA wants to interpret the "significant nexus" application of the proposed rule, interconnectivity with underground water to surface streams might be included, so even water that is not returned to a navigable waterway, in many ways may still be subject to federal jurisdiction. Filippini's water resources come largely from mountain run-off, some of which then infiltrates back into the ground. It is important to define the extent of interconnection as it relates to the "Significant Nexus" test. This is a slippery slope and appears to be a catch-all category to over-reach the EPA's jurisdiction. (p. 2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, and VII, VIII, and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.**

Goehring Vineyards, Inc. (Doc. #19464)

5.109 The "significant nexus" concept is derived from the United States Supreme Court cases in which Court applied the "significant nexus" test to wetlands. However, the Proposed Rule applies the significant nexus standard to all categories of waters, including tributaries, ditches, wetlands, and "other waters" that, under current regulation, are

deemed jurisdictional only if a nexus is found to interstate commerce. (See Guidance, pp. 7-10.)

> The stated purpose of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a), emphasis added.) Justice Kennedy, in his opinion in Rapanos requires that wetlands must "significantly affect the chemical, physical, and, biological integrity of other covered waters" in order to find a nexus. (Rapanos, supra, 547 U.S. 780.) Specifically, Justice Kennedy concluded:
>
> 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). 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." (Rapanos, supra, 547 U.S. 779-80, emphasis added.)
>
> The Proposed Rule disregards Justice Kennedy's test for significant nexus by consistently substituting "or" for "and." (See Guidance, pp. 7, 13.) This improper revision not only disregards Justice Kennedy's "significant nexus" test, it also disregards the stated purpose of the CWA. Such arbitrary substitutions lower the threshold for finding a nexus and vastly expand jurisdictional determinations. Further, a finding of chemical, physical, and, biological integrity of covered waters must be based on sound science. The Proposed Rule makes no mention of appropriate scientific findings that are needed to conclude the chemical, physical, and biological integrity of the covered water is significantly affected. (p. 11-12)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 5 , 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Indiana Association of County Highway Engineers and Supervisors (Doc. #4294)

5.110 The broadened definition of small waters to include "significant nexus" will likely expand the number of county owned facilities affected by the Corps jurisdiction. Increasing jurisdictions and requirements will directly impact county budgets by delaying

projects, increasing permitting and mitigation costs, and increasing construction costs. With limited funding resources, counties will likely reduce the number of projects or base project decisions on permitting and mitigation costs rather than safety. Indiana county highways have a rate of 34.3 serious injuries per 1000 collisions[50], which is the highest rate of serious injuries on any roadway system in Indiana. We cannot afford to let the higher costs associated with this definition affect the choices we make on our roads. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

Alameda County Cattlewomen (Doc. #8674)

5.111 ACCW are deeply disappointed in the agencies refusal to define clearly when the significant nexus test is satisfied. For a livestock producer, the vague definition provided by the agencies does not provide an adequate test that a producer can apply on the ground. According to the proposed rule significant nexus means that a water "either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, *or* biological integrity of a water identified in paragraphs (a)(1) through (a)(3) of this section. For an effect to be significant it must be more than speculative or insubstantial." (emphasis added)[51] Unfortunately, instead of putting Justice Kennedy's "significant nexus" test into an objective form that landowners could understand and readily apply, the agencies simply are attempting to put his words directly into the regulation, with one key exception/expansion. It is ironic that the agencies continue to state that the decisions in *Rapanos* are unclear and confusing, and yet put those words into their proposal verbatim and argue that it is providing clarity. It was unclear when Justice Kennedy wrote them, and the agencies have not done their job of taking those words and putting them in a form that the regulated public can use in the "real world." (p. 21)

Agency Response: Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 6, 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

5.112 Our members will be directly hurt by the agencies lack of clarity with regards to their definition of "significant nexus." Isolated waters that may or may not satisfy this ill-defined test crisscross livestock producers' pastures and fields. There are numerous activities that take place on these lands that do not qualify for any exemptions under the CWA, and because of the proposed rule's failure to adequately define these important terms, puts them at increased risk of violating the CWA. The agencies' replacement of the word "or" for "and" in the significant nexus test (emphasized in the definition

[50] Indiana Crash Facts 2012, Indiana Criminal Justice Institute Publication
[51] Proposed Rule at 22211-13.

provided above) makes the test even more confusing than Kennedy's own words. The agencies' have again only provided administrative convenience at the expense of the regulated community's liability. Justice Kennedy required a significant impact on the "chemical, physical, *and* biological integrity" of a TNW, but the agencies have provided themselves with a test that allows only one of the three connections to be satisfied. Justice Kennedy's test is much narrower than the agencies have defined, and as such, ACCW believe the test goes beyond the agencies' authority under the CWA. Our members would suggest the agencies look to the plurality opinion in Rapanos for more clarity. (p. 21-22)

Agency Response: Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

5.113 As it stands, ACCW request the agency remove the following words from their definition of significant nexus: "either alone or in combination with other similarly situated waters in the region (i.e. the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(3) of this section." To make the definition reflect the plurality decision and provide clarity the definition should recognize that the water needs a physical connection, which makes the feature indistinguishable from a water identified in paragraphs (a)(1) through (3).[52] For analysis purposes, additional clarity can also be realized by clarifying where a water feature begins and ends. We would suggest that a water feature is a discreet area that conveys or contains water, which starts and stops each time the conveyance intersects with a tributary of the conveyance or merges with another conveyance, wetland, or impoundment. ACCW believe this definition is a key term that the agencies were charged to further define, and their lack of completion of this task renders this proposed rulemaking useless. The agencies should withdraw the proposed rule, work with the regulated public on providing a definition that is clear, understandable, and also comports with the Supreme Court decisions. Then, and only then, should the agencies re-propose such a rule for public comment. (p 22)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 4, 5, 7, and 8, Section 5.1, Section 5.2, Section 5.3 and Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I – IX. See Response to Comments Compendium Topic 4 – Other Waters, Topic 8 - Tributaries and Topic 9 – Science. The agencies have finalized the rule. See Response to Comments Compendium Topic 13 – Process Concerns and Administrative Procedures.

5.114 ACCW believe this definition is a key term that the agencies were charged to further define, and their lack of completion of this task renders this proposed rulemaking useless. The agencies should withdraw the proposed rule, work with the regulated public on providing a definition that is clear, understandable, and also comports with the Supreme

[52] Rapanos, at 37 (J. Scalia, wetlands are waters of the United States if they bear the "significant nexus" of physical connection, which makes them as a practical matter indistinguishable from waters of the United States.")."

Court decisions. Then, and only then, should the agencies re-propose such a rule for public comment. (p. 22)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5, 7 and 8 and Technical Support Document Sections I and II. The agencies have finalized the rule. See Response to Comments Compendium Topic 13 Process Concerns and Administrative Procedures.

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)

5.115 Maintaining the term 'significant nexus', even with a definition, will continue confusion when determining the jurisdictional extent of Waters of the United States (WOUS). The word 'significant' already has a defined meaning in the environmental review process in the National Environmental Policy Act (NEPA). Using the same word, with two vastly different meanings will lead to an inherent conflict between the Clean Water Act (CWA) and NEPA. We request that the proposed definition include a new term that better defines the intent of the Supreme Court and is specific to the CWA. (p.1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. The term "significant nexus" as used in this context is specific to the CWA, and the agencies do not believe that using this term creates an inherent conflict between NEPA and the CWA.

County of San Diego (Doc. #14782)

5.116 The rule should clarify that the significant nexus standard will only be applied to Traditionally Navigable Waters, rather than to any category of Waters of the U.S. Under existing regulations and case law, the significant nexus standard has been interpreted by local federal agency representatives to apply not only to areas that drain to Traditionally Navigable Waters, but also to areas that drain to tributaries or other Waters of the U.S. The County requests that the new rule define the interpretation consistent with Justice Kennedy's explanation of the SWANCC decision 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.' 547 U.S. at 759". The proposed rule as currently written does not define what type of Water of the U.S. the area with a significant nexus must drain into to be considered jurisdictional. Therefore, the rule should clarify that the significant nexus standard is only applied to areas draining to Traditionally Navigable Waters, rather than to any category of Waters of the U.S.

> EXAMPLE: If clarification is not provided, jurisdictions will continue to make inconsistent interpretations of the rule. This is a critical point because, in practice, water will always flow toward drainages, which flow into other drainages, then to tributaries, rivers, and finally the ocean. The jurisdictional "line" of connectivity can infinitely be drawn further and further up the watershed unless the rule clearly defines that the significant nexus standard is applicable when connectivity is being shown to a Traditionally Navigable Water, and not a tributary. (p. 8-9)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and responses to summary comments 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I - IX. See also Response to Comments Compendium Topic 9 – Science.**

American Public Power Association (Doc. #15008)

5.117 The Definition of "Significant Nexus" Is Overly Broad and Creates Confusion Instead of Clarity.

The draft rule defines and relies on the concept of "significant nexus." This is defined as a water that significantly affects the chemical, physical, or biological integrity of a jurisdictional water, but explains that, to be significant, an effect must be "more than speculative or insubstantial effect" either alone or in combination with effects of other jurisdictional water in the region. It also provides for aggregation of all "other waters" within a "single landscape unit" to determine whether there is a significant nexus between any particular water feature and a jurisdictional water. 79 Fed. Reg. at 22,199-200. For example, the "significant nexus" is the lynchpin concept of the agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus, but provides no guidance on when the presence of these factors rise to the level of significance. Instead, the proposal seems to suggest that the mere presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 7-8)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and response to summary comments 3, 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4, and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.**

Arizona Public Service Company (Doc. #15162)

5.118 The Agencies rely on Justice Kennedy's *Rapanos* decision regarding wetlands possessing a significant nexus to "waters that are navigable in fact or that could reasonably be so made" as the basis for determining that waters are jurisdictional.[53] The proposed definition of "significant nexus," however, is not clear. According to the proposed rule, an effect is significant if it is "more than speculative or insubstantial."[54] The definition goes on to provide that waters that are "similarly situated" or are located sufficiently close together or close to a WOTUS have a significant effect on the chemical, physical, or biological integrity of the WOTUS and thus have a significant nexus with those waters.[55] On this basis, waters located within the same watershed can be determined to be jurisdictional, not because they flow to a WOTUS, but because they are located within the same watershed. In the arid Southwest, watersheds are extremely large with the potential that many small, insignificant waters would be determined to be WOTUS.

[53] Rapanos, 547 U.S., at 759.
[54] 79 Fed. Reg. at 22268.
[55] Id.

Moreover, on its Web site, EPA states that the proposed rule does not "protect new types of waters, broaden coverage of the CWA, regulate groundwater, or expand jurisdiction over ditches."[56] Review of the rule, however, leads to the conclusion that the Agencies seek to expand authority well beyond that prescribed by the Supreme Court. The proposed rule essentially includes all waters as WOTUS regardless of how remotely located or how tenuous or infrequent the connection to a traditional navigable water, territorial sea, or interstate water. The preamble references Justice Kennedy's decision in Rapanos in which he states that a significant nexus to a navigable water, territorial sea, or interstate water is the basis for defining WOTUS, but the Agencies fail to consider the plurality's holding that the hydrological connection be based on relatively permanent waters or a continuous surface connection. These two terms, relatively permanent water and continuous surface connection, are key terms from the most recent Supreme Court decision, yet despite the Agencies' desire to "clarify" the WOTUS definition, these terms remain undefined in [] this proposal. The Agencies seem to have concluded that any connection is a "significant nexus." While the definition of "significant nexus" is clearly an important concept and unique to the CWA, it falls short when it is not defined consistent with the Supreme Court's Rapanos decision. APS recommends that the proposed rule be withdrawn so that stakeholders can work with the Agencies to better define "significant nexus," "relatively permanent water," "continuous surface connection," and other terms used and discussed in the proposal. After this process has concluded, the Agencies may then re-propose the rule. (p. 11-12)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 3, 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4, Preamble Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science. The agencies have finalized the rule. See Response to Comments Compendium Topic 13 Process Concerns and Administrative Procedures.**

County of San Diego (Doc. #15172)

5.119 The rule should clarify that the significant nexus standard will only be applied to Traditionally Navigable Waters, rather than to any category of Waters of the U.S. Under existing regulations and case law, the significant nexus standard has been interpreted by local federal agency representatives to apply not only to areas that drain to Traditionally Navigable Waters, but also to areas that drain to tributaries or other Waters of the U.S. The County requests that the new rule define the interpretation consistent with Justice Kennedy's explanation of the SWANCC decision 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.' 547 U.S. at 759". The proposed rule as currently written does not define what type of Water of the U.S. the area with a significant nexus must drain into to be

[56] http://water.epa.gov/learn/training/wacademy/upload/Watershed-Academy-WOUS-REVISED-FINAL.pdf.

considered jurisdictional. Therefore, the rule should clarify that the significant nexus standard is only applied to areas draining to Traditionally Navigable Waters, rather than to any category of Waters of the U.S.

EXAMPLE: If clarification is not provided, jurisdictions will continue to make inconsistent interpretations of the rule. This is a critical point because, in practice, water will always flow toward drainages, which flow into other drainages, then to tributaries, rivers, and finally the ocean. The jurisdictional "line" of connectivity can infinitely be drawn further and further up the watershed unless the rule clearly defines that the significant nexus standard is applicable when connectivity is being shown to a Traditionally Navigable Water, and not a tributary. (p. 8-9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

West Bay Sanitary District, Novato Sanitary District, West County Wastewater District, Union Sanitary District and West Valley (Doc. #16610)

5.120 Proposed Revisions to Draft Rule:

[NOTE: Although edits are only suggested for the regulatory language most applicable to the District, similar changes should be made to each of the proposed sections dealing with Waters of the United States (e.g., Parts 112, 116, 117, 230, 232, 300, 302, and 401). Alternatively, to simplify the program, a single section setting forth the definition should be adopted and utilized for each of the Clean Water Act programs.]

PART 122-EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

The authority citation for part 122 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 et seq.

Section 122.2 is amended by revising the definition of "Waters of the United States" and removing the note and editorial note at the end of the section. The revision reads as follows:

§ 122.2 Definitions. (…)

~~*(c) Definitions. (…)*~~

~~*(7) Significant nexus. The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this definition), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single*~~

~~*landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this definition.*~~ (p. 11, 13)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Black Hills Corporation (Doc. #6248)

5.121 The draft definition neglects to define or discuss specific factors that can help regulators or the regulated community to identify "significance" of water features or how to assess "speculative or insubstantial." The draft's vague application of watershed science leaves ample room for inconsistent interpretation in field-specific situations. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Duke Energy (Doc. #13029)

5.122 The proposed rule does not provide any metrics or criteria for determining significance and instead identifies factors that could be evidence of chemical, physical or biological activity. However, the agencies do not provide any information on when the presence of these factors rise to the level of significance which implicitly suggests that the mere presence of any of these factors is sufficient to satisfy the significant nexus standard. Asserting jurisdiction based on the presence of connections is reminiscent of the "any hydrological connection" standard that was rejected by five Justices in Rapanos, including Justice Kennedy. (p. 16)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary response to comments 1, 7, and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

5.123 The concept of aggregating all "similarly situated" waters within the same watershed conflicts with Justice Kennedy's "significant nexus" standard, which called for case-by-case determinations. This concept also allows for aggregation of features that are many miles apart from each other and are not "similarly situated" with respect to proximity to navigable waters, regularity or duration of flow. This completely ignores the quantity and frequency of flow that was central to Justice Kennedy's significant nexus analysis. (p. 16-17)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

5.124 The proposed rule's interpretation that a significant nexus exists whenever impacts are "more than speculative or insubstantial", ignores the traditional meaning of the word significant as "important" or "having or likely to have a major effect". (p. 17)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

National Lime Association (Doc. #14428.1)

5.125 The proposed definition [at section 328.3(c)(7), 79 Fed. Reg. at 22263] is ambiguous and fails to provide a functional bright-line test that can be used for discerning when a "significant nexus" exists. Concerns about the definition's ambiguity and vagueness have also been voiced by EPA's Science Advisory Board (SAB).[57] As currently written, the proposed definition's use of the term "significant" to define "significant nexus" (emphasis added) is circular. If adopted as is, it will precipitate more "confusion and uncertainty," not less. As a general rule of thumb, it is always preferable that the word to be defined (in this case "significant" nexus) is not used to define that word.

> Under the definition which the Agencies have proposed, in order for a "significant" nexus to exist it must "significantly affect[ ] the chemical, physical, or biological integrity of a[nother] water." In other words, in order for a "significant nexus" to exist the effect of the nexus must be "significant." As written, the proposed definition provides no insights or appropriate guidance, including examples, on how one would calculate or otherwise determine when an "effect" is, in fact, "significant" or, conversely when an "effect" would not be significant. The most that can be discerned from the current definition is that an "effect" will be considered "significant" when it is not "speculative or insubstantial." Thus, according to the proposed definition, as long as the effect of one water on another is neither "speculative" nor "insubstantial," it would be deemed to be "significant."
>
> Here again, the definition offers no substantive insights for determining when something is (or not) "speculative" or "insubstantial." For example, are the terms "significant" and "insubstantial" to be evaluated on a quantitative or qualitative basis, or should some other measure be applied? This is certainly not clear from the proposed rule's definition of "substantial nexus." What is clear is that, as currently written, the test which the definition has proposed for determining when a 'significant nexus" would exist is effectively a subjective one; i.e., "I'll know it when I see it." (p. 11-12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, S Agency Summary Responses for ections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

[57] See SAB memo at 6, which states: "Panel members generally found that the term 'significant nexus' was poorly defined in the proposed rule and that the use of the term 'significant' was vague."

Southern Nevada Water Authority (Doc. #14580)

5.126 The Proposed Rule does not provide any basis for distinguishing between nexus (connection) and a significant nexus. It cites Justice Kennedy's concurrence in the *Rapanos v. U. S.* decision, including the statement that there needs to be "some measure of the significance of the connection for downstream water quality." 547 U.S. 715, 784-785 (2006). SNWA recommends "significant nexus" be defined to accurately reflect and clarify its intended meaning. Examples of "other waters" that would be interpreted to have, or not have, a significant nexus would also be helpful. Since determinations regarding significant nexus would be made on a case-by-case basis, without additional clarity the Proposed Rule could create the potential for widely different interpretations and inconsistent regulation. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science. Additionally, the agencies will consider developing significant nexus examples for the public, as requested, when developing instructional rollout tools.

Metropolitan Water District of Southern California (Doc. #14637)

5.127 The proposed rule states that the term "significant nexus" is not itself a scientific term, and Metropolitan agrees. The proposed rule therefore makes a policy decision, not a scientific distinction, to incorporate the concept of significant nexus and to define significant nexus to mean that a water, including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a downstream navigable water and that the nexus must be more than speculative or insubstantial. Nor is the adjective "significant" defined in the proposed rule; therefore, the determination of a significant nexus has not been clarified by the proposed regulation and will be left to the discretion of the regulators on a case-by-case basis for features considered to be "other waters." (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary response to comments 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science.

Colorado River Water Conservation District (Doc. #15070)

5.128 The term "significant nexus" is obviously key to understanding and implementing the rule. Thus, "significant" deserves special attention and a definition that is clearer and more definitive than simply "more than speculative or insubstantial." We believe the Supreme Court's meaning was for a higher bar for a "significance test" than simply just-a- step above inconsequential. Examples of what would and would not be considered "significant" would be helpful. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary response to comments 7 and 8, Agency Summary Responses for Sections

5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science. Additionally, the agencies will consider developing significant nexus examples for the public, as requested, when developing instructional rollout tools.

Northern Colorado Water Conservancy District, Berthoud, Colorado (Doc. #15114)l

5.129 The proposed rule defines a "significant effect" as an effect that is "more than speculative or insubstantial.[58] This is a very low threshold, particularly when assessed in the aggregate. We recommend that, if this rule goes forward, it be revised to provide a more commonsense definition of "significant" that includes a measure of importance or meaningful influence. (p. 9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science.

Oregon Water Resources Congress (Doc. #15488)

5.130 The critical term "significant nexus" is also not fully explained, nor is it a scientific term with a well-understood meaning. In the absence of a more clearly defined meaning for "significant nexus," the proposed rule permits the agencies to make subjective jurisdictional determinations based on far too many variables. Our members are not able to predict or foresee the outcome of an agency determination using the proposed definition of "significant nexus." This definition needs to be more fully outlined, and include more objective criteria for what will be included and excluded when jurisdictional determinations are made. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science.

Aqua America, Inc. (Doc. #15529)

5.131 In the case of "significant nexus", the term "significant" must have a clear definition in concrete terms rather than the existing abstract definition that "it must be more than speculative or insubstantial". Lack of definition allows for confusion and uncertainty, which then leads to inconsistency in the application of the rules. In the end, the clarity that was sought will not be achieved unless all ambiguity is removed. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical

[58] Definition of "Waters of the United States" under the Clean Water Act, 79 Fed. Reg. at 22 196 (proposed amendment to 33 C.F. R. § 328.3(c)(7)).

Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science.

Battelle Energy Alliance, LLC (Doc. #16448)

5.132 What does the term "significant nexus" mean? The proposed rule states that for an effect to be significant, it must be more than speculative or insubstantial. "The existence of a connection, a nexus, does not by itself establish that it is a "'significant nexus.'"[59] It is known that water from the BLR and BC, as they occur on the site, flows into the aquifer and eventually, over a long period of time, discharges into the Snake River approximately 100 miles to the southwest of where the water seeps into the SRPA. There is a nexus. But is it significant? It would be helpful if the term "significant nexus" were defined in quantifiable terms (e.g., mg/L of a pollutant) or categorically identified so that it is clear when the nexus is significant. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4, Agency Summary Responses for Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

5.133 In addition to the vague definitions and the case-by-case determination required to be made by the Agencies, the "significant nexus" analysis is virtually silent on how the CWA applies or does not apply to groundwater. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwater, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and

[59] Supra note 3, at 22197. [*Definition of Waters of the United States, 79 Fed. Reg. 22211 (proposed April 21, 2014) (to be codified at 40 C.F.R. pt. 230.3).*]

near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

South Carolina Public Service Authority (Doc. #18860)

5.134 The proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. This vagueness could very well lead to any and all ditches, dry stream beds, swales, etc. being considered a WOTUS. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 5, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 6 – Ditches, Topic 7 – Features and Waters Not Jurisdictional, Topic 8 – Tributaries, and Topic 9 – Science.

Chesapeake Bay Foundation (Doc. #14620)

5.135 CBF supports the definition of "Significant Nexus." It is clear from our experience throughout the Chesapeake watershed that tributaries, lakes, ponds and wetlands with surface connection to waters have a significant nexus to the receiving water bodies. The Chesapeake Bay Watershed Model assumes all land uses within the watershed have the potential to load nitrogen, phosphorus and sediment pollution to the bay and indeed that potential has been measured repeatedly and assigned loading factors within the model. Local TMDLs and the collective Bay TMDL operate from establishing non-point source load allocations and point source waste load allocations established from comprehensive analyses of watershed assimilative capacity. The tributaries themselves are assumed to receive pollutants from neighboring lands and deliver those pollutants to the bay demonstrating a quantifiable significant nexus.[60] (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 3 Adjacent Waters, Topic 4 Other Waters, Topic 8 Tributaries, and Topic 9 – Science.

National Wildlife Federation (Doc. #15020)

5.136 The agencies' definition of significant nexus is legally and scientifically sound.

> We support the agencies' definition of significant nexus, which closely tracks Justice Kennedy's definition in his Rapanos opinion:

[60] USEPA (U.S. Environmental Protection Agency). 2010. Chesapeake Bay Phase 5.3 Community Watershed Model. EPA 903S10002 - CBP/TRS-303-10. U.S. Environmental Protection Agency, Chesapeake Bay Program Office, Annapolis MD. December 2010.

> The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1)through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial…." 33 CFR 328.3 (c)(7); See also, 79 Fed. Reg. at 22213, 22262.

We agree, in particular, that Justice Kennedy used the term "significant" with respect to significant nexus to mean "more than speculative or insubstantial." 79 Fed. Reg. 22213 citing Rapanos at 547 U.S., at 780. We agree that Justice Kennedy remanded the Carabell and Rapanos cases because the agencies had not properly applied the controlling legal standard – whether the wetlands at issue had a significant nexus. We agree that Justice Kennedy concluded that "[m]uch the same evidence should permit the establishment of a significant nexus with navigable-in-fact waters…." And that he "was concerned that the evidence of connectivity in the Carabell case before the Court contained "conditional language" such as "potential ability" and "possible flooding" that "could suggest an undue degree of speculation." Id. 22262, citing Rapanos at 547 U.S., at 786.

As the agencies note, functions of waters that may demonstrate a significant nexus include "sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, export of organic matter, export of food resources, and provision of aquatic habitat." 79 Fed. Reg. at 22213-22214. We agree that water functions demonstrating a significant nexus in the absence of hydrologic connection include retention of flood waters or pollutants that would otherwise flow downstream to the TNW, IW, or territorial sea. Id. citing 547 U.S. at 775. For scientific support for this point, the agencies cite to the Draft Connectivity Report at 5-26 citing A. Bullock and M. Acreman, "The Role of Wetlands in the Hydrological Cycle," Hydrology and Earth System Sciences 7:358-389 (2003)).

In considering the significance of a nexus between other waters and downstream waters, we urge the agencies to consider the nature of the pollutants (e.g., water soluble toxic chemicals) that could be discharged to a non-adjacent waterbody and could adversely impact downstream waters and water supplies. While it might take years for the pollutant to be carried through groundwater to a river, ultimately those toxic chemicals could threaten water supplies or otherwise degrade the chemical and biological health of a TNW or IW. See Ducks Unlimited's 2014 Rule Comments at 26-27 (illustrating the point with the example of a 2013 Exxon crude oil pipeline spill to wetlands and inlets adjoining a popular fishing and recreation lake where Exxon used the failure to prove "waters of the U.S." in an effort to avoid clean up liability).

We strongly agree with the agencies that a clear distinction must be drawn between the conditional language suggesting undue speculation that concerned Justice Kennedy and the very different conditional language often used by scientists to avoid speculation; the "rigorous and precise language of science necessary when

applying specific findings in another individual situation or more broadly across a variety of situations." Indeed, words like "potential" may have a meaning that is not speculative at all, but may mean definitively that an ability or capability (e.g., a wetland function) is expected to occur under designated circumstances. 79 Fed. Reg. at 22262.

In light of these crucial differences between the language of law and science, the final rule should explain more clearly how Justice Kennedy's legal language should be used in the science-based connectivity analysis that will be conducted for "other waters." We agree with the SAB recommendation that "the EPA clarify in its general communications and in the preamble to the final rule that 'significant nexus' is a legal term, not a scientific term." SAB Rule Letter at 4.

Along these lines, we encourage the agencies to include in the final rule preamble additional clear guidance regarding the extent to which the science related to wetland/water functions, (e.g., water storage, nutrient recycling, maintenance of base flows) can be generalized and applied to significant nexus analyses of "other waters" in ecoregions and/or watersheds beyond the one in which a particular set of research was conducted. We agree with and support the agencies preamble language on this subject at 79 Fed. Reg. 22214, including, in particular, the agencies statement that, "[s]uch information need not always be specific to the water whose jurisdictional status is being evaluated. Regional and national studies of the same type of waters or similarly situated waters can help to inform a significant nexus analysis as long as they are applicable to the water being evaluated." (p. 61-62)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. Additionally, the**

agencies will consider developing significant nexus examples for the public, when developing instructional rollout tools.

Natural Resources Defense Council et al. (Doc. #15437)

5.137 For "Other Waters" that Are Not Categorically Protected, the Agencies' Approach to Assessing "Significant Nexus" is Sensible.

> We recognize that the foregoing categories of "other waters" do not encompass all such water bodies in the country. Accordingly, we understand there will be a continuing need for some case-by-case assessments of water bodies' jurisdiction in the future. For those assessments, we believe the agencies have proposed a generally reasonable framework for implementing the "significant nexus" test. The regulatory definition closely tracks Justice Kennedy's test, and the agencies have, for the most part, described a strategy for implementing that test in a way with which we agree. (p. 54)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, and IX. See also Response to Comments Compendium 9 – Science.

National Federation of Independent Business (Doc. #8319)

5.138 The Proposed Regulation misstates, misconstrues and changes the 'significant nexus test'.

> As stated by Justice Kennedy in Rapanos, waters have the "requisite significant 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.'" Id. at 780 (emphasis added). But the Proposed Regulation expands CWA jurisdiction by distorting Justice Kennedy's "significant nexus test," such that it will liberally justify jurisdictional assertions beyond what the test would allow for if properly applied. The result is an expansion of CWA jurisdiction. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 4, 5, 7, 8, Agency Summary Responses for Section 5.1, Section 5.2, Section 5.3 and Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

5.139 First, the Proposed Regulation misstates the significant nexus test by replacing the conjunctive word "and" with the disjunctive word "or," when listing the different factors to be considered in determining whether the subject wetland has a sufficient nexus to traditional navigable waters. See Proposed Regulation, P-99 ("Justice Kennedy was clear that waters with a significant nexus must significantly affect the chemical, physical, or biological integrity of a downstream navigable water….") (emphasis added). This misstatement is significant because it effectively lowers the standard for establishing jurisdiction. Under the Proposed Regulation, Agencies will assert jurisdiction if they can demonstrate either that the subject wetland – and similarly situated lands in the region –

significantly affect the chemical and physical integrity of other jurisdictional waters or that they affect the biological integrity of those waters. But, Justice Kennedy's jurisdictional test was not an either or proposition. To satisfy the 'significant nexus test,' one must demonstrate all three factors: The subject wetland, and similarly situated lands, must have a significant effect on the (1) chemical, (2) physical and (3) biological integrity of other jurisdictional waters. (p.5)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Section I.

5.140 Second, the Proposed Regulation misconstrues the significant nexus test by stating that the test will be satisfied if it can be demonstrated that the chemical, physical or biological effect on jurisdictional waters is more than "speculative or insubstantial." This enables the Agencies to assert CWA jurisdiction without proving that the subject wetlands are in fact having a significant impact on other jurisdictional waters. This incorrectly shifts the burden of proof from the agency asserting jurisdiction to the property owner.[61] Under the Proposed Regulation, the Agencies will now presume jurisdiction unless proven otherwise. But Justice Kennedy made clear that the agency must bear the burden of demonstrating substantial effects on other jurisdictional waters. Rapanos, 547 U.S. at 784 (Kennedy, J. concurring). (p. 5-6)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 8, Preamble to the Final Rule Sections III and IV and Technical Decision Document Sections I and II. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 - Science. Additionally, the rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The rule, promulgated under authority of Section 501 of the CWA, does establish a binding definition of "waters of the United States."

5.141 Third, the Proposed Regulation changes the significant nexus test by expanding the definition of "region." This is significant because Justice Kennedy provided that the test should consider the affect that the wetland – "either alone or in combination with similarly situated lands in the **region**" – has on other jurisdictional waters. Id. at 780 (emphasis added). Logically, a narrow understanding of the term "region" will cabin relevant considerations, whereas a broad understanding will allow the Agencies to more readily assert jurisdiction. And the Proposed Regulation stretches the term far beyond the localized concerns that Justice Kennedy had in mind and far beyond the definition provided in the 2008 Guidance document. In fact, this is probably the most radical aspect of the Proposed Regulation because it defines the relevant region as the entire "watershed," which would entail more than a million square miles – or 41% of the lower 48 states – in the Mississippi watershed alone.[62] See Proposed Regulation, P-95 ("The agencies propose to interpret the phrase 'in the region' to mean the watershed that drains

[61] In attempting to shift the burden from the agency asserting jurisdiction to the landowner contesting jurisdiction, the Proposed Regulation will place further economic strain on landowners who seek to defend their property rights.
[62] See Army Corps of Engineers, The Mississippi Drainage Basin, http://www.mvn.usace.army.mil/Missions/MississippiRiverFloodControl/MississippiRiverTributaries/MississippiDrainageBasin.aspx (last viewed 10/02/14).

to the nearest traditional navigable water, interstate water, or the territorial seas through a single point of entry."). (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Agency Summary Responses for Section 5.1, Section 5.2 and Section 5.3, Peamble to the Final Rule Sections III and IV and Technical Decision Document Section II.

Ducks Unlimited (Doc. #11014)

5.142 Definition of "Significant Nexus": We agree that in light of Justice Kennedy's opinion, there is a need to define the phrase, "significant nexus," to the extent possible. We reiterate the concern we raised in our July 20, 2011 comments on the previously proposed (and subsequently withdrawn) revised guidance (Docket ID No. EPA-HQ-OW 2011-0409) about the differences in the language of science and the law, and the very divergent perspectives that can arise over terms such as "significant," "speculative," and "could," among others. We are glad to see this issue of the language of science and the law explicitly raised in Appendix B, Legal Analysis (FR 22262). It will be important to keep this in mind as definitions and the remainder of the important substance of the rule is finalized to address the kinds of issues that we raise in our comments.

With respect to the specific definition of "significant nexus," we note and appreciate the legal thinking behind the agencies' close adherence to Justice Kennedy's language. However, it must be understood that his language on a fundamentally scientific question is being offered from within a legal context and by a justice, not a scientist. We have no issue with the definition's inclusion or reference to Kennedy's key language, but we recommend that the final rule go further in terms of explaining with more clarity how his language should be used in the science-based context of the analyses of connectivity that will be conducted for "other waters." Furthermore, we refer again to the fact that his opinion contains additional language (see quotes cited previously herein) that can and should inform the translation of his efforts to describe his legal perspective on a scientific topic into a more meaningful, science-based final rule for the scientists, managers, and others who will be charged with assessing whether or not a "significant nexus" exists.

The SAB September 30 letter to the EPA recommended that "the EPA clarify in its general communications and in the preamble to the final rule that "significant nexus" is a legal term, not a scientific term." We agree with this statement and recommendation.

Looking ahead, it is perhaps here that the agencies could more thoroughly explain how a "weight of the evidence" approach, for example, could or would be used in the context of significant nexus analyses. The definition (and/or related preamble language) could provide even more guidance with greater clarity regarding to what extent various components of the science related to wetland functions, such as water storage, nutrient transformation, and maintenance of base flows, can be generalized and reasonably applied to analyses of ecoregions and/or watersheds outside the one in which a particular piece of research was conducted, as Justice Kennedy indicated was acceptable in at least some contexts. The agencies should build upon the definition of "significant nexus" that is currently in the proposed rule so that it not only conveys the legal perspective on the term, but also provides some additional guidance with respect to the science-based analyses that will be required in order to satisfy the legal issues.

We note many positive aspects of the preamble language regarding the types of hydrologic, chemical, physical, and biological connectivity that are relevant to a significant nexus determination. We especially support the comments regarding application of regional and national studies to waters occurring elsewhere, where appropriate. This is important given the rapidly emerging state of the science of connectivity. (p. 25-26)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Section 5.4, Preamble to the Final Rule and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Environment Council of Rhode Island (Doc. #3532)

5.143 Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. (p. 3)

Agency Response: The agencies' final rule responds to requests to clarify the scope of the CWA.

Cahaba River Society (Doc. #12827)

5.144 Aspects of the Meaning of "a significant nexus"

For purposes of defining which water features should be jurisdictional, the proposed rule would require demonstration of significant nexus with a traditional navigable water. However, some readers interpret the proposed rule to require demonstration that there be a physical, chemical, AND a biological nexus for consideration to proceed to an affirmative designation. That is, some commenters assert the proposed rule requires that all three factors be demonstrably connected to a traditionally navigable water. We disagree with that interpretation. We urge the agencies to make an affirmative jurisdictional determination when one or more of these qualities has been established as having a significant nexus with a traditional navigable water.

The Clean Water Act calls for protection of the physical, chemical, and biological quality of our nation's waters. We understand this to mean that each of these factors or qualities are individually subject to regulation under the Clean Water Act. Usually there are fairly obvious interconnections and interactions among these factors whereby one or both of the other two of these three qualities of the receiving water are altered by a change in any one quality. But we do not currently require demonstration that altering one quality will necessarily alter the other two qualities in order to allow its regulation. There is an appropriate and reasonable assumption that physical, chemical, and biological qualities may each have impacts on the others. It is reasonable to regulate each of these factors separately and it is reasonable to make a positive jurisdictional determination when only one of these qualities have a significant impact on traditional navigable waters.

For example, regulators limit temperature alterations to receiving waters caused by a discharge. We understand temperature has associated impacts on chemical and

biological qualities of the receiving waters. Such interactions almost invariably occur, even when we may not understand the full range and nature of those interactions. So, we try to manage overall impacts to WOTUS by placing limitations individually on important parameters. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 6 and 7, Section 5.4 Agency Summary Response, Preamble to the Final Rule III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

5.145 In similar fashion, when defining which waters have a significant nexus with traditional navigable waters, the test should be whether the feature in question impacts the physical, chemical, or biological integrity of a traditional navigable waters, not whether the feature in question can be demonstrated to impact all three of these. Demanding demonstration of a significant nexus for all three is an attempt to limit the number and types of waters that are designated without regard for their actual impacts on WOTUS. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 6, 7, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

Texas Agricultural Land Trust (Doc. #15188.2)

5.146 The Proposed Rule fails to provide clarity or predictability. Landowners will be ill served by the proposed rule because of the lack of clarity regarding jurisdiction. For example, the "significant nexus" is the lynchpin concept of the agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. Such confusion will create hardship for landowners and will likely cause regulatory uncertainty, inconsistency, and litigation. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Lake County, Illinois Stormwater Management Commission (Doc. #15381)

5.147 §328(c)(7) – *Significant nexus:* This term can be broadly interpreted such that *all* wetlands are connected to the nearest water identified in §328(a)(1)-(3). Accordingly, we believe this definition should be removed from the proposed rule, along with §328(a)(7) as explained in General Comment #1 above. (p. 3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Wisconsin Wetlands Association (Doc. #15629)

5.148 *Significant Nexus* – The proposed definition adheres closely to the language used by Justice Kennedy in the Rapanos/Carabell decision, but fails to clarify what type(s) or degree of evidence must be brought to bear to ensure that the legally established threshold of a "more than speculative or insubstantial" effect on the "chemical, physical, or biological integrity of a water identified in paragraphs (s)(1)" has been met. We urge you to address this gap by inserting language to clarify:

a. The types and sources of information that can or should be considered (i.e., peer reviewed literature, application of *a priori* knowledge of watershed functions, best professional judgment, etc.).

b. The circumstances under which a significant nexus analysis can be applied in making a jurisdictional determination (i.e., on a regional or watershed basis in advance of an application, only in response to an application, etc.).

c. How the findings from these analyses will be incorporated into an administrative record, made available for public review, and amended as new science and information becomes available.

In any case, the language in the final rule should clearly articulate the approach selected for making jurisdictional determinations for "other waters" (see comments under *Approaches to Other Waters* below)[63]. (p. 3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 5 , 7, and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.**

5.149 *Similarly Situated & In the Same Region* – We recommend defining these terms separately from one another and independent of the term *Significant Nexus.* Definitions are needed to clarify when and how a significant nexus analysis could/should be completed based on the aggregated influence of wetlands and other waters on waters identified in (s)(1) to (3). The term "sufficiently close" is vague and not one that appears in the available literature on watershed science. We recommend clarifying the hydrologic scale(s) at which the aggregate effects of similarly situated waters can/should be considered and encourage you to allow that the appropriate scale may vary by region. (p. 3)

[63] [*These comments are provided within Compendium #4*]

Agency Response: **See Section 5.0 Agency Summary Response, Introduction, Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Wyoming Outdoor Council (Doc. #16528.1)

5.150 Scientific Statements and Speculative or Insubstantial Effects. On the last page of the Federal Register commentary the agencies make reference to an important issue: the use of terms by scientists like "may," "could," "potential," or "possible" in scientific reports, which do not mean effects on waters are speculative or insubstantial in a legal sense. 79 Fed. Reg. at 22262. As the agencies note, use of language like this represents good science-appropriately conditioning the results of a study or the status of scientific knowledge – not a legal statement that impacts are speculative or insubstantial. Use of this kind of language often means that something is more likely than not to be case, but since this is not true with absolute certitude in a particular case, and as a measure of good science, cautionary language is advised. But this does not mean effects are speculative or insubstantial in a legal sense, it instead means there is "strength" to the scientific conclusions because they have been well considered as reflected by the use of appropriate language. *Id* at 22195.

We congratulate the agencies for recognizing the proper interpretation of language like this from a scientific standpoint and we urge the agencies to ensure this perspective is maintained throughout the implementation of this rule. For this reason, the agencies should consider modifying the language in the definition of "significant nexus" that states "[f]or an effect to be significant it must be more than speculative or insubstantial." Language should be added to this part of the definition making it clear that scientifically based statements that limit the certitude of a conclusion do not necessarily mean the impact is speculative or insubstantial in a legal sense. This language should be changed to: "For an effect to be significant it must be more than speculative or insubstantial as indicated by scientific conclusions regarding effects on downstream chemical, physical, and biological integrity and the related law," or something like this. (p. 11-12)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.**

George Washington University Regulatory Studies Center (Doc. #13563)

5.151 "Significant nexus" is, according to the Agencies, a "touchstone" for CWA jurisdiction and is central to the entire proposed rule. It was moved to center stage by Justice Kennedy's solitary opinion, which, when joined with the four dissenters, came to be the controlling one in the Supreme Court's 2006 decision on jurisdiction, *Rapanos v. United States*.[64] According to the Agencies, it is *not* a scientific term but a determination to be made by the Agencies under the law in light of the applicable science.[65] "The existence

[64] 79 FR 22260
[65] 79 FR 22193, 22195, 22196

of a connection, a nexus, does not by itself establish that it is a 'significant nexus'. There is a gradient in the relation of waters to each other."[66]

Significance is not defined affirmatively in the proposed rule, but only negatively, in that "it must be more than speculative or insubstantial."[67] The Agencies do cite some functions which "might demonstrate a significant nexus" including sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, etc. However, "a hydrologic connection is not necessary…"[68]

The preamble sets out no quantitative or precise geographic measures of significance; but a significant nexus, say, for "other waters" is more likely with increasing size and decreasing distance from jurisdictional waters.

The term "significant" used in the phrase "significant nexus" should be defined in concrete, affirmative terms, not just negative ones.

While there are many terms that may require further definition or clarification, these comments will focus on the paramount need to define "significant" in the phrase "significant nexus," which the Agencies call the "touchstone" of jurisdiction in this proposed rule.

Without clear a clear definition of "significant," regulated entities and citizens are awash in uncertainty, which defeats the Agencies' goal of achieving certainty and predictability. The open-ended nature of these terms also raises issues of notice and due process. For instance, if the Agencies intend to define, on a "case-specific basis," certain isolated or "other waters" as being jurisdictional, utilizing "fill-and-spill" findings, it is essential to define to what degree such a phenomenon actually affects jurisdictional waters. A nexus is not enough. It must be significant, not speculative or insubstantial. However, this leaves too much residual uncertainty as to the threshold at which a nexus becomes significant. Presumably, it is not simply not speculative or insubstantial but some higher threshold of connectivity.

Recommendation: The Agencies should develop an affirmative definition of "significant" for the phrase "significant nexus" and seek comment on it. (p. 4-5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.3 Agency Summary Response, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Decision Document Sections I, II and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 - Science.

Dave Loebsack, House of Representatives, Congress of the United States (Doc. #1375)

5.152 The proposed rule appears to fail in clarifying key terms that will significantly shape the scope of the rule including "uplands," "significant nexus" and "adjacent." Without

[66] 79 FR 22193
[67] 79 FR 22263
[68] 79 FR 22213

having a clear and predictable definition for these key terms, the entire scope of the rule is called into question. (p. 1)

Agency Response: For "significant nexus" see Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV, and Technical Decision Document at Sections I, II, and VIII.

With regard to "uplands" the agencies no longer use this term in the rule, and consequently, there is no need to define it.

With regard to "adjacent waters," the agencies have further refined the definition of "neighboring" in the rule to provide greater clarity and consistency. See Preamble to the Final Rule, Technical Support Document Section VIII and Response to Comments Compendium Topic 3 Adjacent Waters and Topic 9 – Science.

5.153 The "other" category in the proposed rule will be "jurisdictional provided that they are found, on a case-specific basis, to have a significant nexus to waters." Additionally, this section uses "or" in defining significant nexus as "affect the chemical, physical, or biological integrity of waters," instead of "and." The broadness of this category, jurisdiction on a case-specific bases, and expansive definition of significant nexus by using "or" appears to leave farmers the same questions as today of what waters are included in the Clean Water Act's jurisdiction and increases the burden in seeking the necessary clarification. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 3 and 6, Agency Summary Response Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, and IX. See also Response to Comments Compendium 4 – Other Waters.

Marcia L. Fudge, House of Representatives, Congress of the United States (Doc. #1376)

5.154 The agency's proposed interpretation of "significant nexus" is vague enough to allow EPA to assert its jurisdiction over waters not previously regulated, rather than to limit its jurisdiction, as the agency suggests. By incorporating the Kennedy "significant nexus" test from Rapanos v. United States (547 U.S. 715 (2006)) and removing the word "navigable" from the definition of the CWA, the EPA would place features such as ditches, ephemeral drainages, ponds (natural or man-made), flood plains and other occasionally or seasonally wet areas under federal control. It is concerning the EPA would use the "significant nexus" test without addressing the Scalia test, which calls for jurisdictional to mean only relatively permanent, standing or flowing bodies of water, such as streams, rivers, lakes, and other bodies of water "forming geographic features." 'This definition led Scalia to exclude "channels containing merely intermittent or ephemeral flow." (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 1 and 3, Preamble to the Final Rule Sections III and IV, and Technical Decision Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 7 Features and Waters Not Jurisdictional.

Senators Jeff Flake and John McCain, United States Senate (Doc. #1377)

5.155 EPA's proposed definitions and jurisdictional assertions would conceivably extend federal jurisdiction far beyond what could credibly be considered Congress' intent. With questionable rationale, the proposal includes expanding the definitions of existing regulatory categories as well as adding vague terminology and new definitions regulating areas that have not been jurisdictional under current regulations. For example, the proposed rule assumes that all tributaries of traditional navigable or interstate waters have a significant nexus to such waters and are therefore subject to regulation under the CWA, regardless of distance, size, function, or amount and regularity of flow. In addition, EPA proposes to include for regulatory purposes "natural, man-altered, or man-made" in the new definition of tributary. It would appear that EPA is basing its categorical classification of tributaries as "waters of the U.S." and thus jurisdictional – regardless of their size, amount of flow and distance from a traditional navigable water – on the significant nexus test articulated by Justice Kennedy in his concurring opinion in *Rapanos v. United States*, 547 U.S. 715 (2006). However, it is difficult to see how EPA's assumption that all tributaries have a significant nexus to a traditional navigable water, without any site-specific analysis, is consistent with his opinion. We have concerns about the breadth of regulation of interstate waters and their tributaries for similar reasons. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1, 3, 4 and 5, and Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV and Technical Decision Document at Sections I, II, IV and VII. See also Response to Comments Compendium Topic 2 - Traditional Navigable Waters, Interstate Waters, Territorial Seas, Impoundments, Topic 4 - Other Waters, Topic 8 - Tributaries, and Topic 9 – Science.

Pat Toomey, Chairman, et al., Senate Steering Committee, United States Senate (Doc. #1378)

5.156 This proposed rule will do little to clarify the ambiguities of Clean Water Act regulation. In fact, the agency's proposed interpretation of "significant nexus" is vague enough to allow EPA to assert its jurisdiction over waters not previously regulated, rather than to curtail its jurisdiction, as the agency suggests. Furthermore, the rule continues to incorporate the Kennedy "sufficient nexus" test that arose out of *Rapanos* v. *United States (547 U.* S. 715 (2006)) without meaningfully addressing the Scalia test that also arose out of that ruling. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Agency Summary Responses for Sections 5.1, 5.2, 5.3 and 5.4, Introduction and summary response to comments 1 and 3, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

Wetland Science Applications, Inc. (Doc. #4958.2)

5.157 As has been implemented since the Rapanos/Car[a]bell guidance was put forth by EPA and the COE in 2007, anything that is not speculative or insubstantial is significant. That is nonsense. It denigrates the meaning of the term significant. What should have been

the focus [of] a technical study was what constitutes significant in the context of significant nexus. Since the June 2006, Rapanos/Carabell Supreme Court ruling, in which Justice Kennedy memorialized a concept of significant nexus as the determinative factor for federal jurisdiction under Section 404 of the CWA, the COE and EPA must now determine for all activities proposed in landscapes that are physically removed from Section 10 waterbodies whether the subject landscape feature has a significant nexus to traditionally navigable waters. (p. 2-3)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX.

5.158 The public would have been far better served by the opportunity to scrutinize and challenge a study addressing the agencies' justification of what is significant in terms of Rapanos/Carabell than by a Study that tells us that everything is connected – even that which is isolated. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

5.159 Now a Rule is proposed that uses the term "significantly" to define the term "significant nexus." Aside from the grammatical impropriety of defining a term by the term itself, it creates a definition that is meaningless. While the EPA/COE position that all connections that are not speculative or insubstantial are significant is not, in my opinion, consistent with Justice Kennedy's opinion in Rapanos/Carabell nor factually correct, if that is to be the rule adopted (as it has been implemented for the 8 years since the Rapanos/Carabell decision) then defining significant nexus is meaningless. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 8, Agency Summary Response Section 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II.

O'Neil LLP (Doc. #16559)

5.160 Before the Agencies propose to adopt anything like this proposed test, the Agencies must first remove the ambiguity from the terms "*similarly situated*" and "*chemical, physical, [and] biological integrity*." This ambiguity is compounded by the Proposed Rule's Preamble, which leaves open the possibility that the agencies may subsume the definition of "region" to that of "similarly situated." (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1 – 8, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, and Section 5.3 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.161 Furthermore, the Proposed Rule needs to be improved and then recirculated for public comment after the Agencies have clearly explained how chemical connectivity will be measured in a manner that does not result in high costs to the regulated person, increased time delays in making a jurisdictional determination and does not introduce further uncertainty into which "waters" are jurisdictional under the CWA. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, summary response to comments 5, 7, 8, Section 5.4 Agency Summary Response, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 – Science.

5.162 The Agencies need to clarify in the Rule what constitutes "physical connectivity." For example, frequency of storm event? Does a connection during a 50-year event constitute a connection, or must the connectivity exist in at least the 2-year event? Using a frequency of something larger than a 5- or l0-year event would be inappropriate. The Rule also needs to clarify what physical features or characteristics are indicators of connectivity. The Agencies need to provide the public with their proposals for such clarification, and then circulate those proposal to the public for comment in connection with notice and comment rule-making. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, summary responses to comments 7 and 8, Preamble to Final Rule Sections III and IV and Technical Support Document Section II. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science and Topic 13 Process Concerns and Administrative Procedures

5.163 The Agencies also need to clarify what constitutes "biological connectivity." Although establishing methods and thresholds for "chemical connectivity" can be expected to be time consuming, expensive and difficult to implement, developing methods and thresholds to establish "biological connectivity" would be even more difficult. The Proposed Rule lists movement of " ...amphibians, aquatic seeds, macro invertebrates, reptiles, and mammals". What constitutes "aquatic seeds"? Do only Obligate wetland plants count, or are the seeds of Facultative plants sufficient? Do the Agencies have staff expert in seed identification? How many seeds does it take to establish a connection? Do seeds dispersed only by water count, or do seeds dispersed by wind also count? Similar questions can be asked for each group of organisms. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Preamble Sections III and IV, and Technical Support Document Section II. See also Section 5.4 Agency Summary Response and Response to Comments Topic 9 – Science. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

5.1. SINGLE POINT OF ENTRY

Agency Summary Response

Introduction:

Under the significant nexus standard, waters possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" *Rapanos* at 780. Several terms in this standard were not defined. In this rule the agencies interpret these terms and the scope of "waters of the United States" based on the goals, objectives, and policies of the statute, the scientific literature, the Supreme Court opinions, and the agencies' technical expertise and experience. Therefore, for purposes of a significant nexus analysis, the agencies have determined (1) which waters are "similarly situated," and thus should be in analyzed in combination, in (2) the "region," for purposes of a significant nexus analysis, and (3) the types of functions that should be analyzed to determine if waters significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. These determinations underpin many of the key elements of the rule and are reflected in the definition of "significant nexus" in the rule. *See* Preamble to the Final Rule Section III and Technical Support Document at Sections I and II.

Since Justice Kennedy did not define the "region," the agencies determined that the single point of entry watershed is a reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard. A single point of entry watershed is the drainage basin within whose boundaries all precipitation ultimately flows to the nearest single traditional navigable water, interstate water, or the territorial sea. The agencies determined that because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their long term health, the watershed is a reasonable and technically appropriate way to identify the scope of waters that together may have an effect on the chemical, physical, or biological integrity of a particular traditional navigable water, interstate water, or territorial sea. The watershed includes all stream, wetlands, lakes, and open waters within its boundaries. Using watershed that flows to the nearest single traditional navigable water, interstate water, or territorial sea is consistent with court decisions that these waters are the ultimate focus of CWA protections. Using the single point of entry watershed ensures that any analysis of significant nexus is appropriately connected to these touchstone waters. See Preamble to the Final Rule Section III and Technical Support Document Section II.C.

Because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their integrity, 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 management. Anthropogenic actions and natural events can have widespread effects within the watershed that collectively impact the integrity and quality of the relevant traditional navigable water, interstate water, or the territorial sea. The functions of the contributing waters are inextricably linked and have a cumulative effect on the

integrity of the downstream traditional navigable water, interstate water or the territorial sea. For these reasons, it is more appropriate to conduct a significant nexus analysis at the watershed scale than to focus on a specific site, such as an individual stream segment. See Proposed Rule Appendix A, Scientific Analysis, 79 Fed. Reg. 22188, 22246 (April 21, 2014) and Technical Support Document at Section II.C.

Concluding that the watershed is the reasonable and appropriate region for purposes of a significant nexus analysis is also consistent with the agencies' longstanding practice and experience. To restore or maintain the health of the downstream affected water, the agencies' standard practice is to evaluate the condition of the waters that are in the contributing watersheds and to develop a plan to address the issues of concern. The Corps has used watershed framework approaches for waters sources, for navigation approaches for more than 100 years, and in the regulatory program since its inception. Also, using a watershed framework is consistent with more than two decades of practice by EPA and many other governmental, academic, and additional entities that recognize that a watershed approach is the most effective framework to address water resource challenges. Finally, the watershed that drains to the nearest (i.e., first downstream) traditional navigable water, interstate water, or the territorial seas is likely to be of a size commonly understood as a "region." *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.c.

As discussed above, "the region" for purposes of a significant nexus analysis is the watershed that drains to the nearest traditional navigable water, interstate water or the territorial seas. In a case-specific significant nexus analysis, the first step it to identify the point of entry watershed to which the water being evaluated under (a)(7) or (8) drains. This point of entry approach identifies the nearest traditional navigable water, interstate water or territorial sea that the water being evaluated and any similar situated waters flow to and delineates the watershed of that nearest traditional navigable water, interstate water or territorial sea. The point of entry watershed is the area drained by the nearest traditional navigable water, interstate water, or territorial sea and it is typically defined by the topographic divides between one navigable water, interstate water, territorial sea and another. *See* Preamble to the Final Rule Section III and IV and Technical Support Document Section II.C.

In the arid West, the agencies recognize there may be situations where the single point of entry watershed is very large, and it may be reasonable to evaluate all similarly situated waters in a small watershed. Under those circumstances, the agencies may demarcate adjoining catchments surrounding the water to be evaluated that together are generally no smaller than a typical 10-digit hydrologic unit code (HUC) watershed in the same area. The area identified by this combination of catchments would be the "region" used for conducting a significant nexus evaluation under a(a)(7) or (a)(8) is those situations. The basis for such an approach in very large single point of entry watersheds in the arid West should be documented in the jurisdictional determination. *See* Preamble to the Final Rule Section IV.

In light of the scientific literature, the longstanding approach of the agencies' implementation of the CWA, and the statutory goals underpinning Justice Kennedy's significant nexus framework, the watershed draining to the nearest traditional navigable water, interstate water, or territorial

sea, is the appropriate "region" for a significant nexus analysis. *See* the Preamble to the Proposed Rule and Technical Support Document at Section II.C.

Summary of comments in this section:

Comments generally expressed two different views. Some commenters stated that a single point of entry watershed is too large and would aggregate too many waters (particularly in the west) in a significant nexus analysis. Other comments stated that a much larger ecosystem approach should be adopted.

Summary response to comments in this section:

After considering a variety of approaches, including an ecoregion/ecosystem approach, to defining "in the region" for purposes of the significant nexus approach the agencies decided that the final rule should retain the proposal's use of the single point of entry watershed. *See* Section 5.1 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Section IIc.

Specific Comments

Minnkota Power Cooperative, Inc. (Doc. #19607)

5.164 The Proposed Rule's aggregation principle leads to more ambiguity due to single point of entry into a watershed issue. This is part of what introduces uncertainty to the size and scope of a jurisdictional determination. This could create a scenario where one channel or feature is seen as serving as a jurisdictional determination for an unlimited number of similarly situated channels or features, geographically expanding a connected system well beyond where it should. The terms aggregation, neighboring, adjacent should be removed once a valid definition of a significant nexus is established (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Section 5.1 Agency Summary Response, Introduction, Section 5.3 Agency Summary Response, Preamble to the Final Rule Sections III and IV, Technical Support Document Section II. See also Response to Comments Topic 3 – Adjacent Waters.

National Farmers Union (Doc. #6249)

5.165 The agencies request comment as to whether the agencies should evaluate all "other waters" in a single point of entry watershed as a single landscape unit for purposes of determining whether these "other waters" are jurisdictional.[69] This would create substantial negative economic impact by unduly imposing a regulatory burden on many waters that cannot affect the integrity of "waters of the United States." It would also increase the agencies' administrative load without a return of environmental benefit, since the agencies would have to perform more case-by-case jurisdictional determinations. Since this approach to evaluating "other waters" would create significant administrative burden for the agencies and the regulated community, and would not

[69] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22198,(proposed April 21, 2014) (amending 33 C.F.R. 9328.3) at 22217

produce an environmental benefit, the agencies should not include this approach in the final rule. (p. 7-8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, Section 5.1 Agency Summary Response, Introduction, Section 5.3 Agency Summary Response, Preamble to the Final Rule Section IV, and Technical Support Document Sections II and IX. See also Response to Comments Topic 4 – Other Waters.

National Wildlife Federation (Doc. #15020)

5.166 The single point of entry watershed is a reasonable basis for interpreting "in the region" for purposes of aggregating "other waters" to determine their collective effect on the nearest TNW, IW, or territorial sea.

We agree with the agencies' science-based rationale for proposing the single point of entry watershed as a minimum "region" and basic scale at which to aggregate "other waters" to determine their collective effect on the nearest TNW, IW, or territorial sea. Watersheds are the logical starting point for defining a "region." 79 Fed. Reg. at 22212. The "single point of entry" watershed is a reasonable, albeit in our view conservative, starting point for delineating the "region" in which similarly situated waters are to be identified and assessed.

Justice Kennedy's choice of the Gulf of Mexico's hypoxic zone as an example of the type of water quality issue that the CWA is intended to address should shed some light on the scale of the "region" that should be used to assess aggregate impacts. His example illustrates that a single point of entry watershed will in many cases be too small to appropriately and efficiently assess aggregate impacts of wetlands similarly situated within a region such that the objectives of clarity, certainty, and predictability are achieved. In many cases, the level of the ecoregion will likely be the best scale at which to examine many aggregated wetlands, such as the prairie potholes. (p. 57)

Agency Response: See Sections 5.1, 5.2, and 5.3 Agency Summary Responses, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II.C and see Response to Comments Compendium Topic 9 - Science.

Natural Resources Defense Council et al. (Doc. #15437)

5.167 (…) [W]e agree with treating the single point of entry watershed in which a water body being evaluated is located as the "region" governing the analysis.[70] This appears to us to be a reasonable scale on which to evaluate the impacts of similarly situated waters. At the same time, we believe that the rules should allow for the consideration of impacts at a larger scale when waters in separate single point of entry watersheds contribute to water quality further downstream – such as a larger water body to which each of those single point of entry watersheds contribute. (p. 54)

[70] 79 Fed. Reg. at 22,212.

Agency Response: **See Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Section II. See also Response to Comments Compendium Topic 9 - Science.**

5.168 Analyzing all the types of "other waters" together for a given "single point of entry watershed" basis seems to us to be a reasonable addition to the method discussed above, namely, protecting certain kinds of "other waters" in particular geographic areas categorically. That is, if there is not today a robust scientific record about the impacts of certain kinds of "other waters" in a particular region, such that those waters might be categorically protected, it would then be appropriate to examine whether all of the "other waters" in single point of entry watersheds in that region have significant downstream impacts. To be clear, however, this approach is not an adequate substitute for making the categorical determinations we have urged. (p. 64)

Agency Response: **See Section 5.1 Agency Summary Response, Introduction Section 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, Technical Support Document Section II and IX. Currently available science did not support protecting certain kinds of "other waters" in particular geographic regions categorically. However, paragraph (a)(7) of the final rule identifies five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated. Under paragraph (a)(7), these waters are similarly situated by rule because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. These five types of waters are Prairie potholes, pocosins, western vernal pools in California, and Texas coastal prairie wetlands. Supported by Justice Kennedy's opinion in *Rapanos*, the agencies determined that such waters should be analyzed "in combination" (as a group rather than individually) in the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas when making a case-specific analysis of whether these waters has a significant nexus to traditional navigable waters, interstate waters, or territorial seas.**

Wyoming Outdoor Council (Doc. #16528.1)

5.169 The watershed draining into the nearest (a)(1)-(3) water would be a single point of entry watershed. This would provide the scale for determining a region. A single point of entry watershed would be a drainage basin where all precipitation ultimately flows to the nearest (a)(1)-(3) water. 79 Fed. Reg. at 22212. The agencies indicate that mapping tools will be used to determine these watershed boundaries. *Id.* However, in the West where single point of entry watersheds can be very large, the agencies indicate they might take a modified approach and base the regions on U.S. Geological Survey hydrologic unit code 10 areas.

Any such attempt to modify the single point of entry watershed approach should be done very cautiously. The driving factor and concern should not be whether a watershed proves to be very large, but rather what the impacts on chemical, physical, and biological integrity in downstream jurisdictional waters are. If it is apparent that the very large watershed has significant impacts on these factors, that is the scale that should be used for

measuring impacts to physical, chemical, and biological integrity, not some lesser scale. (p. 5)

Agency Response: See Section 5.1 Agency Summary Response, Introduction and Preamble to the Final Rule Section IV. See also Sections 5.2, 5.3 and 5.4 Agency Summary Responses, Technical Support Document Section II and Response to Comments Compendium Topic 9 - Science.

5.170 The physical distance of an "other water" from an (a)(1)-(3) water is a significant issue that concerns the agencies. However it is clear that even where these waters are located at a distance from an (a)(1)-(3) water they can still be significantly connected. 79 Fed. Reg. at 22248-49. These more remote waters are connected by surface water or groundwater systems and "over time, impacts in one part the hydrologic system will be felt in other parts." *Id.* at 22248. And even where there is not a connection to downstream waters "they can influence downstream water through water storage and mitigation of peak flows." *Id.* They also impact water quality downstream, remove nutrients and other pollutants, and [a]quatic systems that may seem disconnected hydrologically are often connected but at irregular timeframes or through subsurface flow, and perform important functions that can be vital to the chemical, physical, and biological integrity of downstream waters." *Id.* at 22249. Thus, it is clear the agencies should not let physical distance of other waters from downstream (a)(1)-(3) waters be a deciding factor in determining whether these waters are "similarly situated" and "located in the same region." (p. 6)

Agency Response: See Section 5.1 Agency Summary Response, Introduction and Section 5.3 and 5.4 Agency Summary Responses Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. See also Response to Comments Compendium Topic 9 - Science.

Consortium of Aquatic Scientific Societies (Doc. #14802)

5.171 The current definition ("in the region" [means] the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas through a single point of entry.") would seem to imply that if a body of water along a small tributary of a navigable water were being considered, only the watershed of that small tributary would be considered to be "the region". It would seem more natural, and more in keeping with the remainder of the proposed rule, to define "the region" as the watershed of the navigable water rather than the tributary. (p. 2)

Agency Response: See Section 5.1 Agency Summary Response, Introduction, Section 5.2, 5.3 and 5.4 Agency Summary Responses, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Section II. See also Response to Comments Compendium Topic 9 - Science.

5.2. WATERSHED

Agency Summary Response

Introduction:

Under the significant nexus standard, waters possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" *Rapanos* at 780. Several terms in this standard were not defined. In this rule the agencies interpret these terms and the scope of "waters of the United States" based on the goals, objectives, and policies of the statute, the scientific literature, the Supreme Court opinions, and the agencies' technical expertise and experience. Therefore, for purposes of a significant nexus analysis, the agencies have determined (1) which waters are "similarly situated," and thus should be in analyzed in combination, in (2) the "region," for purposes of a significant nexus analysis, and (3) the types of functions that should be analyzed to determine if waters significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. These determinations underpin many of the key elements of the rule and are reflected in the definition of "significant nexus" in the rule. *See* Preamble to the Final Rule Section III and Technical Support Document at Sections I and II.

Since Justice Kennedy did not define the "region," the agencies determined that the single point of entry watershed is a reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard. A single point of entry watershed is the drainage basin within whose boundaries all precipitation ultimately flows to the nearest single traditional navigable water, interstate water, or the territorial sea. The agencies determined that because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their long term health, the watershed is a reasonable and technically appropriate way to identify the scope of waters that together may have an effect on the chemical, physical, or biological integrity of a particular traditional navigable water, interstate water, or territorial sea. The watershed includes all stream, wetlands, lakes, and open waters within its boundaries. Using watershed that flows to the nearest single traditional navigable water, interstate water, or territorial sea is consistent with court decisions that these waters are the ultimate focus of CWA protections. Using the single point of entry watershed ensures that any analysis of significant nexus is appropriately connected to these touchstone waters. See Preamble to the Final Rule Section III and Technical Support Document Section II.C.

Because the movement of water from watershed drainage basins to coastal waters, river networks, and lakes shapes the development and function of these systems in a way that is critical to their integrity, 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 management. Anthropogenic actions and natural events can have widespread effects within the watershed that collectively impact the integrity and quality of the relevant traditional navigable water, interstate water, or the territorial sea. The functions of the contributing waters are inextricably linked and have a cumulative effect on the

integrity of the downstream traditional navigable water, interstate water or the territorial sea. For these reasons, it is more appropriate to conduct a significant nexus analysis at the watershed scale than to focus on a specific site, such as an individual stream segment. See Proposed Rule Appendix A, Scientific Analysis, 79 Fed. Reg. 22188, 22246 (April 21, 2014) and Technical Support Document at Section II.C.

Concluding that the watershed is the reasonable and appropriate region for purposes of a significant nexus analysis is also consistent with the agencies' longstanding practice and experience. To restore or maintain the health of the downstream affected water, the agencies' standard practice is to evaluate the condition of the waters that are in the contributing watersheds and to develop a plan to address the issues of concern. The Corps has used watershed framework approaches for waters sources, for navigation approaches for more than 100 years, and in the regulatory program since its inception. Also, using a watershed framework is consistent with more than two decades of practice by EPA and many other governmental, academic, and additional entities that recognize that a watershed approach is the most effective framework to address water resource challenges. Finally, the watershed that drains to the nearest (i.e., first downstream) traditional navigable water, interstate water, or the territorial seas is likely to be of a size commonly understood as a "region." *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.c.

As discussed above, "the region" for purposes of a significant nexus analysis is the watershed that drains to the nearest traditional navigable water, interstate water or the territorial seas. In a case-specific significant nexus analysis, the first step it to identify the point of entry watershed to which the water being evaluated under (a)(7) or (8) drains. This point of entry approach identifies the nearest traditional navigable water, interstate water or territorial sea that the water being evaluated and any similar situated waters flow to and delineates the watershed of that nearest traditional navigable water, interstate water or territorial sea. The point of entry watershed is the area drained by the nearest traditional navigable water, interstate water, or territorial sea and it is typically defined by the topographic divides between one navigable water, interstate water, territorial sea and another. *See* Preamble to the Final Rule Section III and IV and Technical Support Document Section II.C.

In the arid West, the agencies recognize there may be situations where the single point of entry watershed is very large, and it may be reasonable to evaluate all similarly situated waters in a small watershed. Under those circumstances, the agencies may demarcate adjoining catchments surrounding the water to be evaluated that together are generally no smaller than a typical 10-digit hydrologic unit code (HUC) watershed in the same area. The area identified by this combination of catchments would be the "region" used for conducting a significant nexus evaluation under a(a)(7) or (a)(8) is those situations. The basis for such an approach in very large single point of entry watersheds in the arid West should be documented in the jurisdictional determination. *See* Preamble to the Final Rule Section IV.

In light of the scientific literature, the longstanding approach of the agencies' implementation of the CWA, and the statutory goals underpinning Justice Kennedy's significant nexus framework, the watershed draining to the nearest traditional navigable water, interstate water, or territorial

sea, is the appropriate "region" for a significant nexus analysis. *See* the Preamble to the Proposed Rule and Technical Support Document at Section II.C.

Summary of Comments:

Several commenters expressed uncertainty or concern over the use of the single point of entry watershed to define "the region" for purposes of a significant nexus analysis. Commenters stated that use of the watershed approach would lead to regulatory overreach and burden. Other commenters stated that the single point of entry watershed approach may be too narrow and flexibility should be allowed in the approach where appropriate to view "the region" more broadly.

Agency Summary Response:

As discussed above in the Introduction to Section 5.2, as well as in the Introductions to Sections 5.1 and 5.3, the Preamble to the Rule and the Technical Support Document at Sections II and IX, in light of the scientific literature, the longstanding approach of the agencies' implementation of the CWA and the statutory goals underpinning Justice Kennedy's significant nexus framework, the agencies determined the watershed draining to the nearest traditional navigable water, interstate water, or territorial sea, is the appropriate "region" for a significant nexus analysis. See the Preamble to the Proposed Rule at Sections III and IV and the Technical Support Document at Sections II.

Specific Comments

County Commissioners Association of Pennsylvania (Doc. #14579)

5.172 Similar uncertainty rests with the way "waters in the region" and "watershed" are used to determine a significant nexus, as it appears the two are being used interchangeably throughout the explanation. While the definition of "significant nexus" notes that a region of similarly situated waters could be the watershed that drains to the nearest traditional navigable water, interstate water or territorial sea, this reference to watersheds is included as an "i.e." implying that the proposed rule could also be open to other interpretations of "region." Further, the definition of "significant nexus" also refers to the ability of other waters to be evaluated as a "single landscape unit" – is this different than a region or a watershed, and if so, how? (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Sections 5.1 Agency Summary Response, Introduction, Section 5.2 Agency Summary Response, Introduction and 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document at Section II. See also Response to Comments Compendium Topic 9 - Science.

Hinsdale Colorado Board of County Commissioners (Doc. #1768)

5.173 The Guidance Contains Conflicting Provisions. While the Draft Guidance document states that the intent is to provide clarity for agency field staff in making determinations about whether waters are protected by the CWA, we find that the Draft Guidance has a

number of contradictions and conflicting provisions that further confuse the issue. For example, the Draft Guidance outlines certain criteria and requisites for determining if a waterbody has a significant nexus to traditionally navigable or interstate water. This leads one to conclude that there are limitations on waters that will be found jurisdictional. The Draft Guidance also states that a significant nexus determination should be made at the watershed scale. Our concern stems from the fact that it is difficult to determine any area of the country that is not part of a watershed, which would mean that all waters (and conveyances to these waters) could be found jurisdictional. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 5, Section 5.2 Agency Summary Response, Introduction. Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II and IX. See also Response to Comments Compendium Topic 9 - Science.

Board of Supervisors, Imperial County (Doc. #10259)

5.174 In the region: The Agencies have interpreted "in the region" to mean the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas through a single point of entry. The proposed rule recognizes that the watersheds may get very large in arid areas of the West and can be resource intensive to demarcate watershed. The Agencies offer an unfamiliar National Hydrography Data (NHD) mapping tool as a method to demarcate catchments surrounding the water. In combination, many of the catchments are roughly the size of the typical nearby 10-digit hydrologic unit code (HUC-10) watershed. Marking all the relevant waters in the region appears to be a daunting task. The Agencies should provide a better description of the demarcation method for the public to evaluate, as marking all the waters in a region could be very burdensome. (p. 3)

Agency Response: See Section 5.1 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section II. For more information regarding National Hydrography Data (NHD) visit the following U.S. Geological Survey website at www.nhd.usgs.gov. See also Response to Comments Compendium Topic 9 - Science.

Office of the City Attorneys, City of Newport News, Virginia (Doc. #10956)

5.175 In the proposed rule, at III(i), page 22212, the agencies propose that significant nexus in the region, as proposed by Justice Kennedy, be read to mean any water in the watershed. This is another attempt to impose a per se rule of jurisdiction regardless of the conditions on the site. (p. 5)

Agency Response: The final rule reflects the judgment of the agencies when balancing the science, the statute, the Supreme Court opinions, the agencies' expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public health. In the rule, the agencies determine that tributaries, as defined ("covered tributaries"), and adjacent waters, as defined (covered adjacent waters"), have a significant nexus to downstream traditional navigable waters, interstate waters, and the territorial seas and therefore are "waters of the United States." The agencies also establish that defined sets of

additional waters may be determined to have a significant nexus on a *case-specific* basis: (1) five types of waters that the agencies conclude are "similarly situated" and therefore must be analyzed "in combination" in the watershed that drains to the nearest traditional navigable water, interstate water or the territorial seas when make a case-specific significant nexus analysis; and (2) waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (a)(5). See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 - Science.

National Association of Counties (Doc. #15081)

5.176 "Significant Nexus" – The proposed rule states that "a particular category of waters either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable or interstate waters."[71]

This definition uses the watershed approach to determine jurisdiction – a watershed is an area of land where all of the rivers, streams, and other water features drain to the same place. According to the EPA, "Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. In the continental U.S., there are 2,110 watersheds, including Hawaii, Alaska, and Puerto Rico, there are 2,267 watersheds."[72]

There are very few parts of the country that are not in a watershed. This definition would create burdens on local governments who maintain public safety ditches and infrastructure near natural waterbodies; this infrastructure could be considered jurisdictional under the "significant nexus" definition. (p. 9)

Agency Response: Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 5, 7 and 8, Section 5.2 Agency Summary Response, Introduction and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

Teichert Materials (Doc. #18866)

5.177 The proposed rule's "watershed aggregation" approach in defining "significant nexus" will lead to increased regulation of remote and ephemeral areas and increased mining costs without providing any discernible ecological benefit. In addition, this approach will be, logistically speaking, very difficult to apply in practice. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 5, 7 and 8, Section 5.2 Agency Summary Response, Introduction and Section 5.3 Agency Summary Response, Introduction and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

[71] Id. *[79 Fed. Reg. 22199.]*
[72] U.S. Envtl. Prot. Agency, "What is a Watershed?," available at http://water.epa.gov/type/watersheds/whatis.cfm .

Colorado Farm Bureau (Doc. #12829)

5.178 A proposed rule should not allow for the watershed aggregation approach contained in the Agencies' 2011 draft Guidance. Consistent with *SWANCC*, the proposed rule should explicitly state that isolated (or "non-physically proximate") waters are not subject to CWA jurisdiction.

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Section 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section I. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I.

North Dakota EmPower Commission (Doc. #13604)

5.179 The proposed rule eliminates the "reach" concept, and requires all tributaries, wetlands, and proximate other waters in the same watershed to be aggregated and considered together in determining whether the water has a significant nexus.[73] A watershed is defined by the single point of entry draining into the nearest traditional navigable water or interstate water. This means that all tributaries, wetlands, or proximate other waters in a watershed may be evaluated together for purposes of determining whether the water or wetland in question has a significant nexus to traditional navigable or interstate waters. This has the effect of adding potentially hundreds of tributaries, wetlands, and non-wetland waters to the significant nexus analysis, thus making it easier to find that there is a significant nexus. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 5, 7 and 8, Section 5.2 Agency Summary Response, Introduction and Sections 5.1, 5.3 and 5.4 Agency Summary Response, Introduction and Technical Support Document Section II, VII, VIII and IX, and Preamble to the Final Rule Sections III and IV. See also Response to Comments Compendium Topic 9 - Science.

5.180 In addition a hydrological connection is not necessary to establish a significant nexus. Instead, the EPA and Corps crafted a broad definition of significant nexus, which instructs the field staff to determine whether certain functions such as "sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of aquatic habitat" are present.[74] Field staff is also instructed to look for indicators of hydrology, effects on water quality, and physical, chemical, and biological connections or functions. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section II, Section 5.4 Agency Summary Response and Response to Comment Compendium Topic 9 - Science.

[73] 79 Fed. Reg. 22,212
[74] 79 Fed. Reg. 22,261

5.181 Moreover, the proposed rule continues to perpetuate the notion from previous guidance documents that any relationship which is more than speculative or insubstantial will qualify as a "significant nexus" instead of requiring that the nexus actually be significant or substantial. The difference is important as even a minor nexus would qualify as "more than speculative" even though a minor nexus is clearly not the same as a significant nexus. The result is yet another way to expand EPA and Corps jurisdiction, and it represents a significant change from previous CWA regulations. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

National Wildlife Federation (Doc. #15020)

5.182 The single point of entry watershed approach should provide for more flexible application where region-specific science warrants.

We support the allowance for some flexibility in the use of watershed-based analyses by field staff. We believe that additional flexibility would in many cases be scientifically justified, would in those cases be consistent with Justice Kennedy's perspective on what constitutes a "region," would lead toward greater clarity and certainty, and would provide the basis for a much more effective and efficient process.

For example, we agree with Ducks Unlimited's suggestion that a combination of watersheds and physiographic or ecoregions be used to delineate groups of watersheds that could be scientifically viewed as sufficiently similar to constitute a "region."[75] In a significant number of situations, the "single point of entry" watershed to a TNW or IW will cause work, i.e., jurisdictional determinations, to be unnecessarily repeated for adjacent watersheds when the wetland, riverine, and other land use conditions for adjacent watersheds would be largely indistinguishable. We adopt here Ducks Unlimited's scientific observation that there are many instances in which a watershed at this single point of entry scale will be, in terms of key characteristics such as topography, soils, land use, and many of the characteristics of the watershed's wetlands and other water bodies, "very similar, and in some cases almost indistinguishable, from neighboring watersheds." Ducks Unlimited 2014 Rule Comments citing Lorenz et al 2010. Ducks Unlimited offers the example of numerous neighboring single point of entry watersheds along the Red River of the North between North Dakota and Minnesota that "exhibit strong similarities in almost every respect." Id.

We agree with Ducks Unlimited's recommendation that the agencies review neighboring watersheds to determine if they are similar enough to the one at issue in a case-specific analysis of "other waters" to warrant aggregation of more than one watershed in conducting the analysis. Id. at 29. We agree that combining adjoining watersheds where they exhibit such strong similarities should lead to greater administrative efficiencies, improved clarity and certainty, and more scientifically sound significant nexus analyses.

[75] See Ducks Unlimited 2014 Rule Comments *[Doc. #11014]*.

We recognize the added efficiency of agency direction 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. This approach is consistent with Justice Kennedy's conclusion that "[w]here an adequate nexus is 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."[76]

We agree with Ducks Unlimited's analysis that it would be more efficient, more consistent, more certain, and at least as scientifically and legally sound to bundle very similar watersheds within a physiographic region or ecoregion where the science establishes strong similarities and treat them as a "region." This approach would allow for significant nexus determinations to apply across these multi-watershed regions rather than needlessly replicating them watershed-by-watershed despite their similarities. This would significantly increase the efficiency, and ultimately the certainty, of the review and permitting process. (p. 57-58)

Agency Response: See Agency Summary Response Section 5.2, Introduction and Section 5.3, Agency Summary Response Introduction, Preamble to Final Rule and Technical Support Document at Sections I and II and Response To Comments Compendium 9 - Science.

Cahaba River Society (Doc. #12827)

5.183 We understand the proposed rule would allow EPA and the Army Corps to make case-specific determinations about whether a given water is jurisdictional. We agree that the appropriate geographical scale for such assessments is the local watershed. In making a 'significant nexus' determination, we encourage the agencies to consider the potential total cumulative impact if a significant portion of such water features under consideration were actually impacted. If impact to a significant portion of such water features would have a negative impact on paragraph (1)(1)(i) through (iii) waters (navigable waters), then we agree those features should be classified as jurisdictional waters. However, we also would extend the list to include the paragraph (1)(1)(iv) and (v) waters. (p. 3)

Agency Response: In the final rule, traditional navigable waters, interstate waters, and the territorial seas, are jurisdictional by rule in all cases. Impoundments of jurisdictional waters are also jurisdictional by rule in all cases. Covered tributaries and covered adjacent waters are jurisdictional by rule as defined because the science confirms that they have significant nexus to traditional navigable water, interstate waters or the territorial seas. For waters that are jurisdictional by rule, no additional analysis is required. See Preamble to the Final Rule and Technical Support Document. Regarding the watershed approach, see Section 5.2 Agency Summary Response above and Response to Comments Compendium Topic 9 – Science.

[76] Id. at 2249.

Community Watersheds Clean Water Coalition, Inc. (Doc. #16935)

5.184 The EPA and the ACOE Should Reconsider as "Waters of the U.S." those that the *SWANCC/Rapanos* Decisions Listed as No Longer Jurisdictional. The agencies should include the following in their list of jurisdictional waters.

(a) Intrastate Lakes, Rivers and Streams

The agencies should use a "watershed approach" in evaluating whether or not intrastate lakes, rivers and streams should be "waters of the U.S.", i.e., jurisdictional. Watersheds, including their lakes, rivers and streams that lie entirely within a state can, none-the-less, exert a significant influence on inter-state commerce. For example, there are several watersheds within New York State that contribute significantly to the Hudson River – the Croton Watershed being one of them – which, in turn, is a hub for intrastate, interstate, and foreign commerce. The lakes, rivers and streams within these watersheds, even the lowest order streams, e.g. headstreams, can and often do, have a significant effect on water quality and quantity in the higher order streams. The individual and cumulative effects of all the intrastate sub-watersheds on an interstate river should make them "waters of the U.S.", i.e., jurisdictional. (p. 7)

Agency Response: See Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I and II and Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses. See also Response to Comments Compendium Topic 9 - Science.

5.185 (b) Wetlands

Many of the proposed wordings of a "significant nexus" of a wetland with a relatively permanent water-body, in order to be jurisdictional, will facilitate their drainage and filling for a variety of purposes – shopping malls, housing developments etc. For example, one suggestion for a definition of "significant nexus" is the proximity of the wetland to a navigable river, or connected by a continuous surface flow. This overlooks the multitude of wetlands that are importantly connected by underground flows to navigable waters, or other waters such as streams that are connected to navigable waters.

Taking a watershed approach, a wetland can have a significant impact on water quality, even if there is no "significant nexus" with a nearby stream. Significant impacts to other streams and wetlands situated within the same watershed can occur, and should be evaluated. There does not appear to be a defensible rationale for excluding wetlands from jurisdictional waters. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Sections 5.1, 5.2, 5. 3 and 5.4 Agency Summary Responses and Technical Support Document at Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

Society of Wetland Scientists (Doc. #12846)

5.186 Additional relevant points by wetland scientists:

"Understanding the relationship between *wetland cover in the watershed* and coastal marsh *water quality* is important not only for the purpose of predicting natural variation

in water quality, but also for understanding the implications of wetland loss that often occurs as a result of human development (Wolter and others 2006). Like Johnston and others (1990), we found wetland cover to be a significant factor determining COND levels [specific conductivity]. Wetlands have the ability to filter dissolved ions and nutrients in surface runoff (Hemond and Benoit 1988; Johnston et al. 1990) and can therefore help reduce ionic concentrations. As expected, we also found that *greater wetland cover is* related to lower levels of TNN in marshes at the watershed outflow. This is consistent with a large body of literature that outlines the importance of wetlands in the nitrogen cycle." (DeCatanzaro et al. 2009) (TNN = total nitrate nitrogen). (p. 3)

Agency Response: See Preamble to the Final Rule Sections III and IV and Technical Support Document Section II. See also Response to Comments Topic 9 – Science.

5.3. "SIMILARLY SITUATED"

Following is a general summary of the term "similarly situated" as interpreted by the agencies' in the final rule, a summary of the comments provided by the public on the term "similarly situated," the agencies' responses; and case specific comments and responses.

Agency Summary Response

Introduction:

Under the significant nexus standard, waters possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" *Rapanos* at 780. Several terms in this standard were not defined. In this rule the agencies interpret these terms and the scope of "waters of the United States" based on the goals, objectives, and policies of the statute, the scientific literature, the Supreme Court opinions, and the agencies' technical expertise and experience. Therefore, for purposes of a significant nexus analysis, the agencies have determined (1) which waters are "similarly situated," and thus should be in analyzed in combination, in (2) the "region," for purposes of a significant nexus analysis, and (3) the types of functions that should be analyzed to determine if waters significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. These determinations underpin many of the key elements of the rule and are reflected in the definition of "significant nexus" in the rule. *See* Preamble to the Final Rule Section III and Technical Support Document at Sections I and II.

As reflected in the final rule's definition of "significant nexus," the agencies determined that it is reasonable to consider waters as "similarly situated" where they perform similar functions that affect downstream waters and function together within the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas. Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, and biological integrity of the nation's waters, the agencies interpret the phrase "similarly situated" in terms of whether particular waters are providing common, or similar, functions for downstream waters

such that it is reasonable to consider their effect together. *See* Preamble to the Final Rule Section III and Technical Support Document Section II.

Assessing the functions of identified waters in combination is consistent not only with Justice Kennedy's significant nexus standard, but with the science. Scientists routinely combine the effect of groups of waters, aggregating the known effect of one water with those of ecologically similar waters in a specific geographic area, or to a certain scale. This is because the chemical, physical, and biological integrity of downstream waters is directly related to aggregate contribution of upstream waters that flow into them, including any tributaries and connected wetlands As a result, the scientific literature and the Science Report consistently document that the health of larger downstream water is directly related to the aggregate health of waters located upstream, including waters such as wetlands that may not be hydrologically connected but function together to ameliorate the potential impacts of flooding and pollutant contamination from affecting downstream waters. *See* Preamble to Final Rule Section III and Technical Support Document at Section II.B.

In their review of the scientific and technical adequacy of the rule, the Science Advisory Board (SAB) panel members "generally agreed that aggregating 'similarly situated' waters is scientifically justified, given that the combined effects of these waters on downstream waters are often measurable in aggregate." September 2, 2014. Memorandum from Dr. Amanda Rodewald to Dr. David Allen. Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of 'Waters of the United States' under the Clean Water Act. ("SAB 2014c.")

One of the main conclusions of the Science Report is that incremental contributions of individual streams and wetlands are cumulative across entire watersheds, and their effects on downstream waters should be evaluated within the context of other streams and wetlands in the watershed. *See* Preamble to Final Rule Section III and Technical Support Document at Section II.

Regarding covered tributaries and covered adjacent waters, the agencies define each water type such that the functions provided are similar and the waters are situated so as to provide those functions together to affect downstream waters. *See* Preamble to Final Rule Section III and Technical Support Document at Section II.b.

The science demonstrates that covered tributaries provide many common vital functions important to the chemical, physical, and biological integrity of downstream waters, regardless of the size of tributaries. The science also supports the conclusion that sufficient volume, duration, and frequency of flow are required to create a bed and banks and ordinary high water mark. The science also supports the conclusion that tributaries function together to affect downstream waters. The agencies conclude that covered tributaries with a bed and banks and ordinary high water mark are similarly situated for purposes of the agencies' significant nexus analysis. The agencies reasonably concluded that covered tributaries are similarly situated because those physical characteristics indicate sufficient flow such that the covered tributaries are performing similar functions and tributaries located in the single point of entry watershed are working together in the region to provide those functions to the nearest traditional navigable water, interstate water or the territorial seas. Science demonstrates that tributaries within a single point

of entry watershed act together as a system in affecting downstream waters. Structurally and functionally, tributary networks and the watersheds they drain are fundamentally cumulative in how they are formed and maintained. Science Report at ES-13. Downstream traditional navigable waters, interstate waters or the territorial seas are the time-integrated result of all tributaries contributing to them. *Id.* at ES-5. The incremental effects of individual streams are cumulative across entire watersheds and therefore must be evaluated in context with other streams in the watershed. *Id.* Thus, science supports that tributaries, within a point of entry watershed are similarly situated. *See* Preamble to Final Rule Section III and Technical Support Document at Section II.B. and Section VII.B.

The agencies conclude that all waters meeting the definition of "adjacent" in the rule are similarly situated for purposes of analyzing whether they have a significant nexus to a traditional navigable water, interstate water, or the territorial seas. Based on a review of the scientific literature, the agencies conclude that these bordering, contiguous, or neighboring waters provide similar functions and function k together to significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. Further, because the definition of "adjacent" considers both the functional relationships and the proximity of the waters (i.e., those that are located near traditional navigable waters, interstate waters, the territorial seas, impoundments, and covered tributaries), interpreting the term "similarly situated" to include all covered adjacent waters, as defined in the rule, is informed by the science and is a reasonable interpretation of the scope of the statute. The geographic proximity of an "adjacent" water relative to the traditional navigable waters, interstate waters, the territorial seas, impoundments, and covered tributaries is indicative of the relationship to it, with many of its defining characteristics resulting from the movement of materials and energy between the categories of waters. The scientific literature supports that waters, including wetlands, ponds, lakes, oxbow lakes, and similar waters, that are "adjacent," as defined in the rule, to traditional navigable waters, interstate waters, the territorial seas, impoundments and covered tributaries, are integral parts of stream networks because of their ecological functions and how they interact with each other, and with downstream traditional navigable waters, interstate water or the territorial seas. The science demonstrates that these waters provide many similar vital functions to downstream waters, and the agencies defined adjacent waters with distance limitations to ensure that the waters are providing similar functions to downstream waters and the waters are located comparably in the region such that the agencies reasonably judged them to be similarly situated. *See* Preamble to Final Rule Section III and Technical Support Document at Section II.b and Section VIII.b.

For waters for which a case-specific significant nexus determination is required, the agencies have determined that some waters in specific regions are similarly situated; for other specified waters, the determination of whether there are any other waters providing similar function in a similar situation in the region must be made as part of a case-specific determination. The rule identifies two exclusive circumstances under which a significant nexus determination is made on a case-specific basis to determine whether the water is a "water of the United States." First, there are five subcategories of waters – prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California and Texas coastal prairie wetlands – that the agencies conclude must be analyzed "in combination" when making a case-specific significant nexus analysis. Second, there are waters for which the agencies have made no conclusions with respect

to which waters are "similarly situated" but for which a case-specific significant nexus analysis may be undertaken. The rule establishes that case-specific determinations may be made for waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (5). Preamble to Final Rule Section III and IV.

Based on the agencies' expertise and experience and available literature and data, the agencies have determined by rule that waters in the five subcategories of waters identified in paragraph (a)(7) of the rule are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest traditionally navigable water, interstate water or the territorial seas. The scientific literature shows that these subcategories of waters are frequently located together in a complex or are otherwise closely co-located and perform similar functions. The agencies specifically sought comment in the proposal on options to address these five subcategories of waters, including whether waters in these subcategories should be found "similarly situated" by rule. Based on the body of scientific literature regarding the subcategories of waters specified in paragraph (a)(7) and their functions, the agencies determined that waters of specified subcategories are similarly situated because they perform similar functions and they are located sufficiently close to each other to function together in affecting downstream waters and therefore reasonably be evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. The specified subcategories of waters perform similar functions as waters of the same subcategory in the same single point of entry watershed and collectively function together to affect a traditional navigable water, interstate water, or the territorial seas. Among the functions and relationships the agencies considered to conclude that the subcategories are each similarly situated include the physical capacity of the waters to provide flood and sediment retention. In determining that the waters in each of the five subcategories are "similarly situated," the agencies concluded that these subcategories of waters are co-located to each other or similarly to the tributary system such that they have cumulative and additive effects on pollutant removal through parallel, serial, or sequential processing, such as the role of pocosins in maintaining water quality in estuaries. The subcategories of waters are sufficiently near each other or the tributary system to function as an integrated habitat that can support the life-cycle of a species or more broadly provide habitat to a large number of a single species. Waters subject to normal farming, silviculture, and ranching activities that are within these subcategories will be assessed consistent with this provision of the rule. See Preamble to Final Rule Sections III and IV and Technical Support Document Section IX.A.

The SAB expressed support for the agencies' option in the preamble of the proposed rule to identify certain subcategories of waters as similarly situated and highlighted these same five subcategories. It stated, "[t]here is adequate scientific evidence to support a determination that certain subcategories and types of 'other water' in particular regions of the United States (e.g., Carolina and Delmarva bays, Texas coastal prairie wetlands, Prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, chemical and biological integrity of downstream waters and are similarly situated on the landscape) and thus could be considered waters of the United States. Furthermore, as the science continues to develop, other sets of wetlands may be identified as 'similarly situated.'" SAB2014b at 3.

See Preamble to Final Rule Section III and Technical Support Document at Section II.B. and Section IX.

The waters identified in (a)(7) are similarly situated by rule and shall be combined with other waters of the same subparagraph located in the same watershed that drains to the nearest traditional navigable water, interstate water or the territorial seas with no need for a case-specific similarly situated finding. Under (a)(7), only waters of the same subparagraph in the point of entry watershed can be considered as similarly situated. For example, only pocosins may be evaluated with other pocosins in the same point of entry watershed. Pocosins in different point of entry watersheds cannot be combined, and pocosins cannot be combined with Carolina bays under (a)(7) even where they occur in the same point of entry watershed. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

The agencies at this time do not believe that the five subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. This is because individual waters of the class vary in the level of connectivity and the effects of that connectivity to downstream waters. However, the agencies believe that the science supports that such waters, particularly when considered in combination with similarly situated waters, can on a case-specific basis have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas in light of their numerous functions that can impact downstream water integrity. The Science Report concludes "current science does not support evaluations of the degree of connectivity for specific groups or classes of wetlands (e.g. Prairie potholes or vernal pools). Evaluations of individual wetlands or groups of wetlands, however, could be possible through a case-by-case analysis." Science Report at ES-4. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Paragraph (a)(8) in the rule specifies that a water that does not otherwise meet the definition of adjacency is evaluated on a case-specific basis for significant nexus under this paragraph where it is located within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (5). Although these waters are not considered similarly situated by rule, waters under this paragraph can be determined on a case-specific basis to be similarly situated. This is a change from the proposal which would have allowed for a significant nexus determination for any water, anywhere in the landscape. Under the final rule, the waters specified in paragraph (a)(7) and waters that meet the requirements in (a)(8) are the only waters for which a case-specific determination may be made. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Under paragraph (a)(8), only waters that are located within the 100 year floodplain of a traditional navigable water, interstate water or the territorial seas or within the 4,000 foot boundary established in paragraph (a)(8) of the rule can be evaluated on a case-specific basis for significant nexus to a traditional navigable water, interstate water, or the territorial seas. If a portion of the water is located within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4,000 feet of the ordinary high water mark of an (a)(1) through (a)(5) water, the entire water will be considered to be within the boundaries for (a)(8) and will undergo a case-specific significant nexus determination. Under this provision, if the 100 year floodplain

of an (a)(1) through (a)(3) water extends beyond 4,000 feet of the ordinary high water mark, a water that is not otherwise jurisdictional under the rule, within that floodplain will be evaluated under the 100 year floodplain boundary of (a)(8). A water within the boundaries in (a)(8) must be evaluated on a case-specific basis for not only a significant nexus but also for a determination of whether there are any waters with which the water is similarly situated. Waters identified in paragraph (a)(8) may not be combined with waters identified in (a)(6) for purposes of the significant nexus analysis but may be combined with similarly situated water located in the same point of entry watershed. If waters identified in (a)(8) also meet the definition of adjacency under paragraph (a)(6), they are jurisdictional as adjacent waters and do not need a case-specific significant nexus analysis. Under (a)(8), for example, the agencies would evaluate on a case-specific basis whether a low-centered polygonal tundra and patterned ground bog in an area with a small floodplain and located beyond the 1,500 foot boundary but within the 100-year floodplain of an (a)(1) through (a)(3) water or within the 4,000 foot boundary, or a wetland in which normal farming activities occur, as those terms are used in Section 404(f) Clean Water Act and its implementing regulations, has a significant nexus as defined in the rule. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Waters identified in the subcategories in (a)(7) are evaluated under (a)(7) only; the provisions of (a)(8), including the boundaries in (a)(8), do not apply to (a)(7) waters. The significant nexus analysis for waters under (a)(8) will then consider the water individually or, if it is determined that they are similarly situated waters, as a group of waters within a point of entry watershed for their effect on the chemical, physical, or biological integrity of traditional navigable waters, interstate waters or the territorial seas. *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

In circumstances where waters are located within the 100 year floodplain of an (a)(1) through (a)(3) or are within 4,000 feet of the high tide line or ordinary high water mark of an (a)(1) through (a)(5) water are subject to a case-specific significant nexus analysis and such waters may be evaluated as 'similarly situated," it must be first demonstrated that these waters perform similar functions and are located sufficiently close to each other to function together in affecting integrity of the downstream waters. The significant nexus analysis must then be conducted based on consideration of the functions provided by those waters in combination in the point of entry watershed. A "similarly situated" analysis is conducted where it is determined that there is a likelihood that there are water that function as a system to affect downstream water integrity. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Similarly situated waters can be identified as sufficiently close together for purposes of (a)(8) waters when they are within a contiguous area of land relative to homogeneous soils, vegetation, and landform (e.g., plan, mountain, valley, etc.). In general, it would be inappropriate , for example to consider waters as "similarly situated" under (a)(8) if these waters are located in different landforms, have different elevation profiles, or have different soil and vegetation characteristics, unless the waters perform similar functions and are located sufficiently close to a "water of the United States" to allow them to consistently and collectively function together to affect a traditional navigable water, interstate water, or the territorial seas. In determining whether waters under (a)(8) are sufficiently close to each other the agencies will also consider

hydrologic connectivity to each other or a jurisdictional water. In determining whether groups of waters under (a)(8) perform "similar functions," the agencies will consider functions such as habitat, water storage, sediment retention, and pollution sequestration. In addition, consideration of wetland/water type and landscape location are relevant for determining if the waters are similarly situated. Under (a)(8), the waters do not need to be of the same type as they do in (a)(7)) to be considered similarly situated. The agencies will also consider the hydrologic, geomorphic, and ecological characteristics and circumstances of the water under consideration. Examples include: documentation of chemical, physical, and biological interactions of the similarly situated waters; aerial photography; USGS and state and local topographical or terrain maps and information; NRCS soil survey maps and data; other available geographic information systems (GIS) data; National Wetlands Inventory maps where wetlands meet the CWA definition; and state and local information. The evaluation will use any available site information and pertinent field observations where available, relevant scientific studies or data, or other relevant jurisdictional determinations that have been completed in the region. To provide greater clarity and transparency in determining what functions will be considered in determining what constitutes as significant nexus, the rule lists specific functions that the agencies will consider. *See* Preamble to Final Rule Section IV.

Only those waters that do not meet the requirements in (a)(1) through (a)(6) are to be considered in case-specific significant nexus determinations; subcategory waters that meet the provisions in (a)(1) through (a)(6) are *per se* jurisdictional without the need for a significant nexus determination. For example, waters that are identified under paragraph (a)(6) are adjacent and are not subject to a case-specific significant nexus evaluation under (a)(7) or (a)(8). Waters evaluated under (a)(7) cannot be combined with waters identified in paragraph (a)(6) or (a)(8), and waters evaluated under (a)(8) cannot be combined with waters identified in (a)(6) or (a)(7). For example, Prairie potholes being evaluated under (a)(7) may not be combined with Prairie potholes that are per se jurisdictional under (a)(6) that meet the definition of adjacent. When a water meets the specifications at both (a)(7) and (a)(8), it can only be evaluated under (a)(7). That is, for example, if a wetland is a Western vernal pool and is also within 4,000 feet of the ordinary high water mark of an (a)(5) water, it can only be assessed for significant nexus under (a)(7) in combination with other Western vernal pools in the point of entry watershed. Unlike (a)(8), there is no distance threshold for waters evaluated under (a)(7) – that is, waters in the (a)(7) subcategories that are more than 4,000 feet from the high tide line or the ordinary high water mark of an (a)(1) through (a)(5) water or are beyond the 100-year floodplain of an (a)(1) through (a)(3) water are to be included in combination in a significant nexus analysis. *See* Preamble to Final Rule Section IV.

For practical administrative purposes, the rule does not require evaluation of all similarly situated waters under subsections (a)(7) or (a)(8) when concluding that those waters have a significant nexus to a traditional navigable water, interstate water, or territorial sea. When a subset of similarly situated waters provides a sufficient science-based justification to conclude presence of a significant nexus, for efficiency purposes a significant nexus analysis need not unnecessarily require time and resources to locate and analyze all similarly situated waters in the entire point of entry watershed. For example, if a single Carolina bay or group of Carolina bays in a portion of the point of entry watershed is determined to significantly affect the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or the territorial seas, the

analysis does not have to document all of the similarly situated Carolina bays in the watershed in order to conduct the significant nexus analysis. A conclusion that a significant nexus is lacking may not be based on consideration of a subset of similarly situated waters because under the significant nexus standard the inquiry is how the similarly situated waters in combination affect the integrity of the downstream water. While the rule is clear that waters that are jurisdictional by rule cannot be combined with waters subject to a case-specific nexus analysis, the analysis may appropriately include the evaluation of functions of (a)(8) waters through (a)(6) waters without consideration of the functions contributed by those (a)(6) waters. The hydrologic connections between (a)(8) waters and a covered tributary and eventually to a traditional navigable water, interstate water, or the territorial seas, can often occur through an adjacent water. This hydrologic connection is an appropriate part of the case-specific analysis as to what the (a)(8) waters, alone or in combination with any similarly situated (a)(8) waters in the point of entry watershed , provide those functions downstream such that they significantly affect the chemical, physical or biological integrity of the traditional navigable water, interstate water, or the territorial seas. For example, when evaluating a wetland that is 2,500 feet from the ordinary high water mark of an (a)(5) water and that has surface or shallow subsurface connections to downstream (a)(1) through (a)(3) waters via a wetland that is adjacent to an (a)(4) water, the existence of those connections is not ignored. However, while a water's connections to the (a)(1) through (a)(3) water through (a)(5) through (a)(7) waters can be considered in the significant nexus analysis in order to determine whether the functions of the (a)(8) waters are provided downstream, only the functions of the water, along with any similarly situated waters, being evaluated under (a)(8) on downstream water integrity can be included in the significant nexus analysis. *See* Preamble to Final Rule Section IV.

The administrative record for a jurisdictional determination for a water under (a)(7) or (a)(8) will include available information supporting the determination. In addition to location and other descriptive information regarding the water at issue, the record will include an explanation of the rationale for the jurisdictional conclusion and a description of the information used. Relevant information can come from any sources, and need not always be specific to the water whose jurisdictional status is being evaluated. Studies of the same type of water or similarly situated waters can help inform a significant nexus analysis as long as they are applicable to the water begin evaluated. In the case of (a)(8) waters, the administrative record will include the rationale behind the similarly situated analysis, including an explanation of the data or information examined. The agencies expect that where waters are determined to be similarly situated in a single point of entry watershed, such similarly situated waters will often be found jurisdictional through the case-specific analysis of significant nexus. However, case-specific factors such as distance to the traditional navigable water, interstate water, or the territorial seas; density and/or number of similarly situated waters; individual and/or cumulative size of the similarly situated waters; soil permeability; climate; etc., may be considered in the determination and there could be cases where even considering these waters in combination with similarly situated waters will not be sufficient for waters to have a significant nexus. *See* Preamble to Final Rule Section IV.

Within a single point of entry watershed, over a period of time there will likely be multiple jurisdictional determinations. For (a)(7) waters, if a case-specific significant nexus determination has been made in the point of entry watershed, all waters in the subcategory in the point of entry watershed are jurisdictional. For (a)(8) waters, the case-specific significant

analyses must use information used in previous jurisdictional determinations, and 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. This is because under Justice Kennedy's test, similarly situated waters in the region should be evaluated together. A positive significant nexus determination would then apply to all similarly situated waters within the point of entry watershed. A negative case-specific significant nexus evaluation under (a)(7) or (a)(8) of all similarly situated waters in the point of entry watershed applies to all similarly situated waters in that watershed. However, a conclusion that significant nexus is lacking may not be based on consideration of a subset of similarly situated waters, because under the significant nexus standard the inquiry is how the similarly situated waters in combination affect the integrity of the downstream water. The documentation for each case should be complete enough to support the specific jurisdictional determination, including an explanation of which waters were considered together as similarly situated and in the same region. *See* Preamble to Final Rule Section IV.

Summary of comments in this section:

1. Many commenters expressed concern that the term "similarly situated" is vague, overly broad, too subjective, will lead to an expansion of jurisdiction, and should be removed from the rule.
2. Several commenters stated that there is no definition, criteria or functions to apply in determining significance and stated that definable distances and other criteria for "similarly situated" should be established. Others commenters stated that proximity and functionality must both be met in a "similarly situated" analysis. Several commenters stated that only waters with a surface hydrological connection can be considered similar, while others wanted non-hydrologically connected waters to be included. Commenters stated that isolated waters should be considered when determining which waters are "similarly situated." Other commenters were concerned that the "similarly situated" analysis could lead to isolated waters being considered jurisdictional.
3. Several commenters pointed to the watershed or ecoregions as being too large an area for waters to be considered "similarly situated" while other commenters supported the watershed approach or the ecoregion approach.
4. Some commenters were concerned that "similarly situated" only arises in the context of Justice Kennedy's opinion, and other ideas should be considered regarding "similarly situated." Others commented that incorporating "similarly situated" waters into the significant nexus analysis is consistent with the *Rapanos* decision.

Summary response to comments in this section:

1. The final rule, including the analysis for "similarly situated" waters, reflects the judgement of the agencies when balancing the science, the statute, the Supreme Court opinions, the agencies' expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public health. The agencies determined that it is reasonable to consider waters as "similarly situated" where they perform similar functions that affect downstream waters and are located within the watershed that drains

to the nearest traditional navigable water, interstate water, or the territorial seas. Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, and biological integrity of the nation's waters, the agencies interpret the phrase "similarly situated" in terms of whether particular waters are providing common, or similar, functions for downstream waters such that it is reasonable to consider their effect together. Regarding covered tributaries and covered adjacent waters, the agencies define each water type such that the functions provided are similar and the waters are situated so as to provide those functions together to affect downstream waters. For waters for which a case-specific significant nexus determination is required, the agencies have determined that some waters in specific regions are similarly situated; for other specified waters, the determination of whether there are any other waters providing similar function in a similar situation in the region must be made as part of a case-specific determination. *See* Preamble to Final Rule Section III and Technical Support Document Sections II.B., VII.B., VIII.B., IX.A. and IX.B. See Section 5.4 Agency Summary Response.

The scope of waters covered by the Clean Water Act and this rule today is considerably smaller than the scope of waters historically covered prior to the 2001 and 2006 Supreme Court decisions. To address the concern that the "other waters" category would allow the agencies to regulate virtually any water, the final rule places limits on the waters that could be subject to a case-specific significant nexus determination, in recognition that case-specific analysis of significant nexus is resource-intensive and based on the body of science that exists. The rule identifies two exclusive circumstances under which a significant nexus determination is made on a case-specific basis to determine whether the water is a "water of the United States." First, there are five subcategories of waters – Prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California and Texas coastal prairie wetlands – that the agencies conclude must be analyzed "in combination" when making a case-specific significant nexus analysis. Second, there are waters for which the agencies have made no conclusions with respect to which waters are "similarly situated" but for which a case-specific significant nexus analysis may be undertaken. The rule establishes that case-specific determinations may be made for waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (5). *See* Preamble to Final Rule Sections III and IV and Technical Support Document Sections II.B., IX.A. and IX.B. *See also* Sections 5.0 and 5.4 Agency Summary Responses.

Paragraph (a)(8) in the rule specifies that a water that does not otherwise meet the definition of adjacency is evaluated on a case-specific basis for significant nexus under this paragraph where it is located within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (5) in the rule. Although these waters are not considered similarly situated by rule, waters under this paragraph can be determined on a case-specific basis to be similarly situated. This is a change from the proposal which would have allowed for a significant nexus determination for any water, anywhere in the landscape. Under the final rule, the waters specified in paragraph (a)(7) and waters that meet the requirements in (a)(8) are the only waters for which a case-

specific determination may be made. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II.b., IX.a., and IX.b.

2. Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, and biological integrity of the nation's waters, the agencies interpret the phrase "similarly situated" in terms of whether particular waters are providing common, or similar, functions for downstream waters such that it is reasonable to consider their effect together. A "similarly situated" analysis is conducted where it is determined that there is a likelihood that there are water that function as a system to affect downstream water integrity. The language of the Final Rule specifically states in the definition of "significant nexus" that "[w]aters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters." Similarly situated waters can be identified as sufficiently close together for purposes of (a)(8) waters when they are within a contiguous area of land relative to homogeneous soils, vegetation, and landform (e.g., plan, mountain, valley, etc.). In general, it would be inappropriate , for example to consider waters as "similarly situated" under (a)(8) if these waters are located in different landforms, have different elevation profiles, or have different soil and vegetation characteristics, unless the waters perform similar functions and are located sufficiently close to a "water of the United States" to allow them to consistently and collectively function together to affect a traditional navigable water, interstate water, or the territorial seas. In determining whether waters under (a)(8) are sufficiently close to each other the agencies will also consider hydrologic connectivity to each other or a jurisdictional water. In determining whether groups of waters under (a)(8) perform "similar functions," the agencies will consider functions such as habitat, water storage, sediment retention, and pollution sequestration. In addition, consideration of wetland/water type and landscape location are relevant for determining if the waters are similarly situated. Under (a)(8), the waters do not need to be of the same type as they do in (a)(7)) to be considered similarly situated. The agencies will also consider the hydrologic, geomorphic, and ecological characteristics and circumstances of the water under consideration. Examples include: documentation of chemical, physical, and biological interactions of the similarly situated waters; aerial photography; USGS and state and local topographical or terrain maps and information; NRCS soil survey maps and data; other available geographic information systems (GIS) data; National Wetlands Inventory maps where wetlands meet the CWA definition; and state and local information. The evaluation will use any available site information and pertinent field observations where available, relevant scientific studies or data, or other relevant jurisdictional determinations that have been completed in the region. To provide greater clarity and transparency in determining what functions will be considered in determining what constitutes as significant nexus, the rule lists specific functions that the agencies will consider. To provide greater clarity and transparency in determining what functions will be considered in determining what constitutes as significant nexus, the rule lists specific functions that the agencies will consider. *See* Preamble to Final Rule Sections III and IV and Technical Support Document Sections II.B, VII.B., VIII.B., IX.A.. and IX.B.

Streams, wetlands, and other surface waters interact with groundwater and terrestrial environments throughout the landscape, "from the mountains to the oceans" (Winter et al., 1998) Thus, an integrated perspective of the landscape, provides the appropriate scientific content for evaluating and interpreting evidence about the physical , chemical, an biological connectivity of streams, wetlands, and open water to downstream waters. In determining whether waters under (a)(8) are sufficiently close to each other for purposes of analyzing "similarly situated" waters, the agencies will consider hydrologic connectivity to each other or a jurisdictional water. The agencies recognize that the science demonstrates that water with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." *See* Preamble to the Final Rule Sections III and IV, Technical Support Document at Section II.b.

In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect

on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

3. As reflected in the final rule's definition of "significant nexus," the agencies determined that it is reasonable to consider waters as "similarly situated" where they perform similar functions that affect downstream waters and are located within the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas. Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, and biological integrity of the nation's waters, the agencies interpret the phrase "similarly situated" in terms of whether particular waters are providing common, or similar, functions for downstream waters such that it is reasonable to consider their effect together. In determining whether waters under (a)(8) are sufficiently close to each other the agencies will consider hydrologic connectivity to each other or a jurisdictional water. *See* Section 5.1 Single Point of Entry and Section 5.2 Watersheds.

4. The final rule utilizes the significant nexus standard, including the concept of "similarly situated" waters, as articulated by Justice Kennedy's opinion in *Rapanos* and informed by the unanimous opinion in *U.S. v. Riverside Bayview Homes*, 474 U.S. 121 (1985) (*Riverside Bayview*) and the plurality opinion in *Rapanos* which recognize that the CWA and the agencies must draw lines "on this continuum to find the limit of 'waters,'" *Riverside Bayview* at 134, to interpret the scope for the statutory term "waters of the United States" While the Courts of Appeals are split on the proper interpretation of *Rapanos*, none has adopted the position that the agencies cannot rely on Justice Kennedy's standard or that jurisdiction exists only where both the plurality's and Justice Kennedy's standards are satisfied. The Technical Support Document at Section I provides a detailed explanation of the *Rapanos* decision and other relevant case law as well as the basis for the agencies' use of the significant nexus standard. *See* Technical Support Document at Section I.

Specific Comments

New Mexico Department of Agriculture (Doc. #13024)

5.187 The rule states that, "For an effect to be significant, it must be more than speculative or insubstantial." This broad definition leaves much to interpretation and should he clarified. As written, there is virtually no limit to the number of waters that could be deemed jurisdictional via *significant nexus.* The definition of the term *significant nexus* includes a broad criterion that would allow the Agencies to claim jurisdiction over *similarly situated waters.* A *similarly situated water* "perform[s] similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so they can be evaluated as a single landscape unit with regard to their effect on the chemical , physical , or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section." NMDA requests the removal of language allowing for the use of *significant nexus* determinations based on proxy data like "similarly situated waters." Thus we recommend striking the qualifier "either alone or in combination with

other similarly situated waters in the region" and leaving the wording, "The term significant nexus means that a water, including wetlands, that alone significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section." (p. 13-14)

Agency Response: Regarding interpretation of the phrase "more than speculative or insubstantial" see Section 5.0 Agency Summary Response, Introduction and summary response to comment 8, Preamble to Final Rule Section III and Technical Support Document Section II. Regarding the jurisdictional scope of waters see Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, Preamble to the Final Rule at Section III and Technical Support Document at Sections I, II, and IX. Regarding the "similarly situated" waters language, see Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2 and 4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX.

California State Water Resources Control Board (Doc. #15213)

5.188 We support the proposed "significant nexus" definition, including specifically, "a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (s)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section." Making the determination of "similarly situated" waters should be done at the watershed level (for these purposes, the term watershed should mean all areas resulting from the first subdivision of a subbasin). Certainty that waters are "similarly situated" and thus similarly affecting the chemical, physical, or biological integrity of jurisdictional waters increases when the area of analysis is confined to a watershed where, by definition, all waters flow to a common point. Although waters within an ecoregion could similarly affect chemical, physical, or biological integrity of a jurisdictional water, the large scale of ecoregions would greatly complicate the analysis and provide more opportunities for challenges to the jurisdictional determinations. (p. 9)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 3, Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

Washington State Water Resources Association (Doc. #16543)

5.189 A new category of "other waters" is established which may be found jurisdictional based not on their individual impact on the water quality of a TNW, but rather on the potential impact should one assume, without the benefit of any NEPA type reasonably foreseeable analysis, that all similarly situated waterbodies in the region or basin, which can be evaluated as a single landscape unit, are also impacted. There is no definition or criteria to apply in determining "significance". (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Agency Summary Responses for Sections 5.1, 5.2, 5.3, and 5.4, Preamble to Final Rule Section III and Technical Support

Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science. In addition, the rulemaking complies with NEPA.

Nebraska Department of Roads (Doc. #16896)

5.190 Definition of Significant Nexus with Similarly Situated Waters. NDOR supports defining "significant nexus" in rule rather than guidance. However, the definition includes statements about "similarly situated waters," which perform similar functions and are closely located within a region. In Nebraska, isolated farmed wetland areas could conceivably fall under jurisdiction of the CWA by virtue of them being "similarly situated" to other wetlands adjacent to jurisdictional streams. Under this definition, it's conceivable that a regulator could claim jurisdiction over all isolated farmed or otherwise isolated wetlands in a particular watershed or landscape, not just those in close proximity. Although NDOR supports defining "significant nexus" in rule, we do not support the concept of "similarly situated waters" if that results in an expansion of current jurisdiction. (p. 2)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2, and 3, Agency Summary Response Section 5.0 and 5.4, Response to Comments Compendium 7 – Features and Waters Not Jurisdictional, Preamble to Final Rule Sections III and IV, Technical Support Document Sections I and II.

Shasta County Board of Supervisors (Doc. #1769)

5.191 The Proposed Rule would create a "Significant Nexus" criteria. Broad adjoining areas would be linked together with the Waters of the United States for analysis and potential regulation. This is presumably inspired by the "similarly situated waters" test recently introduced by Justice Kennedy. We would note that the Honorable Justice was alone in propounding that opinion. At this point, a more representative and balanced foundation would seem prudent. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 1, Sections 5.3 and 5.4 Agency Summary Response, Introduction and summary response to comment 4, Preamble to the Final Rule Section III and Technical Support Document Section II.

Office of the City Attorneys, City of Newport News, Virginia (Doc. #10956)

5.192 The agencies further attempt to define "similarly situated". The definition in essence is that if a circumstance occurs in any given type of water, such as a wetland, that it would apply in all wetlands. III(i), pages 22212 and 22213, page 22215. This is legally and scientifically unsound. A "one size fits all" rule should never be sufficient to impose federal penalties upon an entity. (p. 5)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 1, Preamble to the Final Rule Sections III and IV, Technical Support Document Section I, II and IX.

Murray County Board of Commissioners (Doc. #7528.1)

5.193 We are concerned that the proposed rule does not accurately describe Justice Kennedy's use of "significant nexus" to establish jurisdiction under the Clean Water Act. The proposed rule defines significant nexus as an ideological measurement of the chemical, physical, or biological effects that waters perform individually or together with all similarly situated waters on traditional navigable waters. But, caselaw demands more than a measurement of the nexus between a water and a traditional navigable water as part of the water cycle. As currently understood by the proposed rule, the agencies view "significant nexus" as the connection between water itself, and not as a measure of a wetland impact' s effects on water quality. (p. 8)

Agency Response: See Section 5.0 Agency Summary Response and summary response to comments 8, Section 5.3 and 5.4 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

5.194 The degree of significance of nexus of any individual "other water" to the downstream navigable water should play a role in determining whether the individual "other water" is significant enough to be jurisdictional. While other similarly situated waters may have a significant nexus to a navigable, downstream water, any number of proposed activities that requires a permit if conducted in a jurisdictional water may not impact the physical, chemical, or biological integrity of a navigable, downstream water due to the limited degree of nexus significance the individual water has on the navigable water. (p. 9)

Agency Response: See Section 5.0 Agency Summary Response and summary response to comments 8, Section 5.3 and 5.4 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

Hamilton County Engineer's Office (Doc. #4755)

5.195 It is believed that the use of the term "similarly situated" would allow the agencies to consider multiple waters together in making a "significant nexus" determination. The proposed rule states that the agencies should look at whether these waters "can reasonably he expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether these waters are "sufficiently close" to each other or the jurisdictional water. This analysis is fraught with uncertainty and subjective decision-making. The agencies should assess each of the individual functions that the group of waters must perform in order to be considered "similarly situated", including listing such functions as examples in the proposed rule. Also, the agencies should require a confined, verifiable surface connection to each other (and not "fill and spill" as put forth in the proposed rule) in order for waters to be considered "similarly situated", and limit the distance allowable between "similarly situated" waters. Waters not meeting these tests should not be considered "similarly situated" and thus would be non-jurisdictional under the CWA. Considering CWA jurisdiction of "other waters" in a watershed on a

landscape scale would create burdens on both the regulated community and the regulating agencies without much benefit to water quality and should not be considered as an alternative in the rule. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Response to Comments Compendium Topic 9 - Science.

Board of Supervisors, Imperial County (Doc. #10259)

5.196 Similarly situated: This proposed definition includes subjective terms like "performing similar functions" and "single landscape unit" that, when coupled with the broad findings of the CR, could lead to isolated waters being deemed jurisdictional. This would exacerbate the already cumbersome and costly CWA Section 404 permitting process because it would take the Agencies even longer to document the hydrologic and ecological characteristics of the WOTUS, as well as those waters that are "similarly situated." Including some sort of narrowing mechanism in the definition of "single landscape unit" would alleviate concerns of expansive CWA jurisdiction. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Section 5.1 and Section 5.2.

The Board of County Commissioners of Otero County New Mexico (Doc. #14321)

5.197 The rule should stress that the two components of "similarly situated," *proximity* and *functionality*, are conjunctive factors that must both be met. (p. 17)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 2, Preamble to Final Rule Section III and IV, and Technical Support Document Section II.

Riverside County Flood Control and Water Conservation District (Doc. #14581)

5.198 Proposed Rule is intended to clarify and simplify the question of whether a water is jurisdictional, the use of amorphous and over-inclusive terms to determine that question would result in a more protracted 404 permit process simply because of the time it would take the Agencies to document the hydrologic, geomorphic and ecological characteristics and circumstances of the waters, as well as other similarly situated waters in the region. Such a process would not be advantageous for the Agencies or the Permittee. (p. 7)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Section 5.0 Agency Summary Response, Introduction and response to summary comment 3.

New York City Law Department (Doc. #15065)

5.199 The Proposed Rule should provide more clarity on what an analysis of a "significant nexus" between "other waters" and other categories of jurisdictional waters may entail.

For example, the Proposed Rule states that for a significant nexus analysis, wetlands are "similarly situated" when they perform "similar functions" or are "sufficiently close together." To increase clarity and consistency, EPA and the Corps should define "similar functions" and "sufficiently close together" in the text of the Proposed Rule, rather than just in the accompanying narrative. At a minimum, EPA and the Corps should include the various factors for consideration in the significant nexus analysis as a subsection to the "significant nexus" definition. (p. 2)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Section 5.0 Agency Summary Response, Introduction. See also Response to Comments Compendium Topic 9 - Science.

City of Portland, Bureau of Environmental Services (Doc. #16662)

5.200 The final rule should include more information and direction about how to evaluate "similarly situated waters. The key to determining whether these combined "similarly situated" waters will be considered Waters of the US is the determination of whether or not there is a significant nexus between the waters in question and a traditionally navigable water. There is no direction in the proposed rule about what features of combined waters would add up to be "significant" other than that it should not be "speculative or insubstantial." Relevant factors are listed, but there is no quantitative guidance on when it stops being "insubstantial" and starts being "significant," or if there is something in between those two extremes. In addition, the determination of whether a water is "similarly situated" relies very heavily on chemical and hydrologic connectivity, to the exclusion of waters that serve the same biological community. There should be a mechanism for including otherwise isolated ponds that support critical life stages of threatened or endangered species in the determination of which waters are similarly situated to the water in question. The alternative geographic approach adds clarity and certainty but it risks excluding many critical rivers, such as Lower Willamette River headwater streams, that do not drain the Coast Range or Cascade mountains but nonetheless serve the same functions as those headwaters. (p. 2-3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 2. Regarding functions relevant to the "significant nexus" evaluation, see Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8. Regarding "speculative or insubstantial," Section 5.0 Agency Summary Response, Introduction and summary response to comment 8. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, and IX.

City of St. Petersburg (Doc. #18897)

5.201 The new definition of "Significant Nexus" is overbroad, vague, and ambiguous. The proposed definition of *significant nexus* requires a water (or group of similarly situated waters) to significantly affect the chemical, physical, or biological integrity of interstate waters or the territorial seas to become jurisdictional waters of the U.S. under an expanded scope of the CWA. "Similarly situated" is defined therein as a group of water

bodies that "perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that that they can be evaluated as a single landscape unit ..." The "other waters" that may come under this analysis seems limitless, without a more detailed explanation as to how a "similar functions" or "sufficiently close" analysis would occur. The proposed rule did proffer some guidance regarding ecoregions as a basis for determining "similarly situated." The ecoregions appear to be developed as topographical/land descriptors and may not be appropriate to be used to presume hydrological connectivity. Given the options, the City prefers an *ad hoc* jurisdictional analysis over a regional aggregation approach, as the ecoregions were likely not developed with an eye to the precise chemical, physical, or biological standard that a *significant nexus* requires. While streamlining the process of jurisdictional determinations is desperately needed, it must not be done at the expense of precision. (p. 2-3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2, and 3. Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Section 5.0 Agency Summary Response, Introduction, and Section 5.1 Single Point of Entry and Section 5.2 Watersheds.

Hidalgo Soil and Water Conservation District, Lordsburg, New Mexico (Doc. #19450)

5.202 Significant Nexus: Significant nexus is defined as, "a water…either alone or in combination with other similarly situated waters in the region… that significantly affects the integrity of a water [of the U.S.]..." Similarly situated waters are not jurisdictional, making determinations based on this criterion is extraneous and would allow for jurisdiction over waters without any connection to a Water of the U.S. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and Section 5.3 Agency Summary Response, Introduction, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

California State Association of Counties (Doc. #9692)

5.203 Similarly situated: This definition contains subjective terms like "performing similar functions" and "single landscape unit" that when coupled with the broad findings of the CR, could lead to isolated waters being deemed jurisdictional. This would exacerbate the already cumbersome and costly CWA 404 permit process because it would take the agencies even longer to document the hydrologic and ecological characteristics of the WOUS and others "similarly situated". Providing some sort of narrowing mechanism into the definition of "single landscape unit " would alleviate concerns of expansive CWA jurisdiction. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2, and 3. Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Section 5.0 Agency Summary Response, Introduction, and Section 5.1 Single Point of Entry and Section 5.2 Watersheds.

New York Farm Bureau et al. (Doc. #11922)

5.204 The significant nexus determination is changed to allow a watershed approach to determine federal jurisdiction, introducing an amorphous parameter by which to judge "similarly situated waters" that is difficult for both the regulated community and the regulating agency to interpret with a sense of accuracy or consistency. Without a quantifiable distance and clear definition this provision continues to lead to confusion over what waters are and are not subject to permitting under the CWA. (p. 2)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2, and 3. See also Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX.

Western Coalition of Arid States (Doc. #14407)

5.205 WESTCAS recommends the agencies incorporate the following changes in the Final Rule….

Abandon the use of groundwater connectivity to establish CWA jurisdiction. Congress never intended the agencies to regulate discharges to groundwater. Groundwater quality regulation is within the purview of the states. As proposed, the agencies have not clearly defined when an isolated (a)(6) water will have a shallow subsurface connection that affects the chemical, physical or biological integrity of downstream (a)(1) through (a)(3) waters. (p. 2)

Agency Response: See Section 5.0, Preamble to Final Rule Sections I and II and Technical Support Document Section II. The final rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwater, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

Aluminum Association (Doc. #15388)

5.206 The definition of "significant nexus" states that waters are "similarly situated":

> "when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity…"
>
> This definition is so broad and vague as to potentially include isolated features, which may only receive rainwater or have minor groundwater communication that previously would not be jurisdictional, e.g., abandoned strip and pit mines, isolated wetlands and isolated ponds, may now be jurisdictional. (p. 4)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II and IX. See also, Response to Comments Compendium 7 – Features and Waters Not Jurisdictional.

Georgia Association of Manufacturers (Doc. #18896)

5.207 The "significant nexus" definition introduces the concept of "aggregation" to further expand federal jurisdiction to even more remote features that do not individually have a connection to traditionally navigable waters. Even isolated water bodies with no connection to a traditionally navigable water can be jurisdictional if the Agencies determine that, in combination with similarly situated features, there is a "significant nexus." In addition to introducing increased subjectivity and uncertainty, this could result in mass confusion to unknowing property owners. If the Agencies determine that an individual feature is jurisdictional using the "aggregation" concept, it would make all similarly situated features within the same basin or region jurisdictional. This could occur without the knowledge of the other now-affected property owners in the area. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II and IX.

Pinnacle Construction & Development Corp. (Doc. #1807)

5.208 [F]or jurisdictional determinations based on "similarly situated waters," the agencies provide themselves the ability to exert jurisdiction over properties based on a prior determinations that because a "similar" property in the same region is jurisdictional, the property in question is also subject to federal control. (p. 2)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 2, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II and IX. The significant nexus standard requires evaluation of "similarly situated" *waters* for Clean Water Act jurisdiction.

Kansas Independent Oil & Gas Association (Doc. #12249)

5.209 The agencies' use of "similarly situated" differs from Justice Kennedy's use of the phrase. In *Rapanos,* Justice Kennedy opines:

> [W]etlands 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". Where an adequate nexus is 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.

The agencies propose that "other waters" are similarly situated if those waters: [P]erform similar functions and they are either (1) located sufficiently close together so they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, and biological integrity of a traditional navigable water, interstate water, or the territorial seas; or (2) located sufficiently close to a "water of the United States" for such an evaluation on their effect.

Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22211 (proposed Apr. 21, 2014) (to be codified at 33 C.F.R. pt. 328.40 C.F.R. pts. 110, 112, 116). The region of these similarly situated waters is the "watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas." "Other waters" are similarly situated "when they are within a contiguous area of land with relatively homogenous soils, vegetation, and landform. "Other waters" that are similarly situated under the proposed rule are required to perform similar functions pertaining to habitat, water storage, sediment retention, and pollution sequestration.

In light of Justice Kennedy's concurrence in Rapanos and past Supreme Court precedent established in SWANCC, this proposal for similarly situated waters in the region appears to encompass a much broader spectrum of "adjacent waters" than what Justice Kennedy envisioned in his concurrence. Justice Kennedy only mentioned the aggregation of similarly situated wetlands. Most wetlands will share similar characteristics such as flow, pollutant trapping, flood control, and run-off storage. Because wetlands tend to perform similar functions, Justice Kennedy feels, from an administrative convenience standpoint, that aggregation of similarly situated wetlands is appropriate. Under the "other waters" category, one may have many different types of waters that perform substantially different functions, yet still share some characteristics to others within the region. Classifying all "other waters" within a similarly situated region may result in many "other waters" being classified as "waters of the United States" when these "other waters" may actually lack the requisite nexus to have a chemical, physical, or biological impact on a traditional navigable water, interstate water, or territorial seas. (p. 11-12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4, 6, 7 and 8, Section 5.3 and 5.4 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, III and IV. See also Response to Comments Compendium Topic 9 - Science.

5.210 …"similarly situated waters". The proposal provides the significant nexus test must consider a water "alone or in combination with similarly situated waters." This language invites a regulatory decision to combine waters in a manner that has not been typical for the CWA regulatory programs. Further guidance is offered in the definition that provides "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a water of the United States, so that they can be evaluated in a single landscape unit..." The stated goal is that of creating a "landscape unit" to assess the water's effect on the chemical, physical, or biological integrity of the TNW. The definition suggests a "landscape unit" is to be created by the regulator and it will constitute one of the following: (1) waters that perform similar functions and located sufficiently close together or (2) waters that are sufficiently close to a "water of the United States." The regulator is invited to gather different, although similar, waters that are "sufficiently close" to develop a "landscape unit". The collection of waters for the purpose of determining the significant nexus, provides for an inclusive identification of waters (to include separate water bodies) that are protected. Cautioning against speculative or insubstantial conclusions about effect on those waters, the definition asks "what is the chemical, physical or biological influence on integrity." Once that analysis is completed one may then determine "significant nexus." This labored analysis creates a presumption of gathering waters to identify a map of protected "water of the United States." That resulting map is expansive and therefore predicts a more frequent determination of "significant nexus." The proposed definition of "waters of the United States" has embedded within its defined terms a regulatory determination that is a remarkable expansion from the regulatory definition that exists today, and is in direct contravention to the statutory and Supreme Court case law. (p. 17)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1 and 3, Section 5.3 and 5.4 Agency Summary Response, Introduction and summary response to comments 1 and 4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Response to Comments Compendium Topic 9 - Science.

Railroad Commission of Texas (Doc. #14547)

5.211 For waters that escape the expanded definitions of tributary or adjacency, the Agencies may still find a "significant nexus" on a case-by-case basis, considering all "similarly situated waters located in the same region." The definition of "significant nexus" makes it clear that all waters in the same watershed are in the same region, so the proposal would allow the Agencies to "aggregate" such waters. In this regard, RRC agrees with the comment of the Attorney General of Texas that it is difficult to envision any lands that are not potentially within the ambit of federal Clean Water Act jurisdiction. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1 and 3, Section 5.3 Agency Summary Response, Introduction and summary response to comments 1 and 4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, and IX. See also Response to Comments Compendium Topic 9 - Science.

5.212 The proposed rule states that the Agencies find that a "significant nexus" exists when "a water, including wetlands either alone or in combination with similarly situated waters in the region (defined as the watershed), significantly affects the chemical, physical or biological integrity of water identified in (1)-(3) above." The Agencies cite EPA's "connectivity study" as the method the Agencies will use to determine that the nexus is more than insubstantial. By sweeping together all tributaries and adjacent wetlands and waters as having a significant nexus, the agencies conclude that these waters, by definition, satisfy Justice Kennedy's condition that Clean Water Act jurisdiction requires more than a speculative or insubstantial effect on navigable waters. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

The Mosaic Company (Doc. #14640)

5.213 The draft EPA Connectivity Report recognizes that contributions of some small, intermittent, and ephemeral systems to downstream waters can be "small", but then states that the aggregate contribution of an entire class of streams might be substantial (See EPA Connectivity Report at pages 1-14,3-27, and 6-3; see also Appendix B) [emphasis added]. This is not a scientifically defensible basis for establishing significant nexus for all tributaries. The significant nexus standard applies to each individual conveyance, which must in and of itself be shown to have a significant nexus to a downstream traditional navigable water. The extension of Justice Kennedy's test for wetlands ("either alone or in combination with other similarly situated wetlands in the region") to tributaries is not reasonable (79 Fed. Reg. at 22,204). A given small, intermittent, or ephemeral tributary with a "small" or de *minimus* effect on downstream waters, does not aggregate to a "substantial" effect when taken in combination with other similar waters. If something is found not to effect downstream waters, this outcome cannot be changed because of the presence of another similar land feature-which may or may not be planned for impact-located in the same watershed, but which also by itself does not affect downstream waters. This is similar to the equation of zero times zero, which still equals zero. The potential effect does not multiply if it occurs in a number of locations within a watershed. The term "small" in this context is used in the draft EPA Connectivity Report, but is not defined, nor is it correlated with any determination of significant nexus. This is an important concept, especially when considering Justice Kennedy's admonitions against standards based on "potential" effects on TNWs. (p20.)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

National Farmers Union (Doc. #6249)

5.214 The term "similarly situated" must be examined, since it allows the agencies to consider multiple waters together in making "significant nexus" determinations. The prerequisite condition for "other waters" to be considered "similarly situated," before any assessment

of geographic proximity to additional "other waters" or jurisdictional waters, is performance of similar functions. The preamble further explains that a "similarly situated" determination requires an evaluation of whether waters in a region "can reasonably be expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether waters are "sufficiently close" to each other or a jurisdictional water.[77] (p. 6)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and Preamble to the Final Rule. See also Response to Comments Compendium Topic 9 – Science.

5.215 The description of "similarly situated" waters above includes so many variables that it would be difficult for the regulated community to accurately anticipate the outcome of such a determination, opening the door to increased uncertainty. To give the regulated community more clarity in anticipating the results of "similarly situated" evaluations, the agencies should provide a list of functions that a group of waters must perform together in order to be considered "similarly situated." These functions include affecting the reach and flow of a jurisdictional water and allowing or barring the movement of aquatic species, nutrients, pollutants or sediments to a jurisdictional water. (p. 7)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 2, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX. See also Response to Comments Compendium Topic 9 – Science.

Alameda County Cattlewomen (Doc. #8674)

5.216 The agencies use of "aggregation" of "similarly situated" waters erases any limit that the agencies have claimed their proposed rule places on them. This ill-defined phrase can be used to group as many waters as a regulator can imagine together to find a "significant nexus" to an (a)(1) through (a)(3) water. (Proposed Rule at 22211). If a water is not categorically a jurisdictional water by rule like those in categories (a)(1) through (a)(6), and even if it by itself has no significant nexus to a TNW, it still could be a federal water if after a regulator "aggregates" it together with "similarly situated" waters "in the region" and find a significant nexus to an (a)(1) through (a)(3) water. (Id). The proposed rule states:

> "Waters are similarly situated where they perform similar functions and are located sufficiently close together or when they are sufficiently close to a jurisdictional water. How these 'other waters' are aggregated for a case-specific significant nexus analysis depends on the functions they perform and their spatial arrangement within the 'region' or watershed." (Id). (p. 20)

Agency Response: See Section 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.1 Agency Summary Response,

[77] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22198,(proposed April 21, 2014) (amending 33 C.F.R. 9328.3) at 22213

Section 5.2 Agency Summary Response, and Response to Comments Compendium Topic 9 – Science.

5.217 The proposed rule goes on to state that their landscape position within the watershed is generally the determinative factor for aggregating water in a significant nexus analysis, and the description of watershed is "the region." (Id) [Proposed Rule at 22211]. It seems clear by the language in the proposed rule that a regulator has the power to aggregate all similar waters in a watershed, yet does not define the term watershed. In other words, once again, the agencies have used terms and phrases that provide the agencies with enough flexibility to find jurisdiction over any water, and provided the cattle industry with more confusion and even less clarity. (p. 21)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 5, Section 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds and Response to Comments Compendium Topic 9 – Science.

Nebraska Cattlemen (Doc. #13081.1)

5.218 Similarly Situated. Even when waters are not jurisdictional by rule, or by itself has any significant nexus to a traditionally navigable water it can still be a jurisdictional water if, based on the entire discretion of the regulator when "aggregated" together with "similarly situated" waters in the region a significant nexus does exist. (Proposed rule at 22211). "Waters are similarly situated where they perform similar functions and are sufficiently close together or when they are sufficiently close to a jurisdictional water. How these 'other waters' are aggregated for a case-specific significant nexus analysis depends on the functions they perform and their spatial arrangement within the 'region' or watershed." *Id.*

Again, this definition is so overly broad it provides no clarity and guidance, but rather appears to allow EPA the limitless ability to aggregate all waters within a watershed, claiming they are similarly situated and thus jurisdictional under the CWA. (p. 3-4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 5, Section 5.3 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds and Response to Comments Compendium Topic 9 – Science.

Iowa Corn Growers Association (Doc. #13269)

5.219 The significant nexus test in Justice Kennedy's opinion in *Rapanos* includes the word significant for a reason. It is an adjective used to describe and compare waters. It appears that the Agencies have disregarded this critical term and instead have found that any connection is sufficient to establish jurisdiction. The Kennedy opinion stated that a "mere hydrological connection should not suffice in all cases" because "the connection may be too insubstantial for the hydrological linkage to establish the required nexus." To

in a single landscape unit (which is not defined in the proposed rule) that may be remote, have small flows and individually insignificant. In this way, the Agencies are actually ignoring the "significant" portion of the test. (p. 4-5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II. See also Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.220 The proposed rule states that water has a significant nexus to jurisdictional water if it "either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of [traditional navigable waters, interstate waters, or the territorial seas] … [that is] more than speculative or insubstantial." Justice Kennedy established that there can be waters with a hydrological connection that are not jurisdictional, but under this rule virtually any finding beyond" speculative" or "insubstantial" would result in a finding of jurisdiction. Another blatant disregard from the Kennedy opinion can be found in his instructions to identify impacts to the "chemical, physical, and biological integrity" of TNW. The proposed rule substitutes the word "or" for "and" requiring just one impact to be identified instead of all 3, clearly broadening the test. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 6, 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I and II.

Iowa Farmers Union (Doc. #15007)

5.221 While the "significant nexus" test seems like a reasonable distillation of current case law, we have serious concerns about the "similarly situated" portion of the test, and substantial ambiguities in how that standard will be applied in the context of certain on-farm wetlands. To resolve these ambiguities, we propose that the following changes be included in the final rule:

A process that allows for transparent, public determinations of "similarly situated" waters, together with a well-defined and easily accessible appeals process for regulated parties;

An enumerated list of the functions that waters must perform together in order to be considered "similarly situated";

A requirement that wetlands have either a shallow subsurface or confined surface hydrologic connection to each other in order to be considered "similarly situated" and that such connection be perennial and not the result of seasonal overflow. (p. 6)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, and 2. Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

National Sustainable Agriculture Coalition (Doc. #15403)

5.222 Science supports the assertion that wetlands can function in concert with each other, in ways they might not individually, to significantly impact the chemical, physical, and biological integrity of a jurisdictional water. The agencies seek public comment regarding waters that should be considered "similarly situated," proposing geographic delineations like ecoregions or watersheds. The EPA's ecoregions, even at their most specific level, generally cover larger swaths of land and while they denote similarities in regional ecosystems, they may not be the best indicator of hydrologic connectivity. For this reason, a watershed approach to "similarly situated" waters is more reasonable.

We recommend that the agencies propose a process for determining when a designation of "similarly situated" waters is appropriate for a watershed or sub-watershed. Such a process might include listing functions wetlands in the watershed perform collectively that would significantly impact the chemical, physical, and biological integrity of a(1) through a(3) waters. The agencies should also determine an appropriate watershed or sub-watershed size for "similarly situated" waters. For example, the designation of "similarly situated" other waters could be limited to 12-digit Hydrologic Unit Code (HUC) sub-watersheds draining directly to a(1) through a(3) waters. (p. 7)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 3, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections II, VII, VIII, and IX. See also Section 5.1 Single Point of Entry Agency Summary Response and Section 5.2 Watersheds Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

National Barley Growers Association (Doc. #15627)

5.223 Puddles. While EPA claims that it is not trying to regulate puddles, the language of the Proposed Rule is so sweeping that almost any wet area, including small and isolated bodies of water, might qualify as a "water of the United States" when, in combination with other similarly situated waters, they have a "significant nexus" to a traditionally navigable body of water. This language is so overly broad that it imposes not effective limit to federal regulatory authority. Substantial clarification and narrowing is critical in this area. (p. 6)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 1, Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 5, Response to Comments Compendium 7 – Features and Waters Not Jurisdictional, Preamble to Final Rule Sections III and IV, Technical Support Document Sections I and II.

Georgia Department of Transportation (Doc. #14282.1)

5.224 The proposed rule includes a new definition of the "significant nexus" standard for determining jurisdiction of "other waters" and invites comment on various approaches that would define more precisely the criteria used in applying that standard. We agree that it is useful to include a definition of "significant nexus" in the proposed regulations,

and we do not object to the use of that standard as the basis for determining the jurisdictional status of "other waters."

Our concerns relate to the practical aspects of applying that standard, especially the potentially burdensome task of analyzing other "similarly situated" waters. Under the rule, waters are similarly-situated when they "perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit...." (79 Fed. Reg. 22263). This standard often will require a wide-ranging geographic analysis to determine the jurisdictional status of a single wetland. Applying this type of standard on a case-by-case basis is inherently time-consuming and expensive.

The preamble to the proposed rule addresses these concerns to some extent by providing broad guidelines for determining whether waters are "similarly situated," including the following:

"Similarly situated waters may be identified as sufficiently close together for purposes of this paragraph of the proposed regulation when they are within a contiguous area of land with relatively homogeneous soils, vegetation and landform (e.g., plain, mountain, valley, etc.)."

"As a general matter, it would be inappropriate ... to consider 'other waters' as 'similarly situated' if these 'other waters' are located in different landforms, have different elevation profiles, or have different soil and vegetation characteristics, unless the 'other waters' perform similar functions and are located sufficiently close to a 'water of the United States' to allow them to consistently and collectively function together to affect an (a)(1) through (a)(3) water."

"In determining whether other waters are sufficiently close to each other or to a water of the United States, the agencies would also consider hydrologic connectivity to each other or a jurisdictional water."

"In determining whether groups of other waters perform 'similar functions' the agencies would also consider 'functions such as habitat, water storage, sediment retention, and pollution sequestration' and '[t]hese and other relevant considerations would be used by the agencies to document the hydrologic, geomorphic and ecological characteristics and circumstances of the waters.'"

"The evaluation would use any available site information and pertinent field observations where available, relevant scientific studies or data, or other relevant jurisdictional determinations that have been completed in the region."

These guidelines are useful as a starting point, and we support including them in the preamble to the final rule. However, even with these guidelines, they still leave considerable room for case-by-case determinations that require extensive factual investigations.

Recommendation: To minimize administrative burdens, we support the concept of providing more specific direction regarding the application of the "significant nexus" standard to specific categories of waters, as suggested in the preamble to the proposed

rule. (79 Fed. Reg. 22189). In concept, we support the following options suggested in the preamble:

Determining by rule that 'other waters' are similarly situated in only certain areas of the country, and not in other areas. The preamble indicates that these determinations would be made for different "ecoregions."

Determining by rule that certain additional subcategories of waters have a significant nexus and are jurisdictional by rule, and that other subcategories of waters are not jurisdictional and lack a significant nexus. The preamble suggests playa lakes in the Great Plains as one example of a subcategory that could be deemed non-jurisdictional. We emphasize, however, that any such determinations should be made through notice-and-comment rulemaking, not guidance, and any determinations would need to be supported by sound science. (p. 8-9)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 2, Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7, and 8, Preamble to Final Rule Sections III and IV, Technical Support Document Sections I and II.

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)

5.225 Caltrans recommends that similarly situated waters be assessed for a significant nexus connection by the USACE and EPA on a regional basis. Completing this assessment for a small delineation effort requires substantial additional costs to assess both the feature within the delineation area as well as 'similarly situated' features that may be well outside of the project area. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 3. Preamble to Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX.

Red River Joint Water Resource District (Doc. #4227)

5.226 The proposed rule's description of the case-by-case analysis of "other waters" seems to expand the significant nexus test articulated in Supreme Court decisions. Under the "other waters" rule, any "waters" (including mud flats, sand flats, sloughs, prairie potholes, natural ponds, etc.) that "alone, or in combination with other similarly situated waters ... in the same region," impact the chemical, physical, or biological integrity of any navigable, interstate, or territorial waters would meet the significant nexus test. However, the rules do not define "in combination with" or "similarly situated" waters. The District is concerned these inartfully drawn and vague phrases will ultimately expand jurisdiction to every slough and prairie pothole in the Red River Valley. (p. 2)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 1, 2, and 4, Section 5.0 Agency Summary Response, Introduction and summary response to comments 1 and 3, Preamble to Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comments Compendium Topic 9 – Science. In particular with

respect to Prairie potholes, see Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Northwest Colorado Council of Governments Water Quality/ Quantity Committee (Doc. #10187)

5.227 Within the "significant nexus" definition, the proposed rule also directs that agencies may establish a significant nexus "in combination with other similarly situated waters in the region."[78] Incorporating similarly situated waters into the significant nexus analysis allows agencies to look more broadly at regional river systems. This approach is consistent with the watershed approach taken by many in the QQ region to protect water quality and is consistent with the Rapanos decision.[79] It also may allow agencies an opportunity to use data generated in other jurisdictional determinations when appropriate. (p. 6)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comment 3, Preamble to Final Rule Sections III and IV, and Technical Support Document Section II. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds. See also Response to Comments Compendium Topic 9 – Science.

Southern Company (Doc. #14134)

5.228 The Agencies Do Not Have Authority to Make Aggregate "Significant Nexus" Determinations on a Case-Specific, Individual Project Basis. The agencies' proposed approach to aggregation is unlawful and poses serious procedural questions and issues of fundamental fairness. Under the concept of aggregation, the agencies may establish jurisdiction over an individual feature by showing that it "in combination with other similarly situated waters" have a significant nexus to TNWs. By establishing a *single* feature's jurisdictional status – presumably based on a single landowner's request for jurisdictional determination – the agencies would necessarily establish the jurisdictional status for all other "similarly situated" features within the "same region," without any clear criteria for deciding what is similarly situated and how vast a region in which to automatically establish jurisdiction. All other similarly situated features may or may not be specifically identified nor delineated at the time and their jurisdictional status would not properly be before the agencies in an unrelated and perhaps distant permitting action. Therefore, the agencies' actions involving one feature would confer legal status, and accompanying obligations, without so much as the informing other affected landowners or providing them an opportunity to question or challenge such determinations. Surely this cannot be. (p. 45)

Agency Response: See Section 5.3 Agency Summary Response, Introduction. Preamble to Final Rule Sections III and IV, Technical Support Document Sections I, II and IX. See also Section 5.1 Agency Summary Response and Section 5.2 Agency Summary Response, Section 5.4 Agency Summary Response and Response

[78] 79 Fed. Reg. 22262.
[79] 547 U.S. at 780

to Comments Compendium Topic 4 – Other Waters and Compendium Topic 9 - Science.

Eastern Municipal Water District (Doc. #15409)

5.229 "Other waters" that have a "significant nexus" to jurisdictional waters are also vague and can extend to vast geographical areas where waters are "similarly situated" to trigger definition as waters of the U.S. EMWD's entire service area lies within a Level III Ecoregion where "other waters" would categorically be considered jurisdictional and NEED "similarly situated" water would be collectively defined as jurisdictional. EMWD and other permittees deserve a definitive and more science-based definition of these terms in order to effectively comply with permit requirements. The rule proposes no criteria to define "significant nexus" other than reciting Justice Kennedy's opinion that it should be something more than "speculative or insubstantial." However, the rule consciously lowers the bar for determining a significant nexus by stating that a nexus "significantly affects the chemical, physical, or biological integrity" of a downstream water, as opposed to Justice Kennedy's opinion that the significant nexus affect all three. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 6, 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII, and IX. See Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response, and Section 5.4 Agency Summary Response, and Response to Comments Compendium Topic 9 – Science.

Natural Resources Defense Council et al. (Doc. #15437)

5.230 (…) [W]e urge the agencies to consider, in evaluating whether waters are "similarly situated," whether "they perform similar functions," as proposed, but we caution about focusing too narrowly on whether such waters "are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a [navigable or interstate] water…."[80] We believe, as the separate comments of Ducks Unlimited also stress, that surficial proximity is not a critical element of this assessment.[81] (p. 54)

Agency Response: See Section 5.3 Agency Summary Response, Introduction. Preamble to Final Rule Sections III and IV, Technical Support Document Sections II and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds.

[80] Id. at 22,213.

[81] We believe this is consistent with the advice provided by the SAB. Although the SAB indicated that "[s]patial proximity is one important determinant of the magnitude, frequency and duration or connections between wetlands and streams that will ultimately influence the fluxes of water, materials and biota between wetlands and downstream waters," SAB Connectivity Review at 60 (emphasis added), it did not suggest that proximity alone is relevant. To the contrary, in discussing the proposed rule's provision on adjacent wetlands, the SAB noted that "the available science supports defining adjacency or determination of adjacency on the basis of functional relationships, not on how close an adjacent water is to a navigable water." SAB Rule Review at 2-3. The same could be said for "other waters."

See also Response to Comments Compendium Topic 3 - Adjacent Waters, Topic 4 – Other Waters and Compendium Topic 9 - Science.

Wisconsin Wetlands Association (Doc. #15629)

5.231 *Similarly Situated & In the Same Region* – We recommend defining these terms separately from one another and independent of the term *Significant Nexus.* Definitions are needed to clarify when and how a significant nexus analysis could/should be completed based on the aggregated influence of wetlands and other waters on waters identified in (s)(1) to (3). The term "sufficiently close" is vague and not one that appears in the available literature on watershed science. We recommend clarifying the hydrologic scale(s) at which the aggregate effects of similarly situated waters can/should be considered and encourage you to allow that the appropriate scale may vary by region. (p. 3)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 2 and 3. Preamble to Final Rule Sections III and IV, Technical Support Document Sections II and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds. See also Response to Comments Compendium Topic 9 - Science.

Wyoming Outdoor Council (Doc. #16528.1)

5.232 Another key concept in defining "similarly situated" waters that make up a "region" are unidirectional wetlands. It is clear these unidirectional wetlands can have very significant impacts on chemical, physical, and biological integrity. 79 Fed. Reg. at 22246. These waters are often referred to as "geographically isolated" but they have significant effects on downstream waters. Clearly unidirectional wetlands should be considered other waters in many cases; they "will typically fall under the definition of "other waters."" *Id*. These waters can also be "channel origin wetlands" which clearly help define watersheds for purposes of identifying similarly situated waters in a region. (p. 5-6)

Agency Response: See Section 5.3 Agency Summary Response, Introduction and summary response to comments 2 and 3. Preamble to Final Rule Sections III and IV, Technical Support Document Sections II and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds and Response to Comments Compendium Topic 9 – Science and Topic 4 – Other Waters.

Society for Freshwater Science (Doc. #11783)

5.233 SFS supports the Agency proposal that demonstrations of connectivity for a subset of similarly situated waters should justify extension to the entire population of similarly situated waters. This is defensible on a statistical basis an ecological basis, and would greatly reduce the resources and time required to make such a demonstration. (p. 4)

Agency Response: See Section 5.3 Agency Summary Response, Introduction, Preamble to Final Rule Sections III and IV, Technical Support Document Sections II, VII, VIII and IX. See also Section 5.1 Single Point of Entry and Section 5.2 Watersheds and Response to Comments Compendium Topic 9 – Science.

5.4. CONNECTIONS

Agency Summary Response

Under the significant nexus standard, waters possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet]lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" *Rapanos* at 780. Several terms in this standard were not defined. In this rule the agencies interpret these terms and the scope of "waters of the United States" based on the goals, objectives, and policies of the statute, the scientific literature, the Supreme Court opinions, and the agencies' technical expertise and experience. Therefore, for purposes of a significant nexus analysis, the agencies have determined (1) which waters are "similarly situated," and thus should be in analyzed in combination, in (2) the "region," for purposes of a significant nexus analysis, and (3) the types of functions that should be analyzed to determine if waters significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. These determinations underpin many of the key elements of the rule and are reflected in the definition of "significant nexus" in the rule. *See* Preamble to the Final Rule Section III and Technical Support Document at Sections I and II.

In the rule's definition of "significant nexus," the agencies identify the functions that waters provide that can significantly affect the chemical, physical or biological integrity of traditional navigable waters, interstate waters and the territorial seas. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II. EPA's Office of Research and Development prepared the Science Report, a peer-reviewed compilation and analysis of published peer-reviewed scientific literature summarizing the current scientific understanding of the connectivity of and mechanisms by which stream and wetlands singly or in combination, affect the chemical, physical, and biological integrity of downstream waters. The final Science Report is available in the docket and at http://cfpub.epa.gov/ncea/cfm/recodiplay.cfm?deid+296414. See Preamble to the Final Rule at Section III and Response to Comments Compendium Topic 9 - Science.

The Science Report reviews and synthesizes the peer-reviewed scientific literature on the connectivity or isolation of streams and wetlands relative to large water bodies such as rivers, lakes, estuaries, and oceans. The purpose of the review and synthesis is to summarize current scientific understanding about the connectivity and mechanisms by which streams and wetlands, singly or in aggregate, affect the physical, chemical, and biological integrity of downstream waters. See Preamble to the Final Rule at Section III.

The final Science Report states that connectivity is a foundational concept in hydrology and freshwater ecology. Connectivity is the degree to which components of a system are joined, or connected, by various transport mechanisms and is determined by the characteristics of both the physical landscape and the biota of the specific system. Connectivity for purposes of interpreting the scope of "waters of the United States" under the CWA serves to demonstrate the "nexus" between upstream water bodies and the downstream traditional navigable water, interstate water, or the territorial sea. The scientific literature does not use the term "significant" as it is defined in a legal context, but it does provide information on the strength of the effect on

the chemical, physical, and biological functioning of the downstream water bodies from the connections among tributaries, adjacent waters, and case-specific waters and those downstream waters. The scientific literature also does not use the terms traditional navigable waters, interstate waters, or the territorial seas. However, evidence of strong chemical, physical, and biological connections to larger rivers, estuaries, and lakes applies to that subset of rivers, estuaries, and lakes that are traditional navigable waters, interstate waters, or the territorial seas. See Preamble to the Final Rule at Section III.

The Science Report presents evidence of those connections from various categories of waters, evaluated singly or in combination, which affect downstream waters and the strength of that effect. The objectives of the Science Report are (1) to provide a context for considering the evidence of connections between downstream waters and their tributary waters, and (2) to summarize current understanding about these connections, the factors that influence them, and the mechanisms by which the connections affect the function or condition of downstream waters. The connections and mechanisms discussed in the Science Report include transport of physical materials and chemicals such as water, wood, sediment, nutrients, pesticides, and mercury; functions that adjacent waters perform, such as storing and cleansing water; movement of organisms or their seeds and eggs; and hydrologic and biogeochemical interactions occurring in and among surface and groundwater flows, including hyporheic zones and alluvial aquifers. See Preamble to the Final Rule at Section III.

The Science Report presents five major conclusions:

1. Streams - The scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the chemical, physical, and biological integrity of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are chemically, physically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed and transported. Streams are the dominant source of water in most rivers, and the majority of tributaries are perennial, intermittent, or ephemeral headwater streams. Headwater streams also convey water into local storage compartments such as ponds, shallow aquifers, and floodplains, and into regional and alluvial aquifers; these local storage compartments are important sources of water for maintaining baseflow in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers. The scientific literature provides robust evidence that streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both upstream and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities. In addition to material transport and biological connectivity, ephemeral, intermittent, and perennial flows influence fundamental biogeochemical processes by connecting channels and shallow groundwater with other landscape elements. Chemical, physical, and biological connections between streams and downstream waters interact via integrative processes such as nutrient spiraling. This occurs when stream communities assimilate and chemically transform large quantities of nitrogen and other nutrients that otherwise would

be transported directly downstream, thereby increasing nutrient loads and associated impairments due to excess nutrients in downstream waters. Science Report at xxv.

2. Riparian/Floodplain Wetlands and Open Waters - The scientific literature clearly shows that wetlands and open waters in riparian areas and floodplains are chemically, physically, and biologically integrated with rivers via functions that improve downstream water quality, including the temporary storage and deposition of channel-forming sediment and woody debris, temporary storage of local groundwater that supports baseflow in rivers, and transformation and transport of stored organic matter. Riparian/floodplain wetlands and open waters improve water quality through the assimilation, transformation, and sequestration of pollutants, including excess nutrients and chemical contaminants such as pesticides and metals that can degrade downstream water integrity. In addition to providing effective buffers to protect downstream waters from point source and nonpoint source pollution, these systems form integral components of river food webs, providing nursery habitat for breeding fish and amphibians, colonization opportunities for stream invertebrates, and maturation habitat for stream insects. Lateral expansion and contraction of the river in its floodplain result in an exchange of organic matter and organisms, including fish populations that are adapted to use floodplain habitats for feeding and spawning during high water, that are critical to river ecosystem function. Riparian/floodplain wetlands and open waters also affect the integrity of downstream waters by subsequently releasing (desynchronizing) floodwaters and retaining large volumes of stormwater, sediment, and contaminants in runoff that could otherwise negatively affect the condition or function of downstream waters. *Id.*

3. Non-floodplain Wetlands and Open Waters - Wetlands and open waters in non-floodplain landscape settings ("non-floodplain wetlands") provide numerous functions that benefit downstream water integrity. These functions include storage of floodwater; recharge of groundwater that sustains river baseflow; retention and transformation of nutrients, metals, and pesticides; export of organisms or seeds to downstream waters; and habitats needed for stream species. This diverse group of wetlands (e.g., many Prairie potholes or vernal pools) can be connected to downstream waters through surface water, shallow subsurface water, and groundwater flows, and through biological and chemical connections. In general, connectivity of non-floodplain wetlands occurs along a gradient, and can be described in terms of the frequency, duration, magnitude, timing, and rate of exchange of water, material, and biotic fluxes to downstream waters. These descriptors are influenced by climate, geology, and terrain, which interact with factors such as the magnitudes of the various functions within wetlands (e.g., amount of water storage or carbon export) and their proximity to downstream waters to determine where wetlands occur along the connectivity gradient. At one end of this gradient, the functions of non-floodplain wetlands clearly affect the condition of downstream waters if a visible (e.g., channelized) surface water or a regular shallow subsurface-water connection to the river network is present. For non-floodplain wetlands lacking a channelized surface or regular shallow subsurface connection (i.e., those at intermediate points along the gradient of connectivity), generalizations about their specific effects on downstream waters from the available literature are difficult because information on both function and connectivity is needed. Science Report at xxv-vi.

4. Degrees and Determinants of Connectivity - Connectivity of streams and wetlands to downstream waters occurs along a gradient that can be described in terms of the frequency, duration, magnitude, timing, and rate of exchange of water, material, and biotic fluxes to downstream waters. These terms, which we refer to collectively as connectivity descriptors, characterize the range over which streams and wetlands vary and shift along the connectivity gradient in response to changes in natural and anthropogenic factors and, when considered in a watershed context, can be used to predict probable effects of different degrees of connectivity over time. The evidence unequivocally demonstrates that the stream channels and riparian/floodplain wetlands or open waters that together form river networks are clearly connected to downstream waters in ways that profoundly influence downstream water integrity. The connectivity and effects of non-floodplain wetlands and open waters are more variable and thus more difficult to address solely from evidence available in peer-reviewed studies. Science Report at xxvii.

5. Cumulative Effects - The incremental effects of individual streams and wetlands are cumulative across entire watersheds, and therefore, must be evaluated in context with other streams and wetlands. Downstream waters are the time-integrated result of all waters contributing to them. For example, the amount of water or biomass contributed by a specific ephemeral stream in a given year might be small, but the aggregate contribution of that stream over multiple years, or by all ephemeral streams draining that watershed in a given year or over multiple years, can have substantial consequences on the integrity of the downstream waters. Similarly, the downstream effect of a single event, such as pollutant discharge into a single stream or wetland, might be negligible but the cumulative effect of multiple discharges could degrade the integrity of downstream waters. When considering the effect of an individual stream or wetland, all contributions and functions of that stream or wetland should be evaluated cumulatively. For example, the same stream transports water, removes excess nutrients, transports pollutants, mitigates flooding, and provides refuge for fish when conditions downstream are unfavorable; if any of these functions is ignored, the overall effect of that stream would be underestimated. Science Report at xxvii-viii.

Under the rule a "significant nexus" is established by a showing of a significant chemical, physical, or biological effect. In characterizing the significant nexus standard, Justice Kennedy stated: "[t]he 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'…" 447 U.S. at 7709. It is clear Congress intended the CWA to "restore and maintain" all three forms of "integrity," 33 U.S.C.§ 1251(a), so if any one is compromised then that is contrary to the statute's stated objective. It would subvert the objective if the CWA only protected waters upon a showing that they had effects on every attribute of the integrity of a traditional navigable water, interstate water, or the territorial sea. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II.

In the final rule's definition of "significant nexus," the agencies identify the functions that waters provide that can significantly affect the chemical physical, or biological integrity of traditional

navigable waters, interstate waters and the territorial seas. In identifying the functions to be considered, the agencies were informed by the goals of the statute and the available science. Among the means to achieve the CWA's objective to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, Congress established an interim national goal to achieve wherever possible "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the waters. CWA § 101(a)(2). Functions to be considered for the purposes of determining significant nexus are sediment trapping nutrient recycling; pollutant trapping, transformation, filtering and transport; retention and attenuation of floodwaters, runoff storage; contribution of low; export of organic matter; export of food resources; and provision of life-cycle dependent species located in traditional navigable waters, interstate waters, or the territorial seas. The effect of an upstream water can be significant even when a water, alone or in combination, is providing a subset or even just one of the functions listed. *See* Preamble to Final Rule at Section III and Technical Support Document at Section II.

In this rule, the agencies' determine that (1) covered tributaries, in combination with other covered tributaries located in a watershed that drains to a traditional navigable water, interstate water, or the territorial seas, significantly affect the chemical, physical, and biological integrity of that water; and (2) covered adjacent waters, in combination with other covered adjacent waters located in a watershed that drains to a traditional navigable water, interstate water, or the territorial seas, significantly affect the chemical, physical and biological integrity of that water. In addition, the rule provides for case-specific determinations under more narrowly targeted circumstances based on the agencies' assessment of the importance of certain specified waters to the chemical, physical, and biological integrity of the traditional navigable waters, interstate water, and the territorial seas. For evaluation on a case-specific basis, the agencies have defined two sets of waters that may be determined to have a significant nexus: (1) five types of waters that the agencies conclude are "similarly situated" and therefore must be analyzed "in combination" in the watershed that drains to the nearest traditional navigable water, interstate water or the territorial seas when making a case-specific significant nexus analysis ((a)(7) waters); and (2) waters within the 100 year floodplain of a water identified in (a)(1) through (a)(3) or within 4000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (a)(1) through (5). *See* Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II, VII, VIII, and IX.

The agencies evaluate waters individually or in combination with any identified similarly situated waters in the single point of entry watershed to determine if they significantly impact the chemical, physical, or biological integrity of the traditional navigable water, interstate water or territorial sea. For purposes of determining significant nexus under (a)(7), all waters of the specified subcategory are to be considered in combination in the point of entry watershed, as those waters are similarly situated. For purposes of determining significant nexus under (a)(8), depending on the results of the similarly situated analysis, a water within the distance limitation in paragraph (a)(8) is evaluated either alone or in combination with other similarly situated waters in the region. For example, in the case where the agencies have determined that a particular water under (a)(8) is not similarly situated, it is evaluated individually for significant nexus; the water cannot be aggregated if it is not similarly situated with other such waters. *See* Preamble to the Final Rule Section IV.

The analysis will include an evaluation of the functions listed in paragraph (c)(5) of the rule, which defines significant nexus. A water has a significant nexus when any single function or combination of functions performed by the water, alone or together with similarly situated waters in the region, contributes significantly to the chemical, physical, or biological integrity of the nearest water. A water may be determined to have a significant nexus based on performing any of the following functions: sediment trapping, nutrient recycling, pollutant trapping, transformation, filtering, and transport, retention and attenuation of floodwaters, runoff storage, contribution of flow, export of organic matter, export of food resources, or provision of life cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, or use as a nursery area) for species located in a traditional navigable waters, interstate water, or the territorial seas. *See* Preamble to the Final Rule Section IV.

For purposes of paragraph (c)(5)(I), a species is located in a water identified in traditional navigable waters, interstate waters or the territorial seas if such a water is a typical type of habitat for at least part of the life cycle of the species. For example, amphibians and many reptiles can use traditional navigable waters, interstate water, or the territorial seas for part of their life cycle needs. *See* Preamble to the Final Rule Section IV.

When evaluating a water individually or in combination with other similarly situated waters for the presence of a significant nexus to a traditional navigable water, interstate water, or the territorial seas, a variety of factors will influence the chemical, physical, or biological connections the water has with the downstream traditional navigable water, interstate water, or the territorial seas, including distance from a jurisdictional water, the presence of surface or shallow subsurface hydrologic connections, and density of waters of the same type (if it has been concluded that such waters can be evaluated in combination). The likelihood of a significant connection is greater with increasing size and decreasing distance from the identified traditional navigable water, interstate water, or the territorial seas, as well as with increased density of the waters for such waters that can be considered in combination as similarly situated waters. In addition, the presence of a surface or shallow subsurface hydrologic connection can influence the impact that a water has with downstream waters. *See* Preamble to the Final Rule Section IV.

In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that

reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Section IV.

The rule recognizes that not all waters have the requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. Waters with a significant nexus must significantly affect the chemical, physical, or biological integrity of a downstream traditional navigable water, interstate water, or the territorial seas, and the requisite nexus must be more than "speculative or insubstantial." *Rapanos* at 780.

Evidence of chemical connectivity and the effect on waters can be found by identifying the properties of the water in comparison to the identified traditional navigable water, interstate water, or the territorial seas; signs of retention, release, or transformation of nutrients or pollutants; and the effect of landscape position on the strength of the connection to the nearest "water of the United States," and through it to a traditional navigable water, interstate water, or the territorial seas. In addition, relevant factors influencing chemical connectivity include hydrologic connectivity (see physical factors, below), surrounding land use and land cover, the landscape setting, and deposition of chemical constituents (e.g., acidic deposition). *See* Preamble to the Final Rule Section IV.

Evidence of physical connectivity and the effect on traditional navigable waters, interstate waters, or the territorial seas can be found by identifying evidence of physical connections, such as flood water or sediment retention (flood prevention). Presence of indicators of hydrologic connections between the other water and jurisdictional water are also indicators of a physical connection. Factors influencing physical connectivity include rain intensity, duration of rain events or wet season, soil permeability, and distance of hydrologic connection between the (a)(7) or (a)(8) water and the traditional navigable water, interstate water, or the territorial seas, depth from surface to water table, and any preferential flowpaths. *See* Preamble to the Final Rule Section IV.

Evidence of biological connectivity and the effect on waters can be found by identifying: resident aquatic or semi-aquatic species present in the case-specific water and the tributary

system (e.g., amphibians, aquatic and semi-aquatic reptiles, aquatic birds); whether those species show life-cycle dependency on the identified aquatic resources (foraging, feeding, nesting, breeding, spawning, use as a nursery area, etc.); and whether there is reason to expect presence or dispersal around the case-specific water, and if so whether such dispersal extends to the tributary system or beyond or from the tributary system to the case-specific water. Factors influencing biological connectivity include species' life history traits, species' behavioral traits, dispersal range, population size, timing of dispersal, distance between the case-specific water and a traditional navigable water, interstate water, or the territorial seas, the presence of habitat corridors or barriers, and the number, area, and spatial distribution of habitats. Non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependency on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule. *See* Preamble to the Final Rule Section IV.

Specific Comments

Committee on Space, Science and Technology (Doc. #16386)

5.234 In the proposed rule, you rely on scientific studies to determine that *any water* in a flood plain, any water in a riparian area, *any water* with a surface or shallow subsurface connection to a jurisdictional water, and *any tributary* – no matter how distant from navigable water automatically has a significant nexus to traditional navigable waters. That means EPA and the Corps of Engineers do not have to make any case-by-case determination that disturbance or pollution of such water will have an adverse impact on traditional navigable water.

However, many of the studies that EPA relies on never address potential adverse impacts on traditional navigable water. These studies only address the movement of birds, fish, insects and mammals. EPA's Connectivity Study says that you can establish a connection between waters if a bird, fish, insect, or mammal spends part of its life in navigable water and part of its life in a non-navigable water. EPA's proposed rule says that this connection is sufficient to establish federal jurisdiction over the non-navigable water.

a. The Supreme Court has already said that use of water by a migratory bird or an endangered species is not sufficient to establish jurisdiction. How can you establish jurisdiction based on use of water by any species?

b. How can you establish a nexus to navigable water that is relevant to the Clean Water Act based on studies that do not even discuss water quality?

c. How is maintaining the integrity of an animal species the same thing as maintaining the biological integrity of water? (p. 11-12)

Agency Response: See Technical Support Document Sections VII and VIII, Section 5.4 Agency Summary Response and Preamble to the Final Rule Sections III and IV. See also Response to Comments Compendium Topic 9 – Science.

Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological

integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

5.235 In her blog, Acting Assistant Administrator Stoner says "The Clean Water Act only regulates the pollution and destruction of waters." I agree, but I would expand that to say the Clean Water Act regulates the pollution and destruction of navigable waters. You can't read the word "navigable" out of the statute.

You claim you are regulating non-navigable water based on potential impact to navigable water. But, if pollution of a water or destruction of a non-navigable water cannot significantly affect the quality of a navigable water by itself, because it is too distant or is too isolated, what is your justification for regulating that non-navigable water under the Clean Water Act? (p. 18)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 1 and 4. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. See also Response to Comments Compendium Topic 9 - Science.

Central Flyway Council (Doc. #5578)

5.236 The Council has great concerns for the protection of wetlands in the Central Flyway that are vital to sustaining populations of waterfowl, shorebirds, wading birds, marsh birds, endangered species and other wetland-dependent wildlife species. A major portion of the wetlands that occur in the Central Flyway that are used by waterfowl for breeding, migrating and wintering would be classified as isolated wetlands and not covered under CWA jurisdiction. We note that isolated wetland is a legal description and not a scientific classification and therefore rather artificial in nature. The Council believes that it is critical for agencies responsible for establishing rules of jurisdiction of the CWA to recognize that wetland systems are inter-connected and that there really are no isolated wetlands. The Council strongly advocates that the CWA was passed to restore and maintain the integrity of all wetlands in the U.S. for the benefit of society. CWA must continue to have jurisdiction of all wetlands in order to protect our nation's most endangered yet most precious resource, its water and wetlands (p. 1-2).

Agency Response: See Preamble to Final Rule at Section III and Technical Support Document at Section II. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VIII and IX.

5.237 Though not connected visibly, wetlands are interconnected and have a significant nexus through overflow areas, flowages, groundwater, streams and tributaries. The North American waterfowl resource links the nation's and continent's wetlands ecologically and biologically but also provides the basis for international commerce linkages. Large numbers of Americans hunt waterfowl in Canada while some do so in Mexico. In the U.S. the waterfowl resource is enjoyed by more than 27 million people and generates more than $19.5 billion annually of total economic output. Wetlands serve other functions besides being necessary for wildlife species to survive. Wetlands provide

enormous flood control benefits. Water storage in thousands of shallow wetlands in the Central Flyway saves millions of dollars in flood damage downstream. This is an often overlooked function of wetlands. (p. 2)

Agency Response: See Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.

Alaska State Legislature, Alaska Senate Leadership (Doc. #7494.1)

5.238 Expansion of Clean Water Act ("CWA") jurisdiction is opposed, particularly in cases where "some measure" of a "significant connection" to "downstream water quality" cannot clearly be established.[82] (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 3. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.

5.239 Under Rapanos v. United States, to establish CWA jurisdiction, there needs to be "some measure" of a "significant connection" to "downstream water quality."[83] Mere hydrologic connection will not be enough in all cases.[84] The "connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood."[85] (p. 2)

Agency Response: See Sections Section 5.0 Agency Summary Response, Introduction and summary responses 7 and 8. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.

5.240 In the proposed rules, the agencies state that hydrologic connection is not necessary to demonstrate a "significant nexus." Why? Because, allegedly, the function may be demonstrated even in the absence of a connection. We object to that interpretation. Adopting a rule where "function may be demonstrated even in the absence of a connection" creates even more regulatory uncertainty. If adopted (and assuming no modification) the CWA has evolved well past the original intent of the legislation. The theoretical jurisdiction of the agencies would be, nearly, all encompassing. (p. 2-3)

Agency Response: See Sections Section 5.0 Agency Summary Response, Introduction and summary responses to comments 4, 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or

[82] See *Rapanos* v. United States, 126 S.Ct. 2208, 547 U.S. 715 (2006).
[83] See Rapanos, 126 S.Ct. at 2250-2251 ,547 U.S. at 784-785.
[84] *Id.*
[85] *Id.*

the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

5.241 Permafrost should be excluded from CWA jurisdiction as it is a "subsoil" entity without a "continuous surface connection" that maintains or improves "downstream water quality." … The lack of hydrologic connection to traditional streams and waters is not a function of manmade ditches or canals; it is a factor of it being permanently frozen. Permafrost ice lenses have persisted through not only the current periglacial period, but are preserved in underlying strata from the prior 30 to 40,000 year old ice age (having persisted through this and the prior periglacial period). The nexus, at best, between permafrost and traditional waters is limited to runoff of snow melt. It occurs in a very limited timeframe that precedes the growth season. The shallow and insignificant nature of the connection is best illustrated by the improved functionality of disturbed watersheds. It is not a continuous surface connection. The drainage can vary from season to season depending on snow drift and the erratic pattern of a given year's snowmelt. Isolated areas of permafrost otherwise surrounding by uplands have even less connection to traditional waters, often impeding or preventing groundwater flow. Permafrost is not "surface water." The minimal phreatic "groundwater" that forms a few inches below the surface is not a "significant connection" that provides beneficial functions to the waters of the United States. (p. 6-7)

<u>Agency Response:</u> Waters subject to case-specific review under (a)(8) will include areas determined to meet the technical definition of "wetlands" because they have the required hydrology, vegetation, and soils. The presence of permafrost is not itself determinative of whether a particular area satisfies the three parameter requirement needed to be wetlands under the rule. This is true under existing

regulations and remains unchanged in this rule. Because the definition of wetland does not change under the rule, the agencies do not anticipate the rule will alter the current scope of CWA jurisdiction over wetlands underlain by permafrost. See Preamble to Final Rule Sections III and IV.

Quapaw Tribe of Oklahoma (the O-Gah-Pah) (Doc. #7980)

5.242 The proposed rule would remove the requirement that a subject water would need to affect the physical, chemical and biological integrity of a downstream water. Rather, the subject water would only need to affect one of those attributes (physical, chemical or biological integrity). The subject water does not need to be a part of the tributary network to the downstream traditional navigable water. As a result, the proposed rule would broaden the geographic scope of waters that can be jurisdictional through establishment of a significant nexus. This would result in a heavier workload on the already-overtaxed regional USACE offices and on the communities who must request a determination for each project. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 3, 5, and 6. See also Section 5.4 Summary Agency Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Section I, II, VII, VIII and IX.

State of Iowa (Doc. #8377)

5.243 There are three key concepts of the rulemaking that lead us to believe that the proposed rule serves to expand coverage – Adjacency, aggregation, & connectivity: …

Connectivity – Ground water remains exempt, but is proposed to be used as a basis for establishing jurisdiction over other waters under the definitions in the rule. In the rule preamble, EPA asserts that both the existence of a groundwater connection and the lack thereof can justify a jurisdictional determination. In Iowa, NPDES permits do not consider hydrologic connections from groundwater to surface water. Under the new definition would NPDES permits need to consider these connections and regulate them accordingly? If yes, how is that accomplished? The rule does not place any limits on distance, rate of flow, volume of flow or any other variable regarding the degree of hydrologic connection or lack thereof necessary to support a jurisdictional determination. Iowa staff expertise and resources do not exist to implement such considerations for water body classification or NPDES permitting. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Section II, VII, VIII, and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems, is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can

consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. Natural Resource Conservation Service soil surveys are a valuable resource of information as to the likely presence of shallow subsurface flow. The definition of "waters of the United States" applies to CWA Section 402, National Pollutant Discharge Elimination System (NPDES) permitting as well as other Clean Water Act programs.

State of Idaho (Doc. #9834)

5.244 Any effort to clarify CWA jurisdiction should recognize that the "significant nexus" test Justice Kennedy set forth in Rapanos v. United States requires a connection between waters that is more than speculative or insubstantial to establish jurisdiction. Idaho supports efforts to quantify "significant" in order to ensure the term's usage does not extend jurisdiction to waters with a de minimis connection to jurisdictional waters. Idaho appreciates language in the Proposed Rule which states that effects on jurisdictional waters must be "more than speculative or insubstantial." However, further work is needed to quantify the concept of significance, particularly the term "significantly affects" in 40 CFR 328.3 (c)(7), and to flesh out a transparent process for the agencies to use when making significance determinations.

To address this uncertainty, Idaho believes the Final Rule should provide a specific, quantifiable measure or set of measures to guide determinations of significance rather than simply stating the effect on another jurisdictional water must be "more than speculative or insubstantial." Waters that satisfy the specified measure(s) would be presumed to have a significant connection to the waters identified in paragraphs (a)(1) through (3) of section 328.3 of the Proposed Rule, while waters that do not satisfy the measure(s) would be presumed to lack a significant connection. Patties should be able to provide evidence to rebut a presumption of significance or non-significance, but the use of specific, quantifiable measure(s) would provide much needed clarity and a justifiable starting point for significance determinations. (p. 2-3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8. Preamble to the Rule Sections III and IV and Technical Support Document Sections II, VII, VIII and IX.

New York State Attorney General (Doc. #10940

5.245 … the proposed rule is grounded in peer-reviewed scientific studies that confirm fundamental hydrologic principles. Water flows downhill, and connected waters, singly and in the aggregate, transport physical, chemical and biological pollution that affects the function and condition of downstream waters, as demonstrated by the many studies on

which EPA and the Corps rely. The health and integrity of watersheds, with their networks of tributaries and wetlands that feed downstream waters, depend upon protecting the quality of upstream headwaters and adjacent wetlands. Comprehensive coverage under the CWA of these ecologically connected waters is essential to achieve the water quality protection purpose of the act. (p. 2)

Agency Response: The key to the agencies' interpretation of the CWA is the significant nexus standard as established and refined in Supreme Court opinions: waters are "waters of the United States" if they, either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters or the territorial seas. See Section 5.4 Agency Summary Response, Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II.

Alaska State Legislature (Doc. #13566)

5.246 We submit the following definition for "significant nexus": There must be a continuous, substantial hydrologic linkage in order to establish a significant nexus, and, minimally, a significant connection to downstream water quality. Otherwise: At what quantifiable level does mere connection become significant? (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 5, 7 and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX.

Tennessee Department of Environment and Conservation (Doc. #15135)

5.247 The SAB review of the Report includes the following: (…)

> The [Connectivity] Report references connectivity as if it is present or not present (i.e., connected or not connected). To be technically accurate, the SAB recommends the "interpretation of connectivity be revised to reflect a gradient approach that recognizes variation in frequency, duration, magnitude, predictability, and consequences of those connections." *The SAB specifically notes that relative low levels of connectivity can be meaningful in terms of the impacts of the chemical, physical and biological integrity of downstream waters.*

Comment: We agree that connectivity occurs on a gradient-that reality should not be ignored. Additionally, although the science may indicate that low levels of connectivity can be meaningful, the law requires a nexus that is significant, not insubstantial or speculative. EPA and the Corps need to address connectivity across a gradient and how, specifically, water bodies with relatively low levels of connectivity demonstrate the significant nexus required for jurisdiction. This concept and the distinction between functional and connectivity aggregation will be discussed in detail below. (p. 11)

Agency Response: See Section 5.0 Agency Summary Response to Comments, Introduction and summary response to comments 4, 5, 7, 8. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Section II.

5.248 The state agencies also recommend that EPA and the Corps revise the definition of significant nexus to be consistent with the language used by Kennedy in *Rapanos*. The proposed definition uses the term "or" rather than the term "and" to connect the terms "chemical, physical, biological." The standard articulated in *Rapanos* includes the term "and," signaling that all three connections must be present; therefore, the agencies' regulation must be consistent with that requirement.[86] (p. 23)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6 and Technical Support Document Section I.

California State Water Resources Control Board (Doc. #15213)

5.249 [W]e recommend that the Agencies make it clear that the existence of a significant nexus may be reassessed in cases where new permanent changes in hydrology occur, through natural or man caused events (e.g., climate change), altering hydrologic flows. In such cases, a water previously determined not to be jurisdictional under the rule, may be found to be jurisdictional in its new altered condition. (p. 9)

Agency Response: Under existing Corps' regulations and guidance, Corps' approved jurisdictional determinations generally are valid for five years. The agencies will not reopen existing approved jurisdictional determinations unless requested to do so by the applicant. All jurisdictional determinations made on or after the effective date of this rule will be made consistent with this rule. Similarly, consistent with existing regulations and guidance, jurisdictional delineations associated with issued permits and authorizations are valid until the expiration date of the permit or authorization.

Southern Ute Indian Tribe Growth Fund (Doc. #15386)

5.250 *Recommendations*: The term significant should be defined as well as any threshold for deciding what is not speculative or insubstantial. If the term significant nexus is considered a legal definition only, the Proposed Rule should provide a scientific definition of significant nexus paired to the legal definition.

The Connectivity Report should clarify that connectivity is not a binary property – something either present or absent, but a gradient.

Either the Connectivity Report or the Proposed Rule should provide the basis for defining the point along the connectivity gradient where the effects of connectivity will result in a significant nexus. This could be accomplished by the development of specific, quantifiable criteria to guide determinations of significance. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II.

5.251 Recommendation: The Proposed Rule should provide the basis for defining the point along the connectivity gradient where the effects of connectivity will result in a

[86] Id. at 779-781. [Rapanos, 547 U.S. at 779-781 (2006).]

significant nexus. This could be accomplished by the development of specific, quantifiable criteria to guide determinations of significance. (p. 10)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II.

State of Idaho (Doc. #16597)

5.252 Any effort to clarify CWA jurisdiction should recognize that the "significant nexus" test Justice Kennedy set forth in *Rapanos v. United States* requires a connection between waters that is more than speculative or insubstantial to establish jurisdiction. Idaho supports efforts to quantify "significant" in order to ensure the term's usage does not extend jurisdiction to waters with *a de minimis* connection to jurisdictional waters. Idaho appreciates language in the Proposed Rule which states that effects on jurisdictional waters must be "more than speculative or insubstantial." However, further work is needed to quantify the concept of significance, particularly the term "significantly affects" in 40 CFR 328.3 (c)(7), and to flesh out a transparent process for the agencies to use when making significance determinations.

To address this uncertainty, Idaho believes the Final Rule should provide a specific, quantifiable measure or set of measures to guide determinations of significance rather than simply stating the effect on another jurisdictional water must be "more than speculative or insubstantial." Waters that satisfy the specified measure(s) would be presumed to have a significant connection to the waters identified in paragraphs (a)(1) through (3) of section 328.3 of the Proposed Rule, while waters that do not satisfy the measure(s) would be presumed to lack a significant connection. Parties should be able to provide evidence to rebut a presumption of significance or non-significance, but the use of specific, quantifiable measure(s) would provide much needed clarity and a justifiable starting point for significance determinations. (p. 2-3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II.

State of Alaska (Doc. #19465)

5.253 Significant nexus in the proposed rule is descriptive of a connection but **not** predictive of impact; no light is shed on whether the characteristics of a traditional navigable water would change in a meaningful way if that connection did not exist. The proposed rule needs a clear definition of significant nexus that sets the standard for when similarly situated waters that are part of the same stream reach, and adjacent wetlands would change the characteristics of a traditional navigable water in a meaningful way beyond what would happen if that connection did not exist. (p. 23)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments7 and 8, Section 5.4 Agency Summary Response,

Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II.

Washington Association of Conservation Districts (Doc. #3272.2)

5.254 WACD requests EPA clarification or correction is the proposed WOTUS rule language on "significant nexus" for capturing "other waters". The presented approach and terminology seems ripe for confusion and for inconsistent regional application by regulatory agencies. The rule's language on connectivity, and its proposed process for evaluating any possible impact from other waters to jurisdictional waters that is "more than speculative" or not "insubstantial", certainly will cause landowners a great deal of confusion. These terms may be undefinable; they are at least confusing and impractical. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections II and IX.

Consolidated Drainage District #1, Mississippi County, MO (Doc. #6254)

5.255 We do not think it is the fuzziness of the court rulings that the EPA and USACE want to clarify – rather, they want to shift the burden away from themselves and onto the individual landowners to prove that there is no hydrological connection. Such a shift expands the regulatory reach of both agencies dramatically by ridding them of the need of doing a case-by-case analysis and inserting a one-size-fits-all rule that oversimplifies and over-generalizes land use. It will not allow for more nuanced understandings of the particular situations of specific owners or specific pieces of land. That most farmland is part of an interconnected system of other farmland is also not addressed by the proposed rule. It also leaves individual farmers – in our jurisdiction mostly family farmers – in the highly difficult position of showing that their drainage ditches are not connected to some navigable body of water. Such a showing would require lengthy surveys and hydrological tests that, quite frankly, family farmers would not be able to afford. The economic and financial burdens would cut into the profitability of their land, making them less economically viable – and much more likely to claim a regulatory taking in the future. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II, VII, VIII and IX. See also Response to Comments Topic 7 regarding Features and Waters Not Jurisdictional.

White Pine County Board of County Commissioners, White Pine County, Nevada (Doc. #6936.1)

5.256 all definitions of verbiage that will pose new restrictions on public and private lands must be extremely clear and existing agricultural (farm and ranch) uses of public and private land s must not be burdened with regulation and permitting processes that limit the use of the lands and pose additional fees or delays in the use of those lands. … [The draft rule]

Claims to exclude groundwater, but includes certain waters based on a subsurface groundwater connection. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary responses to comments 3, 4, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Preamble to the Final Rule Sections III and IV and Technical Support Document.

5.257 Significant nexus definition allows any connection to qualify as significant. There must be a very defined situation that must outline "significant nexus" that will qualify its justification to be classified. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8. See Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

City of Westminster (Colorado) (Doc. #7327.2)

5.258 There is a change in the proposed "Significant Nexus" definition, paragraph (u)(7) [(a)(7)]. In the existing rule, the "Significant Nexus" is determined to be valid if the water in question "significantly affects the chemical, biological, and physical integrity of the downstream water identified in paragraphs (s)(1) [(a)(1)] through (3)." The proposed rule requires only one attribute to be affected, i.e. chemical, biological, or physical integrity of the downstream water to determine a "Significant Nexus." This increases the scope of the USACE jurisdictional waters to an area that the potential connectivity to a traditional navigable water in highly questionable. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 6. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Board of Douglas County Commissioners, Castle Rock, CO (Doc. #8145)

5.259 The Supreme Court's rulings would be ignored and requirements to find a significant nexus obviated by the Proposed Rule where a "significant nexus" only requires one of the measures of connectivity – biological, chemical **or** physical. The new broad standard of the Proposed Rule greatly diminishes the importance of hydrologic connectivity that was implemented by the U.S. Supreme Court. Moreover, it is this change in definition, without any further legal or scientific support, that the Agencies use to support the new definition for "tributary" wherein a break in an OHWM does not change a feature's status as a tributary. (p. 15)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 6, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

Southern California Association of Governments (Doc. #8534.1)

5.260 The proposed definition of "significant nexus" is likewise inappropriate and will interfere with agency operations. Pursuant to Justice Kennedy's concurring opinion in Rapanos, the Proposed Rule states that a water will be considered a Water of the United States if it has a significant nexus to a traditional navigable water. Notably, however, the Proposed Rule greatly expands Justice Kennedy's definition to include any waters that have an impact on the chemical, physical or biological integrity of downstream traditional navigable waters. Justice Kennedy's opinion limited the reach of the Clean Water Act to those waters that had all three, not each or any. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 6. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

5.261 The distinction is crucial. Under the Proposed Rule, water bodies, including dry washes, drains and ditches, can be considered a Water of the United States if they have a biological impact on downstream traditional navigable waters. This means if any plant or animal species uses the water in question, and also uses downstream traditional navigable waters then the water would be a Water of the United States regardless of whether they have a hydrologic connection to the downstream water. This is a significant expansion of the definition of the Waters of the United States that will have significant impacts on public infrastructure. We ask that the Corps and EPA reconsider the applicability of this new definition to man-made channel, ditches, swales and other features. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

Beaver County Commission (Doc. #9667)

5.262 What is even more troubling with the proposed rule is the idea that because intertwined "water connectivity" and nebulous "significant nexus" to navigable waters might exist, somehow that connectivity and nexus should give the Agencies jurisdictional authority to

fit their perceived needs. This is especially troublesome given the fact that what is being proposed has already resulted in multiple court cases that have gone as far as the Supreme Court of the United States, and has already resulted in the Supreme Court rendering multiple decisions that define "waters of the United States". (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

White Pine County, Board of County Commissioners (Doc. #9975)

5.263 Significant nexus definition allows any connection to qualify as significant. There must be a very defined situation that must outline "significant nexus" that will qualify its justification to be classified. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8. See Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Office of the City Attorneys, City of Newport News, Virginia (Doc. #10956)

5.264 Although the clear thrust of both the SWANCC case and the Rapanos case is that jurisdictional issues must be determined on a case-by-case fact specific analysis, EPA's attempt to "clarify" and "efficiently implement" the CWA is to broaden the definition of WOUS to cover virtually all stormwater, regardless of limitations imposed by the Supreme Court in the series of cases cited. The thrust of the definition is that any connectivity between the area in question and WOUS is sufficient to establish a "significant nexus". This is accomplished, in part, by an ever-expanding definition of tributaries that relies on any connectivity demonstrated. The most egregious position is that, in spite of the acknowledgement that groundwater is beyond the reach of the Clean Water Act and thus not subject to the WOUS definition, it nonetheless may be used as a connection between bodies of water through "subsurface hydrological connections" for the purpose of expanding the definition of WOUS. See, pages 22199 and 22207. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

Board of Commissioners, Wallowa County, Oregon (Doc. #12247)

5.265 Volume 79, No. 76 22210: "Similarly, uplands separating two waters may not act as a barrier to species that rely on and that regularly move between the two waters. Therefore, the proposed rule reflects an understanding that adjacent waters affect the chemical, physical, and biological integrity of waters to which they are adjacent and to (a)(1) through (a)(3) waters even where the two waters may be separated by features that are not jurisdictional, such as uplands, berms, roads, levees, and similar features."

This says that a duck that lands in one pond, then flies to a second pond 4 miles away, and again, and again ties all these ponds over 16 miles together as adjacent waters.

Again, this is increased regulation by EPA and the Corps that is based on speculation that this is a biological connection. (p. 3)

Agency Response: See Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and VIII.

Mesa County, Colorado Board of County Commissioners (Doc. #12713)

5.266 Mesa County requests further study on the impact of the change of the definition of "significant nexus" determination being one of the three attributes (chemical, physical, and biological), instead of all three attributes. Mesa County requests that the current rule remain unchanged with respect to the definition of a "significant nexus", which requires demonstrated impact to all three attributes (chemical, physical and biological). We do not believe that requirement of only *one* of the three attributes (chemical, physical, and biological) being present, shows a "significant nexus" (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

City of Palo Alto, California (Doc. #12714)

5.267 "Significant nexus" should be defined in science-based terms to determine whether "other waters" are sufficiently linked to waters of the U.S. The rule defines significant nexus as any connection that is "more than speculative or insubstantial." (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary response to comments 7 and 8. Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV and Technical Support Document Section II.

Missoula Public Health (Doc. #13576)

5.268 Under the 1972 Clean Water Act, for more than 30 years, virtually all natural surface waters were recognized as "Waters of the United States", and protected from pollution or destruction through dredging, filling and draining. Court decisions in 2001 and 2006 (SWANCC and Rapanos), and subsequent agency guidance have removed much of the protection for vital wetlands and streams. These water resources are critically important to the protection of water quality, enhancement of wildlife habitat, and attenuation of floodwaters in Missoula County. … They all provide important functions – filtering pollutants, recharging groundwater aquifers, providing habitat for fish and wildlife, attenuating floodwaters, and protecting downstream property owners.

We believe that the proposed regulations need additional work to clarify the significant connection issue. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II.

Waters of the United States Coalition (Doc. #14589)

5.269 Definition of "Significant Nexus" – The Proposed Rule will classify water bodies that have only a biological connection to traditional navigable waters as waters of the United States. The proposed change will reclassify waters that exist far beyond the OHWM as waters of the United States and capture treatment wetlands, percolation ponds and other manmade features. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7, 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII, and IX.

Snowmass Water and Sanitation District (Doc. #16529)

5.270 The regulatory preamble points to a vast range of potential chemical, physical and biological functions that, if affected by all similarly situated waterbodies, can demonstrate the requisite nexus for jurisdiction. These include various ecological and biological processes and the movement of animals and insects. Under this ecological process approach to connectivity, a significant nexus can be found where a water has no influence on the quality of navigable waters. Under this approach, a hydrologic connection is not even necessary. Areas can be jurisdictional in the presence of an ecological nexus and, in fact, due to the absence of any hydrologic connection. (p. 8-9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7, 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections II, VII, VIII and IX.

Palm Beach County, Florida (Doc. #16647)

5.271 Throughout the country, and particularly in South Florida, one can argue that reality dictates that everything in a watershed is "connected." Basic courses in ecohydrology seek to document the different processes that collectively influence a watershed. However, the fact that connectivity can be demonstrated does not result in a water body becoming a "water of the US." Pursuant to the language of the CWA and resulting legal precedent, limits are required to be placed on connectivity to define what water bodies are jurisdictional. The scientific and technical report accompanying the proposed rule contained no justification for the assumption in the proposed rule that a measurement of connectivity, a scientific term, could be utilized interchangeably with the term "significant nexus," a legal term that necessitates specific limits based on the language of the CWA. Accepted engineering and technical practices should be utilized to inform clear and concise limits on jurisdictional assertions based on "connectivity." Approaches to consider include specifying a minimum/maximum watershed size, percentage 'of watershed or current "blue line" practices utilized by the US Geological Survey in current mapping activities. (p. 8-9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 7, and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II.

City of St. Petersburg (Doc. #18897)

5.272 The proposed rule further states that all adjacent waters by definition have a significant nexus with their traditional navigable waters based simply on proximity, ignoring the definition's requirement to demonstrate a significant effect on the chemical, physical, or biological integrity of a traditional CWA jurisdictional receiving water body. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and response to comment 4, Preamble to the Final Rule Sections III and IV and Technical Support Document, Sections II and VIII.

Mississippi Valley Flood Control Association (Doc. #19488)

5.273 The agencies' departure from the Kennedy concurrence is most clearly apparent when comparing the Proposed Rule to Justice Kennedy's instructions to identify impacts to the "chemical, physical, and biological integrity" of traditional navigable waters. Where Justice Kennedy uses the conjunction "and" to refer to all kinds of impacts collectively, the agencies substitute "or," allowing the identification of any one. The result of the agencies' wordplay is an undeniably and unequivocally broader test than that articulated by Justice Kennedy. (p. 6-7)

Agency Response: See Section 5.0 Agency Response to Comments, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section I.

Maui County (Doc. #19543)

5.274 The U.S. Supreme Court identifies a significant nexus as being present when a water has sufficient duration, frequency, and volume of flow to significantly affect the biological, chemical, and physical integrity of a WOTUS. The proposed rule ignores the Supreme Court's rulings, requiring only one of the measures of connectivity – biological, chemical, or physical. This change is without sufficient legal and scientific support. (p. 2)

Agency Response: See Section 5.0 Agency Response to Comments, summary response to comment 6, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section I.

Massachusetts Association of Conservation Commissions (Doc. #11016)

5.275 We also believe the proposed rule should go further and include by definition all intermittent and most (if not all) ephemeral streams and their adjacent wetlands. The SAB report provides ample evidence and support for including those waters. It is clear that even temporarily connected streams and wetlands can have a disproportionately large influence on the integrity of downstream waters.

The importance of ephemeral, intermittent, and perennial streams is discussed at length in the proposed rule's preamble as well as the SAB report, but the seasonality and annual variability of hydrologic connectivity are not explicitly recognized in the proposed rule itself. Though hydrologic connectivity can vary within and between years, its significance in establishing a connection to downstream waters is not diminished by this

natural variability. We recommend language that recognizes this variability, not only for streams but for all waters. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4. Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections II, VII, VIII and IX.

5.276 Additionally, we strongly support the use of wetland-dependent wildlife as indicators of biological connectivity for determining the jurisdictional status of other waters. Wetland-dependent species often depend on multiple wetland and other aquatic habitats and the presence or absence of these organisms can be used to indicate ecological connectivity and functional relationships between "other waters" and jurisdictional waters. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 6. Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections II, VII, VIII and IX.

Florida Association of Counties (Doc. #10193)

5.277 The proposed definition of "other waters" then concludes with the "significant nexus" requirement, a phrase - perhaps more than any other – that is intrinsically and unquestionably vague. The Agencies attribute the phrase to Justice Kennedy's concurring opinion in Rapanos but, in fact, it was cited from the SWANCC decision years before.[87] As discussed *infra*, the SWANCC Court's use of "significant nexus'' was in support of its finding that the CWA applied not only to navigable waters, but also to the wetlands *adjacent* to those waters. Indeed, the SWANCC Court articulated succinctly that with regard to wetlands that are not adjacent to navigable waters, "the text of the [CWA] would not allow this." Yet, we are now faced with a proposed rule that would expand jurisdiction, based upon a significant nexus, well beyond the adjacent, and indeed "many miles away." (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 3, 4 and 5, Section 4.3 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

5.278 The expansion of federal jurisdiction under this misdirected "significant nexus" criterion is discouraging. The interpretive guidance in the Scientific Appendix of the proposed rule elucidates our concerns. The guidance provides that "other waters" have hydrologic, water quality and habitat functions that affect downstream waters when there is a "connection," and that hydrologic connectivity "can include waters that have groundwater or occasional surface water connections." [88] Although the CWA does not contemplate groundwater jurisdiction and the Agencies have repeatedly confirmed this, if groundwater can be used to derive jurisdiction through connectivity, it becomes a

[87] See Rapanos, 547 U.S. 7 15, 779-787 (2006) (Kennedy, J. concurring); see also SWANCC 531 U.S. 159, 167 (2001).
[88] See 79 Fed. Reg. 76, 22248 (Apr. 21,2014).

distinction without a difference. The consequence is likely most acute in Florida where the entire state is traversed by groundwater (p. 4-5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

5.279 Unfortunately, the rule doesn't stop there. The guidance also provides that a lack of such connectivity doesn't mean that the jurisdictional question has been answered. According to the Agencies, disconnected waters can still impact conditions downstream and. despite "physical distance," waters are "frequently connected in some degree through either surface water or groundwater systems."[89] We believe this purported "science" impermissibly expands waters of the United States. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, Section 5.4 Agency Summary Response, Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

Nebraska Association of Resources Districts (Doc. #11855)

5.280 NARD supports the Agencies' goals of improving predictability and clarifying the scope of WOTUS under the CWA.[90] However, the Agencies seek to accomplish these goals through an unprecedented reliance on undefined groundwater connections, and non-hydrologic connections previously rejected by the Supreme Court, as the basis for the assertion of federal jurisdiction over any isolated intrastate body of water. The Agencies' flawed assumptions effectively shift the burden of proving liability under the CWA to the regulated community. (p. 3-4)

[89] *Id.*
[90] 79 Fed. Reg. 22188

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, and 8, Section 5.4 Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. Additionally, the rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The rule, promulgated under authority of Section 501 of the CWA, does establish a binding definition of "waters of the United States."**

5.281 Rather than respect constitutional constraints on the authority granted under the CWA, and set forth in *Solid Waste Agency of No. Cook Cty v. Corps of Engineers* ("SWANCC")[91] and *Rapanos v. U.S.*,[92] and their lineage, the Agencies have relied on overly broad scientific justifications (many tenuous at best) to convert the "significant nexus" concept (a legal term of art) into a sweeping regulatory tool under which any chemical, physical, or biological connection, alone or in the aggregate, legitimizes the Agencies' exercise of jurisdictional authority under the Proposed Rule. Specifically, the Proposed Rule's expansive definitions of "neighboring," "riparian," and "tributary," expand the scope of presumed federal jurisdiction upon any showing by the Agencies that a chemical, physical, or biological connection between an isolated intrastate body or conveyance of water and a traditionally navigable body of water is not insignificant. (p. 4-5)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 2, 3, 4, 5, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.**

[91] 121 S. Ct. 675 (2001)
[92] 126 S. Ct. 2208 (2006)

5.282 Despite the Agencies' statements to the contrary,[93] the Proposed Rule does include groundwater, because without groundwater, there is no hydrologic link between many isolated waters and traditionally navigable waters.[94] Any past practice or proposed standard under which the Agencies establish jurisdiction over isolated waters by virtue of groundwater, exempt waters, or any other undefined connections, must be rejected.[95] Simply put, the Agencies should not attempt to assert jurisdiction over an otherwise isolated water by piggybacking on nonjurisdictional waters. The Agencies are required to establish jurisdiction over each link from traditionally navigable water to isolated intrastate waters. (p. 8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. Additionally, the rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The rule, promulgated under authority of Section 501 of the CWA, does establish a binding definition of "waters of the United States."

National Association of Conservation Districts (Doc. #12349)

5.283 The significant nexus test must not be used as a method of taking the Connectivity Report as the basis for making every hydrological connection as a legal connection for determining "significant." To be significant, or "more than speculative or

[93] "The agencies have never interpreted 'waters of the United States' to include groundwater and the Proposed Rule explicitly excludes groundwater, including groundwater drained through subsurface drainage systems." 79 Fed. Reg. 22218

[94] Comments to the SAB Report indicate that in some cases, the only connection between water bodies is groundwater. See Science Advisory Board (SAB) Draft Report (4/23/14). See also SAB letter to EPA regarding the scientific and technical basis of the Proposed Rule regarding "waters of the U.S." (9/30/14).

[95] 79 FR 22219; GAO Report – "Waters and Wetlands" (page 23) February, 2004.

insubstantial,"[96] means that the expansion of jurisdiction beyond the Supreme Court decisions is not allowed. NACD supports the decisions of the Supreme Court to leave the management of non-navigable waters in the hands of landowners and local governments, as well as the use of local input to ascertain and develop parameters, criteria and defined standards. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II. The agencies fully support efforts by States and tribes to protect under their own laws any additional waters, including locally special waters that may not be within the Federal interests of the CWA as interpreted in this final rule.

California Association of Sanitation Agencies (Doc. #12832)

5.284 … Under the proposed rule, a significant nexus appears to be assumed, as it states "…even in cases where a hydrologic connection may not exist, there are other important considerations…that result in a significant nexus between the adjacent wetlands or waters and the nearby "waters of the United States" and (a)(1) through (a)(3) waters." (79 FR 22244) As one seeming justification for this expanded interpretation, the proposed rule states that "many major species that prefer habitats at the interface of wetland and stream ecosystems remain able to utilize both habitats despite the presence of such a berm." (Id. at 22245) This use of species preference and behavior to justify incorporation of a water with no proven hydrologic connection as a water of the U.S. closely resembles the previously invalidated migratory bird rule. As such, terrestrial species preference is not an acceptable basis for the assertion of jurisdiction. (p. 4)

Agency Response: The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule. See Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Section II.

Colorado Stormwater Council (Doc. #12981)

5.285 Significant Nexus. The proposed rule would remove the requirement that a subject water would need to affect the physical, chemical and biological integrity of a downstream water. Rather, the subject water would only need to affect one of those attributes (physical or chemical or biological integrity). The subject water does not need to be a part of the tributary network to the downstream traditional navigable water. As a result, the proposed rule would broaden the geographic scope of waters that can be jurisdictional through establishment of a significant nexus. This would result in a heavier workload on

[96] 40 CFR 230.3(u)(7)

the already-overtaxed regional USACE offices and on the communities who must request a determination for each project. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 6. Preamble to Final Rule Sections III and IV, and Technical Support Document Sections I and II.

Western Coalition of Arid States (Doc. #14407)

5.286 The agencies also assert that all impoundments of waters of the U.S. will be categorically determined to have a significant nexus with downstream (a)(1) through (a)(3) waters – even if they do not have a chemical, physical, or biological effect. The proposed rule also asserts jurisdiction over tributaries to impoundments, wetlands and waters adjacent to impoundments, and waters adjacent to tributaries of impoundments.

> [Figure 5 omitted here]
>
> Again, the agencies do not discuss anywhere in the rule's preamble, in Appendix A to the preamble, or the Connectivity Report, the science that supports this decision. As a result, the regulation of isolated impoundments and the upstream tributaries that connect to them is likely to continue to cause confusion among permitting agencies and field personnel. If the agencies can identify a legal and scientific basis for regulating cut-off impoundments, such as those described in our comments, the agencies should provide a clear description in the Final Rule. (p. 13-14)

Agency Response: See Preamble to Final Rule Section IV and Technical Support Document at Section VI.

County Commissioners Association of Pennsylvania (Doc. #14579)

5.287 The EPA and Army Corps have indicated that the proposed WOTUS rule creates "bright line categories" of waters that are and are not jurisdictional. However, the definition's reliance on the interconnectivity of waters in reality dulls this line, and the definition is so vague, it is difficult to tell where federal jurisdiction would actually end. The proposed regulation further claims to have a goal of greater predictability and consistency through increased clarity, but at the same it emphasizes "the categorical finding of jurisdiction for tributaries and adjacent waters was not based on the mere connection of a water body to downstream waters, but rather a determination that the nexus, alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA, and caselaw." With all of these factors in play, how is it possible to draw a black and white line to determine juri[s]diction? (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, and summary response to comments 3, 4, 5, 7, 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

5.288 The terminology and definitions used serve to illustrate how difficult[] it will be to determine what jurisdiction federal agencies have under the proposed rule. One of the more ambiguous terms defined within the proposed rule is that of "significant nexus," a term which is to be used to determine jurisdictional waters on a case-by-case basis. This single term would essentially grant EPA and Army Corps jurisdiction over virtually all

waters and connecting lands, because in reality, there is almost nothing from a hydrological standpoint that is not somehow connected or is not significant within the hydrologic cycle. This is a point the regulation seems to concede repeatedly as it refers to the important role of tributaries and adjacent waters in maintaining the chemical, physical and biological integrity of traditional navigable waters, interstate waters and the territorial seas, and by insisting that the effects of small water bodies in a watershed need to be considered in the aggregate. In addition, the proposed rule even indicates that a water body could in fact have a significant nexus *without* a hydrologic connection because it has a "functional relationship" with the traditional navigable water, interstate water or territorial sea, such as retention of flood waters or other pollutants that would otherwise flow downstream. In the alternative, attributes that may not be jurisdictional by themselves may be when considered in combination for the significant nexus test, and waters near a WOTUS could also be jurisdictional *without* a significant nexus if they are in the floodplain or a riparian area. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

5.289 Further, the Clean Water Act protects the chemical, physical and biological integrity of the nation's waters. Generally, the three terms have always been considered together. However, throughout the proposed rule, and specifically in the term "significant nexus," the terms are grouped differently – sometimes they are linked by an "and" (chemical, physical and biological) and sometimes they are linked by an "or" (chemical, physical or biological). How the terms are linked will have a huge impact on how this regulation is enforced, because it means the difference between whether all three must be present to create a significant nexus, or merely any one of the three. Why were the changes made and where will these changes have the biggest impact? (p. 5)

Agency Response: See Section 5.0 Agency Summary Response and summary response to comment 6, and Technical Support Document Section I.

J.R. Simplot Company (Doc. #15062)

5.290 What degree or intensity of connection constitutes a "significant nexus"? Waters connected by shallow subsurface hydrologic connection, however, could include gradients of connections, varying by distance, topography, geomorphology, substrate, quantities of water, etc. Does any subsurface connection cause adjacency? The attempt to define neighboring is highly confusing and does not lend itself to a formal rule. All field situations are different and this may be an assessment that is better determined in the field by qualified staff rather than a formal rule, even if some uncertainty of jurisdiction is retained.

> Example 5: Could a pit lake associated with mining be considered a water of the U.S.? Based on the definition of "other waters" and on the definition of significant nexus, if a physical, biological, or chemical connection is shown to "influence" a water of the U.S., then the pit lake could be considered jurisdictional. In this case, the connection would be the pit lake influencing the shallow groundwater quality and then that groundwater discharging into a jurisdictional stream.

> Examples 3 through 5 illustrate one of the fundamental flaws of the proposed rule: the definition of WOTUS is so broad that it captures a number of man-made water features that were never intended to be WOTUS. Furthermore, it also captures other water features in which any true connection to TNW is tenuous and/or highly subjective. As an example, the terms "other waters" as written could conceivably determine significant nexus for a small group of prairie potholes and then determine via (a)(7) that all prairie potholes are jurisdictional "waters of the United States". Similar logic could be applied to vernal pools, and other isolated waters. Many pages of the preamble are presented to explain the definition, but in such determinations by the Agencies appear to be very subjective. Finally, the term "significant" is also poorly defined. If it must be more than "speculative or insubstantial", then the effect must be at least substantial. No definition of this term is provided and is left up to field staff to interpret past case law. This is another element of "significant nexus" which instead of clarifying jurisdiction, it increases the uncertainty to the public. (p. 6)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8 and Section 5.4 Agency Summary Response. See also Response to Comments Compendium 3 – Adjacent Waters and Compendium 3 Other Waters, and Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.**

The rule includes several refinements to the exclusion for water-filled depressions created as a result of certain activities. In addition to construction activity, the agencies have also excluded water-filled depressions created in dry land incidental to mining activity. This change is consistent with the agencies' 1986 and 1988 preambles, which generally excluded pits excavated for obtaining fill, sand or gravel, and there is no need to distinguish between features based on whether they are created by construction or mining activity. A number of commenters indicated that these water-filled depressions created in dry land are often left on a site after construction or mining activity is complete in order to provide beneficial purposes,

such as water retention, recreation, and animal habitat. The agencies are also not retaining language from the preambles that stated a water could be found jurisdictional once the construction or mining activity is completed. Paragraph (b) of the rule states that excluded waters are not jurisdictional even if they meet one of the categories in paragraph (a) of the rule. Including the "abandonment" provision of prior preambles would confuse the status of these waters, and the agencies do not include it in the final rule in order to further their goal of providing clarity and certainty. The agencies believe that it is more likely that waters constructed in association with mining or construction activities are more likely to be allowed to remain after such activities if they are not subject to potential CWA coverage. The agencies believe that this is a positive environmental result consistent with the goals of the Act. See Preamble to Final Rule Section IV.

Coalition of Local Governments (Doc. #15516)

5.291 The proposed rule does exclude groundwater, however the proposed definitions for "tributaries" and "adjacent waters" include those waters that are connected via subsurface hydrologic connections. *See supra* Section IV.B-C[97]. By allowing "water of the United States" to include any water that is connected to another navigable water through underground water sources, the proposed rule is regulating groundwater. (p. 19)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

Indiana Farm Bureau et al. (Doc. #14119)

5.292 The agencies define a "significant nexus," to be a significant effect upon "the chemical, physical, or biological integrity of the water identified…" 79 Fed Reg. at 22263 (emphasis added). In the preamble, the agencies correctly quoted Justice Kennedy's

[97] [*Doc. #15516, p. 7-11*]

opinion in Rapanos in which he stated, "significantly affect the chemical, physical, and biological integrity." 79 Fed. Reg. at 22192 (emphasis added). There is significant legal distinction between "and" and "or" and changing this definition in the rule proposal greatly expands the reach of the agencies. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comment 6 in 5.0 Agency Summary Response, and Technical Support Document Section I.

Federal Water Quality Coalition (Doc. #15822.1)

5.293 The Existence of a Connection Does not Imply a Significant Effect on Downstream Water. SAB panel members point out that connectivity occurs on a gradient.[98] Applying that fact to the proposed rule, Dr. Aldous points out that: 'Specific scientifically-grounded, objective methods must be put in place to draw the line between those waters having or not having a significant nexus to other jurisdictional waters."[99]

In particular, SAB panel members noted that this gradient is critical to determining what waters have or do not have a "significant nexus" to downstream waters:

> Panel members generally found that the term "significant nexus" was poorly defined in the proposed rule and that the use of the term "significant" was vague. Panel members commented that the little guidance was provided in the preamble of the rule to interpret these terms. There was agreement among Panel members that it was important to articulate in the proposed rule that (1) "significant nexus" is not a scientific term but rather legal term that requires a policy determination in light of the law and science and (2) the relative strength of downstream effects should inform the conclusions about the significance of those effects for purposes of interpreting the Clean Water Act.[100]

According to the Panel members, developing such methods will require additional research:

> Panel members commented that as the science continues to develop, other sets of wetlands may be identified as "similarly situated." Panel members further noted that before such determinations are made, additional research will be required to establish degree of connectivity and analyze spatial and temporal variability and threshold levels of connectivity. This research will be a requisite step in further development of rules relative to the jurisdictional status of "additional other waters of the U.S."[101]

In response to the agencies' request for comments on including additional categories of water as jurisdictional by rule, Dr. Ali responded as follows:

[98] Incorporating a gradient approach to connectivity is one of the chief recommendations of the SAB review of the Draft Connectivity Report. SAB Report Review, at 2.
[99] SAB Rule Review, at 2.
[100] September 2, 2014, Memorandum from Dr. Amanda D. Rodewald, to Dr. David Allen, "Comments to the chartered SAB on the adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' Under the Clean Water Act," at 6 (hereinafter Rodewald Memorandum)
[101] Rodewald Memorandum, at 5.

> The draft rule goes on to say that "*the [EPA science] Report indicates that there is evidence of very strong connections in some subcategories that are not included as jurisdictional by rule*" but there again, it is unclear to me whether that very qualitative terminology ("very strong") is a synonym for "significant". Having other groups or types of waters being determined jurisdictional by rule or category would only be possible if we could rank them according to the frequency and/or magnitude and/or duration with which they actively transfer materials (or prevent the transfer of materials) to downstream waters (see coarse schematic in Figure 1).[102]
>
> The concern regarding the need to address the frequency and magnitude of the transfer of materials to downstream waters applies equally to the waters the agencies have proposed to list as jurisdictional by rule, as to any additional categories that may be suggested by commenters. (p. 45-46)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, and Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comment Compendia Topic 3 – Adjacent Waters, Topic 4 - Other Waters, Topic 8 - Tributaries, Topic 9 - Science.

5.294 The SAB Panel Reviews Demonstrate that the Proposed Rule Fails To Articulate A Coherent Theory To Support Including or Excluding Water From Jurisdiction. "Connectivity" is the agencies' rationale for asserting jurisdiction under the proposed rule.[103] However, as noted by the SAB Panel, all water is connected. Taking the rationale to its logical conclusion, all water, even groundwater, could be a water of the U.S. But this would run afoul of the specific constitutional, statutory, and judicial constraints on CWA jurisdiction described above. Furthermore, the lack of a coherent approach consistent with these constraints has led the SAB Panel to press for an even more inclusive rule, which would stray even further from the constraints.

> Thus, the SAB Panel questions why the Draft Connectivity Report did not include deep aquifer connections.[104]
>
> > The Report focuses primarily on the site and subregional scales, perhaps due to cost of and access to data and model results. This tends to either ignore or at least downplay the potential significance of regional-scale hydrologic connectivity, especially as it relates to groundwater. This is a problem because regional groundwater flows commonly interact with the surface environment at sinks and springs. For example, the Floridan aquifer underlies all of Florida as well as portions of Mississippi, Alabama, Georgia, and South Carolina and commonly interacts with the surface

[102] SAB Rule Review, at 12.
[103] As discussed above, the agencies assume all connections, in the aggregate, meet their "significant nexus" standard.
[104] SAB Report Review, at 19.

> environment through sinks, springs, and outcrops (see Sun et al. 1997 and references therein).[105]
>
> In fact, if the agencies' rationale for the proposed rule were a valid basis for federal jurisdiction, all water in Florida, as well as the parts of Mississippi, Alabama, Georgia and South Carolina that overlay the Floridan aquifer would be regulated waters of the U.S.
>
> Similarly, applying the agencies' "connectivity" rationale to biological connectivity, there are no waters that would be unconnected. The SAB Panel notes that "organismal movement can connect waters and wetlands across uplands and between watersheds."[106] Thus, if the agencies' rationale for the proposed rule was valid, waters could be located in completely different watersheds but still be considered connected.
>
> In addition, the Panel recommends including a discussion of manmade connections "via roads, agricultural tiles, dams, pumping groundwater, irrigation, channelization, and other manmade infrastructure (piped streams, stormwater pipes)."[107]
>
> The SAB recommends that the Report authors consider including examples from at least some of the following human alterations affecting the connectivity of streams: agricultural ditches and tile drains, urban lined channels and buried streams, removal of riparian trees, cattle grazing, gravel mining, channel diversions, low-head dams, grade control structures, roads, stream restoration, accelerated erosion, sediment transport and storage, stream restoration, and effluent dominated streams.[108]
>
> Based on their understanding of connectivity, some members of the Panel who reviewed the proposed rule recommended against the exclusions for groundwater, ditches, rills, gullies, non-wetland swales, and artificial lakes and ponds.[109] (p. 51-53)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, and Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See Response to Comment Compendia Topic 3 – Adjacent Waters, Topic 4 - Other Waters, Topic 8 – Tributaries and Topic 9 - Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of**

[105] Id., at 20.
[106] Id.
[107] Id. at 11.
[108] Id. At 31-32.
[109] Rodewald Memorandum, at 6-8.

significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

Water Advocacy Coalition (Doc. #17921.1)

5.295 The Proposed Rule Fails to Quantify Significance or Explain When Chemical, Physical, and Biological Effects Amount to a Significant Nexus.

> For years, we have urged the agencies to provide more specific criteria for "significant nexus,"[110] and again they have failed to do so. The significant nexus analysis is the lynchpin concept of the agencies' proposed rule, but the rule provides no metrics or criteria for determining significance. This is also a major problem with the Connectivity Report that served as the scientific basis for the proposed rule.[111] The Science Advisory Board ("SAB") tasked an *ad hoc* panel of experts with review of the Connectivity Report, and the SAB Panel produced a report with numerous recommendations to improve the Connectivity Report.[112] One of the SAB Panel's main recommendations was that the Connectivity Report be revised to consider connections in terms of a connectivity gradient rather than treating connectivity as a binary property (connected versus not connected).[113] The SAB Panel "recommends that the interpretation of connectivity be revised to reflect a gradient approach that recognizes variation in the frequency, duration, magnitude, predictability, and consequences of connections."[114] Although the proposed rule's preamble acknowledges the gradient in some instances, its categorical assertions of jurisdiction over tributaries and adjacent waters do not account for instances where features may fall very low on the connectivity gradient. (p. 34-35)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 7 and 8. Section 5.4 Agency Summary Response,**

[110] See, e.g., AFBF Comments on 2008 Rapanos Guidance, Exhibit 2 at 65.
[111] See Waters Advocacy Coalition, "Comments on the U.S. EPA Draft Report: Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of Scientific Evidence," Docket No. EPA-HQ-OA-2013-0582, at 6-7 (Nov. 6, 2013) (incorporated by reference herein) ("WAC Comments on Connectivity Report").
[112] See SAB, Panel for the Review of the EPA Water Body Connectivity Report, SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, EPA-SAB-15-001 (Oct.17, 2014), http://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15001+unsigned.pdf ("SAB Panel Review of Connectivity Report") (attached hereto as Exhibit 5).
[113] SAB Panel Review of Connectivity Report, Exhibit 5 at 2.
[114] Id. at 3. Indeed, the gradient approach to connectivity is recommended at least 28 times in the SAB Panel Review of the Connectivity Report.

Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX.

5.296 Rather, the preamble and the Connectivity Report focus on the ability to simply identify the presence of connections. As explained by GEI Consultants in their report, the proposed rule is based on the agencies' "underlying assumption that any observable connection with a downstream water . . . regardless of frequency, duration, magnitude, predictability, and consequences, significantly affects the integrity of downstream waters."[115] Indeed, the SAB Panel, which was also tasked with reviewing the proposed rule, raised this concern, noting, "Panel members generally found that the term 'significant nexus' was poorly defined . . . and that the use of the term 'significant' was vague."[116] Dr. Michael Josselyn raised this issue, explaining that "the Proposed Rule focuses on finding evidence of a connection; not evidence that such a connection actually plays a role in affecting the biological integrity of the navigable water in question."[117] For example, the proposed rule identifies factors that could be evidence of chemical, physical, or biological activity (e.g., hydrologic connectivity, flood water or sediment retention). See 79 Fed. Reg. at 22,214. But it does not explain how "significance" is determined in applying these factors – i.e., is there a significant nexus when there are three or more factors present? When there is a certain quantity of storage? The agencies provide no guidance on when the presence of these factors rise to the level of significance and implicitly suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 35)

<u>Agency Response:</u> See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 7 and 8. Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 - Science.

5.297 The presence of a nexus does not provide a basis for assessing to what extent such connections may or may not significantly affect downstream navigable waters, and therefore does little to inform the analysis required by Justice Kennedy's concurrence. Again, asserting jurisdiction based on the presence of connections is the equivalent of the "any hydrological connection" standard that was rejected by five Justices in Rapanos. Moreover, without providing metrics to define whether connections are significant, the agencies provide no scientific basis to conclude which connections are significant and which are non-significant, and thereby provide no scientific basis for the proposed rule's conclusions that all tributaries and all adjacent waters have a significant nexus.[118] Nor does the proposed rule provide any real basis for regulators to assess the significant nexus of "other waters" on a case-by-case basis. (p. 35)

[115] GEI Consultants, "Scientific Comments on U.S. EPA's Definition of 'Waters of the United States' Under the Clean Water Act; Proposed Rule," at 2 (Sept. 26, 2014) ("GEI Report") (attached hereto as Exhibit 6).
[116] Exhibit 7, Rodewald Memo at 6; SAB Panel Member Comments on Proposed Rule at 6 (Comments of Dr. Genevieve Ali) ("The draft rule does include a definition for 'significant nexus'; however I find it rather vague and subject to interpretation.").
[117] SAB Panel Member Comments on Proposed Rule, Exhibit 7 at 47 (comments of Dr. Michael Josselyn).
[118] See GEI Report, Exhibit 6 at 2.

> The lack of metrics to measure the importance of connections was a common concern raised by the SAB Panel.[119] The SAB Panel's Review of the Connectivity Report specifically requested that EPA revise the report to "discuss approaches to measuring or otherwise quantifying connectivity."[120] As Dr. Allison Aldous noted, "Specific scientifically grounded, objective methods must be put in place to draw the line between those waters having or not having a significant nexus to other jurisdictional waters . . . [E]valuating the technical accuracy of the definition is difficult in the absence of clear criteria."[121] Dr. Siobhan Fennessy also raised this concern, stating that the proposed rule "require[s] the development of methods to determine when a nexus is significant, including metrics based on hydrologic, chemical, and biological connectivity."[122] Other panel members had similar concerns.[123] (p. 35-36)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 3, 4, 7 and 8. Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium Topic 9 - Science.**

5.298 EPA provides measurable metrics of significance in other regulatory programs.[124] For example, as noted by Dr. Mark Murphy, "Water quality criteria are an explicit result of measuring what constitutes a scientifically significant nexus between a surface water pathway exposure and a resident aquatic species."[125] The SAB Panel Review of the Connectivity Report also suggested that EPA "draw on examples related to water quantity and quality modeling."[126] Yet, the agencies make no attempt to quantify significance here, and, as Dr. Murphy notes, "no reference to either water quality standards or the science for setting them appears in the proposed rule." Id. As noted in the attached GEI Report, "well established scientific practice demands that 'significance' of effect or consequence be defined in a clear and rigorous way that is both transparent and repeatable."[127] It is puzzling how the agencies can claim that this proposed rule is grounded in science while also claiming that significant nexus, the key determinative

[119] SAB Panel Review of Connectivity Report, Exhibit 5 at 11 ("It would be useful to provide examples of the various dimensions of connectivity that are most appropriately quantified, ways to construct connectivity metrics (e.g., retrospective or prospective analyses, model simulations, spatial analyses), and the scientific methodological, and technical advances most needed to understand and estimate connectivity.").
[120] Id. at 14.
[121] Id. at 2 (comments of Dr. Allison Aldous).
[122] Id. at 31 (comments of Dr. Siobhan Fennessy) ("A key question is where, along the gradient of connectivity, do the effects of other waters becomes significant.")
[123] See, e.g., id. at 47 (comments of Dr. Michael Josselyn) ("A section may need to be added to the Final Science Report that addresses what type of connections should be evaluated and the methods by which these connections can be measured . . . . I concur with an approach that is more quantitative."); id. at 90-91 (comments of Dr. Mark Murphy) ("if [the proposed rule] is to have any defensible basis in science," "[t]he significance of the connection must be defined by the likelihood of a measureable effect . . . ."); id. at 101 (comments of Dr. Duncan Patten) ("[T]here is little or no explanation (science or legal) of what 'significant effect' means.").
[124] See GEI Report, Exhibit 6 at 2 (noting that the Agencies have clearly defined "significance" of effect or consequence in both the Ecological Risk Assessment (ERA) process and with development of water quality criteria).
[125] SAB Panel Member Comments on Proposed Rule, Exhibit 7 at 93 (comments of Dr. Mark Murphy).
[126] SAB Panel Review of Connectivity Report, Exhibit 5 at 15.
[127] GEI Report, Exhibit 6 at 2.

factor for jurisdiction, is a matter of law and policy and not scientific metrics or criteria. Indeed, as recently as September 26, 2014, a member of the chartered SAB questioned why neither the Connectivity Report nor the SAB review assessed the level of importance of connectivity. He stated, "EPA scientists should consider where along the connectivity gradient there is an impact of sufficient magnitude to impact downstream waters," and noted that, although there is a continuum, scientists are depended upon to make determinations of significant or critical effects.[128] (p. 36)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium 9 - Science.

5.299 The SAB Panel has advised that the significant nexus analysis should be based on scientific criteria and has called for the agencies to provide metrics to quantify significance of connections.[129] For all of these reasons, we urge the agencies to do the same, providing notice and an opportunity for the public to comment on any such metrics. (p. 37). See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendium 9 - Science. The agencies are finalizing the rule. See Response to Comments Compendium 13 Process Concerns and Administrative Procedures.

The Proposed Rule Asserts Categorical Jurisdiction Without Legal or Scientific Support and Arbitrarily Shifts the Burden of Proof from Agencies to the Public.

> As discussed above, the proposed rule and the Connectivity Report both recognize that connectivity occurs on a gradient, but the proposed rule gives no consideration for where on that continuum the threshold for significant nexus lies.[130] Instead, without scientific support or legal justification, the proposed rule finds that *all* "tributaries" and *all* "adjacent waters" have a significant nexus to jurisdictional waters and, therefore, are *per se* jurisdictional.[131]
>
> The agencies lack scientific support for their categorical assertions of jurisdiction over all waters that meet their definition of "tributary" or "adjacent water." The Connectivity Report and the proposed rule's categories of jurisdiction are framed in terms of a binary approach (connected/jurisdictional versus not connected/non-jurisdictional), without consideration of "variation in the frequency, duration, magnitude, predictability, and consequences of connections."[132] The regulation of these categories of jurisdiction *by rule* violates the gradient principle emphasized by

[128] U.S. EPA Science Advisory Board Quality Review Teleconference (Sept. 26, 2014) (Statements of Dr. Michael Dourson).
[129] See, e.g., SAB Panel Member Comments on Proposed Rule, Exhibit 7 at 6-7 (comments of Dr. Genevieve Ali) (noting that there should be a "scientific definition of 'significant nexus'" to provide "a more transparent determination process").
[130] See GEI Report, Exhibit 6 at 3.
[131] 79 Fed. Reg. at 22,201, 22,207.
[132] See SAB Panel Review of Connectivity Report, Exhibit 5 at 2.

the SAB Panel. As noted by Dr. Mark Murphy, the inclusion by rule of all tributaries and adjacent waters "is not scientifically justified by the published literature, the Connectivity report or the SAB review."[133] Dr. Michael Josselyn agreed, pointing out that "if the science demonstrates a gradient in ecological function," there would be situations in which significant nexus cannot be assumed.[134] Similarly, the GEI Report explains, "all tributaries and adjacent waters exist on a gradient of connectivity, and the science has not identified the point on that gradient (i.e. the strength of connectivity) where the significant nexus falls."[135] Thus, the GEI Report concludes, "the existing scientific literature and analyses presented by EPA do not support these categorical jurisdictional determinations."[136] Nor is this approach supported by *Rapanos* or other existing judicial precedent. (p. 37)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comment Compendia Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, Topic 9 - Science.

Water Advocacy Coalition (Doc. #17921.14)

5.300 The Proposed Rule and Supporting Scientific Analysis Fail to Address the Significance of Connectivity.

Each of the technical issues discussed below is strongly influenced by the Agencies' overarching and overly simplistic view that connectivity between tributaries, adjacent waters, or "other waters" and downstream waters is a binary property rather than a gradient. This point is made very strongly in the Science Advisory Board (SAB) Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, EPA-SAB-15-001(USEPA 2014a) (Oct. 17, 2014). In fact, this is the first major comment and recommendation in the SAB's recommendations: "The Report often refers to connectivity as though it is a binary property (connected versus not connected) rather than as a gradient. In order to make the Report more technically accurate, the SAB recommends that the interpretation of connectivity be revised to reflect a gradient approach that recognizes variation in the frequency, duration, magnitude, predictability, and consequences of those connections." (emphasis added). This is a crucial point, because most, if not all, of the conclusions reached in the Proposed Rule result from the Agencies' underlying assumption that any observable connection with a downstream water (whether physical, chemical, or biological), regardless of frequency, duration, magnitude, predictability, and consequences, significantly affects the integrity of downstream waters. As a result, the Proposed Rule concludes that most types of tributaries,

[133] SAB Panel Member Comments on Proposed Rule, Exhibit 7 at 95 (comments of Dr. Mark Murphy).
[134] Id. at 44.
[135] GEI Report, Exhibit 6 at 3.
[136] 91 Id.

wetlands, and other upstream waters should be considered a jurisdictional "water of the United States."

However, the Agencies have failed to consider that for any connection, there must be a scientifically defensible method to assess the strength of connection with respect to the integrity of the downstream water, and it is on that assessment of strength that a determination of jurisdiction should be based. While the Proposed Rule points to a distinction between the scientific determination of connectivity in terms of "strength" versus its corresponding regulatory determination of "significant nexus," the lack of a clear scientific definition of connectivity "strength" renders the finding of significant nexus and ultimate regulatory determination of jurisdiction to be without scientific basis and, thus, effectively meaningless. Unlike with other established regulatory frameworks, where the Agencies have clearly defined "significance" of effect or consequence (e.g., ambient water quality criteria), the Agencies' discussion of the strength or significance of connectivity in both the Connectivity Report and the Proposed Rule provides no framework for evaluating strength of connection or significance of effects. Specifically, well established scientific practice demands that "significance" of effect or consequence be defined in a clear and rigorous way that is both transparent and repeatable. Applied scientific frameworks require that an objective level of significance be considered in the context of a pre-determined level of ecological concern that ultimately becomes the basis of regulatory decisions.

An excellent example of an established and objective framework for evaluating significance of effect in a regulatory context is that used for determining numeric water quality criteria (Stephen et al., 1985). The water quality criteria framework makes use of a scientifically-based process of toxicological evaluations with at least eight different aquatic species representing multiple types of organisms (i.e., plants, vertebrate and invertebrate animals, etc.) to determine concentrations of substances that can be considered safe for short-term and long-term exposures. Recognizing that there is a gradient of sensitivity to toxic substances, the level of significance along the gradient of effects used in establishing water quality criteria to protect aquatic life was set to the protection of all but 5% of the most sensitive species (i.e., 95% would be protected). This level was selected based on the finding that "[b]ecause aquatic ecosystems can tolerate some stress and occasional adverse effects, protection of all species at all times and places is not deemed necessary" (Stephan et. al 1985). Thus, this framework provides a consistent, scientifically-based method to establish an objective level of protection for any potentially toxic substance that enters a body of water.

An analogous framework could be established by the Agencies for determining whether a tributary or other upstream water would have sufficient strength of connectivity with downstream waters to affect the physical, chemical, and biological integrity for the downstream water. The framework could establish a definition for physical, chemical, and biological integrity, based on the designated uses of the downstream waters, and the criteria for protection of these uses. Once a framework for making such determinations is established, it would be possible to

make consistent, scientifically-based jurisdictional determinations. Had such a framework been used in support of the Proposed Rule, it would have been possible to consistently define the strength of connections between water bodies in a manner that was directly and scientifically linked to the physical, chemical, and biological integrity of downstream waters. Because EPA did not use such a framework, the end result is the presentation of numerous studies that claim "strength" or "significance" of effects based on whatever data were collected for each particular study. This ultimately creates a lengthy laundry list of mixed observations that cannot be used to provide a consistent basis for making jurisdictional determinations by rule.

Furthermore, despite the clear need for such a framework, the chartered SAB review of the Proposed Rule (USEPA 2014b) concludes that, "Although water bodies differ in degree of connectivity that affects the extent of influence they exert on downstream waters (i.e., they exist on a 'connectivity gradient'), the available science supports the conclusion that the types of water bodies identified as waters of the United States in the proposed rule exert strong influence on the physical, chemical, and biological integrity of downstream waters." In essence, the SAB has concluded that despite the existence of a gradient of connectivity, all tributaries by default fall at a point of significance along that gradient. This is the equivalent of concluding that any connection is meaningful and important, regardless of strength, magnitude, duration, or frequency, which is clearly not supported by the science (see also SAB Panel comments in USEPA 2014a). The failure of the Agencies to establish a scientifically defensible method to assess the strength of connection with respect to the integrity of the downstream water pervades everything in the Proposed Rule. None of the assertions of jurisdiction in the Proposed Rule are based on an assessment of strength of connection or an evaluation of the significance of features to downstream waters. (p. 171-173)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 5, 7 and 8. Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendia Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 - Science.**

5.301 The Science Does Not Support the Proposed Rule's Categorical Assertions of Jurisdiction.

The Agencies have recognized the continuum of connectedness in several instances in the preamble to the Proposed Rule, yet in developing the Proposed Rule, there was no consideration for where on that continuum the threshold for strength of connectivity or significant nexus lies.

Rather, the Proposed Rule establishes categories of features that are jurisdictional by rule without any consideration of the strength or significance of their connections for downstream waters. For waters addressed in sections (a)(5) (tributaries) and (a)(6) (adjacent waters) of the Proposed Rule, the Agencies follow the paradigm that any connection is strong, represents a significant nexus to downstream waters, and thus

makes the upstream water jurisdictional by rule. In contrast, for "other waters," the Agencies recognize that there is a gradient of connectivity, and acknowledge that for at least some "other waters" a case-by-case evaluation of the significant nexus would be necessary. However, as discussed in our comments on the Connectivity Report, all tributaries and adjacent waters exist on a gradient of connectivity, and the science has not identified the point on that gradient (i.e., the strength of connectivity) where the significant nexus falls. Hence, the existing scientific literature and analyses presented by EPA do not support these categorical jurisdictional determinations. (p. 173-174)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and Summary response to comments 5, 7 and 8. Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Section 5.4 Agency Summary Response and Response to Comments Compendia Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 - Science.

Minnkota Power Cooperative, Inc. (Doc. #19607)

5.302 The lack of scope and scale aspects pertaining to jurisdictional determination opens this Proposed Rule up to increased ambiguity. Without reference points to utilize (such as a watershed with its related boundaries for example), a determination of connection (significant nexus which includes hydrologic, chemical, physical, and biological connectivity) could range widely and on a macro scale. Likewise, a reviewer's interpretation may result in a micro scale situation, resulting in a small entity that currently would not be regulated being regulated under the rule.

The continued degree of clarity becomes worse in large part due to the proposed definitions for tributaries, other waters, neighboring, and adjacent. The ambiguous integration of "ground water" also clouds the determination of a significant nexus. The lack of metrics in this Proposed Rule also contributes to the fuzziness and interpretive latitude in trying to apply these new definitions, serving to confuse expectations by the regulated community. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, Section 5.1 Agency Summary Response, Introduction, Section 5.2 Agency Summary Response, Introduction Section 5.3 Agency Summary Response Introduction and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, IX and Response to Comment Compendia Topic 3 – Adjacent Waters, Topic 4 – Other Waters and Topic 8 Tributaries.

Kolter Land Partners and Manatee-Sarasota Building Industry Association (Doc. #7938.1)

5.303 Despite a heavy reliance on the purported "significant nexus" between traditionally navigable waters and most other wet areas (e.g., all "tributaries," all "adjacent waters," and many "other waters"), the proposal fails to distinguish between significant and insignificant connections. Likewise, the rule includes references to vaguely defined floodplains and riparian areas, giving the Agencies full and unfettered discretion to impose unnecessary federal oversight over many lands and projects. (p. 2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.**

Home Builders Association of Michigan (Doc. #7994)

5.304 The Agencies have erroneously claimed the proposed rule does not regulate puddles. The actual text of the rule is so sweeping virtually any wet area could be considered a "water of the United States." Despite a heavy reliance on the purported "significant nexus" between traditionally navigable waters and most other wet areas (e.g., all "tributaries," all "adjacent waters," and many "other waters"), the proposed rule fads to distinguish between significant and insignificant connections. Likewise, the proposed rule includes references to vaguely defined floodplains and riparian areas, giving the Agencies full and unfettered discretion to impose unnecessary federal oversight over many lands and projects. (p. 2-3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 7 – Features and Waters Not Jurisdictional.**

North Houston Association et al. (Doc. #8537)

5.305 The rulemaking and technical support make great pains to establish what is a universally understood basic fact that water falls from the sky onto the land, gathers here and there and inevitably runs downhill to the ocean. This basic hydrologic cycle is taught in grade school. So we all know that at some level, there is connectivity throughout the hydrologic cycle (thus a cycle) within any number of levels of consideration; whether they are ecoregions, hydrologic landscape regions, or watersheds. And within the levels of consideration, a continuum of hydrologic intensity exists from the obvious "traditional navigable waters" to the point of contact of each raindrop on the landscape. There is in essence a continuum of water input that collects and flows and collects and flows again to the point of what all agree is a TNW.

> If the test is that a wetland or a tributary must have a "significant nexus" to "traditionally navigable water," that nexus must surely be in some way substantially greater than the nexus of all the land in the general area into the navigable water. The challenge is to know where on the continuum an effective application of regulations will provide real and meaningful protections of the waters. Simply stated, the new rule as proposed will become a federally driven system of land use regulation; a land-use regulation that imparts a federally driven, centralized planning style of land-use and approval, managed by a handful of government employees. What the rule appears to be creating or desirous of is watershed management in the name of protecting the nation's waters. To manage a watershed, you pretty much have to manage all the land-use that occurs within that geographic boundary. While we all want water quality protected, going to such an extreme

application of federal involvement in daily lives and business of land-use on a local level, is not a workable or desirable solution. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 7 – Features and Waters Not Jurisdictional. See Also Section 5.4 Agency Summary Response.

DreamTech Homes, Ltd. (Doc. #11012)

5.306 The proposed rule contains the following major flaws:…

Lacks Sufficient Detail or Definition to Allow for Consistent or Repeatable Results. Despite a heavy reliance on the purported "significant nexus" between traditionally navigable waters and most other wet areas (e.g., all "tributaries," all "adjacent waters," and many "other waters"), the proposal fails to distinguish between significant and insignificant connections. Likewise, the rule includes references to vaguely defined floodplains and riparian areas, giving the Agencies full and unfettered discretion to impose unnecessary federal oversight over many lands and projects. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 Other Waters, Topic 7 – Features and Waters Not Jurisdictional and Topic 8 - Tributaries. See Also Section 5.4 Agency Summary Response.

North Houston Association, West Houston Association, Woodlands Development Company (Doc. #12259)

5.307 The rulemaking and technical support make great pains to establish what is a universally understood basic fact that water falls from the sky onto the land, gathers here and there and inevitably runs downhill to the ocean. This basic hydrologic cycle is taught in grade school. So we all know that at some level, there is connectivity throughout the hydrologic cycle (thus a cycle) within any number of levels of consideration; whether they are ecoregions, hydrologic landscape regions, or watersheds. And within the levels of consideration, a continuum of hydrologic intensity exists from the obvious "traditional navigable waters" to the point of contact of each raindrop on the landscape. There is in essence a continuum of water input that collects and flows and collects and flows again to the point of what all agree is a TNW.

If the test is that a wetland or a tributary must have a "significant nexus" to "traditionally navigable water," that nexus must surely be in some way substantially greater than the nexus of all the land in the general area into the navigable water. The challenge is to know where on the continuum an effective application of regulations will provide real and meaningful protections of the waters. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and

IX. See also Response to Comments Compendium Topic 7 – Features and Waters Not Jurisdictional. See Also Section 5.4 Agency Summary Response.

O'Neil LLP (Doc. #14651)

5.308 The Proposed "Significant Nexus" Test Must be Revised, Clarified, and Re-Circulated for Public Comment Before it is Adopted. The Agencies propose to adopt a "significant nexus" test which would extend their jurisdiction under the CWA to waters that are not, by themselves, within the scope of waters covered by the CWA, but rather "either alone or in combination with other similarly situated waters in the region ... significantly affect[] the chemical, physical, or biological integrity of a [core] water .... Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a [core] water." Yet again, the Agencies are proposing a significant expansion of the waters which Congress stated it was covering under the CWA. Before the Agencies propose to adopt anything like this proposed test, the Agencies must first remove the ambiguity from the terms *"similarly situated"* and *"chemical, physical, [and] biological integrity."* (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 7 – Features and Waters Not Jurisdictional. See Also Section 5.4 Agency Summary Response.

5.309 The Agencies need to clarify in the Rule what constitutes "physical connectivity." For example, frequency of storm event? Using a frequency of something larger than a 5- or 10-year event would be inappropriate. The Agencies need to clarify what physical features or characteristics are indicators of connectivity. The Agencies need to provide the public with their proposals for such clarification, and then circulate those proposal[s] to the public for comment in connection with notice and comment rule-making. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. See Also Section 5.4 Agency Summary Response.

5.310 The Agencies also need to clarify what constitutes "biological connectivity." The Proposed Rule lists movement of "… amphibians, aquatic seeds, macroinvertebrates, reptiles, and mammals". What constitutes "aquatic seeds"? Do only Obligate wetland plants count or are the seeds of Facultative plants sufficient? How many seeds does it take to establish a connection? Do seeds dispersed only by water count, or do seeds dispersed by wind also count? Similar questions can be asked for each group of organisms. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. See Also Section 5.4 Agency Summary Response and Response to Comment Compendium Topic 9 -

Science. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

5.311 The basis of regulating an area – under the current limits imposed by Congress for the Agencies to regulate activities associated with "waters" under the CWA – based on biological connectivity is ill-conceived as drafted, inasmuch as in almost all instances, a biologist or regulator could point to some species of plant or animal (including insects and mammals) which could conduct some sort of relevant biological activity for some period of time in the traditionally navigable water but have a "home range" or movement pattern which includes other areas that occasionally hold or convey water, and thus result in these other waters being subject to regulation under the Proposed Rule. This is an inappropriately expansive and inappropriately vague way to define waters with a "significant nexus" to a traditionally navigable water such that the non-navigable water should also be regulated. It will lead to arbitrary and capricious decisions by regulators. Once again, this vague and nebulous standard is extremely ill-advised and extraordinarily unfair to the regulated public, given, *inter alia*, that the CWA attaches criminal penalties to essentially strict liability offenses. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. See Also Section 5.4 Agency Summary Response and Response to Comment Compendium Topic 9 - Science. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

5.312 The Proposed Rule fails to recognize the difficulties in establishing "connectivity" by such means. This issue needs to be substantially reconsidered, and the Agencies need to recirculate a rule that provides far more clarity as to how they intend to interpret or define the concept of "biological connectivity" for determining what waters fall within the CWA jurisdiction – and then seek input from the public on this proposal. (p. 4-5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and IX. See Also Section 5.4 Agency Summary Response and Response to Comment Compendium Topic 9 - Science. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or

species such as non-resident migratory birds do not demonstrate a life cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

ERO Resources Corporation (Doc. #14914)

5.313 The proposed rule states that a hydrologic connection is not necessary to establish a significant nexus and in some cases the lack of a hydrologic connection would be a sign of the water's function in relationship to the TNW. The proposed rule then provides examples of these functional relationships that include retention of flood waters or pollutants that would otherwise flow downstream to the TNW including depressional wetlands lacking a surface outlet that function together to significantly reduce or attenuate flooding.

> Currently, in most instances, the above examples would be considered isolated waters and per the SWANCC opinion and the approved JD form, would be determined to be nonjurisdictional. Substantial guidance for case-specific assessments will need to be developed if the lack of a hydrologic connection will be used to demonstrate a nexus of an "other water" to a TNW. This criterion eliminates future determinations of isolation and basically says that the Rapanos opinions replace the SWANNC opinion and the policies, guidance and practices that flowed from the SWANCC opinion. Demonstrating a "significant" biological, physical or chemical connection of an "other water" that lacks a hydrologic connection to a TNW will in many circumstances be challenging and will require case-specific analysis. (p. 28-29)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, 8. See also Section 5.4 Agency Summary Response. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to

downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, as well as other case law, see Technical Support Document Section I. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

ERO Resources Corporation (Doc. #14914)

5.314 The proposed rule states that a hydrologic connection is not necessary to establish a significant nexus and in some cases the lack of a hydrologic connection would be a sign of the water's function in relationship to the TNW. The proposed rule then provides examples of these functional relationships that include retention of flood waters or pollutants that would otherwise flow downstream to the TNW including depressional wetlands lacking a surface outlet that function together to significantly reduce or attenuate flooding.

> Currently, in most instances, the above examples would be considered isolated waters and per the SWANCC opinion and the approved JD form, would be determined to be nonjurisdictional. Substantial guidance for case-specific assessments will need to be developed if the lack of a hydrologic connection will be used to demonstrate a nexus of an "other water" to a TNW. This criterion eliminates future determinations of isolation and basically says that the Rapanos opinions replace the SWANNC opinion and the policies, guidance and practices that flowed from the SWANCC opinion. Demonstrating a "significant" biological, physical or chemical connection of an "other water" that lacks a hydrologic connection to a TNW will in many circumstances be challenging and will require case-specific analysis. (p. 28-29)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, 8. See also Section 5.4 Agency Summary Response. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV. Evaluating the presence or absence of a hydrological connection is part of the analysis that would be conducted during a case-specific significant nexus determination. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, as well as other case law, see Technical Support Document Section I. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

Teichert Materials (Doc. #18866)

5.315 The proposed rule has the potential to make marginally aquatic areas jurisdictional that only have a remote and insubstantial impact on traditional navigable waters. This is especially true in the case of tributaries and "adjacent" waters which are proposed to become jurisdictional "by rule." For these resources, this change would have the effect of going beyond "significant nexus" and shift jurisdiction to "any nexus." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 4 and 5, 7 and 8, Technical Support Document at Sections II, VII, and VIII and IX and Preamble to Final Rule at Sections III and IV.

North Carolina Aggregates Association (Doc. #6938.1)

5.316 The proposed rule would sweep in many marginally aquatic areas that only have a remote and insubstantial impact on traditional navigable waters – the rule removes "significant nexus". (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 4 and 5, 7 and 8, Technical Support Document at Sections II, VII, and VIII and IX and Preamble to Final Rule at Sections III and IV.

5.317 Lack of Hydrologic Connection for "Other Waters" is Insufficient to Establish Significant Nexus.

Under the proposed rule, the lack of a hydrologic connection can be the water's function in relation to traditional navigable water (79 Fed. Reg. at 22,213-22,214). Under this approach the lack of a hydrologic connection between a water (wetland) and a traditional navigable water would be the function that affects the integrity of the downstream water by acting as sink for pollutants (79 Fed. Reg. at 22,214). This language and potential method for determining significant nexus comes from Justice Kennedy's concurring opinion in *Rapanos*. Justice Kennedy's *Rapanos* opinion states "it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme" (79 Fed. Reg. at 22,213-22,214). However, there is not sufficient scientific evidence to support how the lack of a hydrologic connection is used as a means of establishing significant nexus. In fact, the EPA Connectivity Report refutes this claim. Regarding unidirectional wetlands, the EPA Connectivity Report concludes:

> "The literature we examined on unidirectional wetlands indicates that these systems have important hydrologic, water quality, and habitat functions that affect downstream waters and rivers if a connection exists between the wetland and downstream water. The problem then, is to identify which unidirectional wetlands have such a connection. Answering this is difficult, because most wetland studies do not investigate their effects on downstream waters or, if they do, they rarely address connectivity explicitly" (EPA Connectivity Report page 5-37, lines 25-30) [emphasis added].

The EPA concludes that the scientific literature is insufficient to determine the effects of hydrologically isolated wetlands on downstream waters. Therefore, it is inappropriate to propose that the lack of a hydrologic connection can be the function that meets the significant nexus test for jurisdiction. Based on the EPA's conclusions in the draft EPA Connectivity Report, a hydrologic connection must be a prerequisite during site-specific determinations for establishing jurisdiction. This distinction should be made in the proposed rule.

The lack of a hydrologic connection was the underlying basis for the Court's ruling in SWANCC. In fact, the isolated ponds present in that case provide equivalent, or improved, floodwater retention and pollutant sink functions when compared to the wetlands addressed in the draft EPA Connectivity Report. Under this rationale,

every retention pond, borrow pit, and excavated pond could be jurisdictional due to these beneficial functions, especially those excavated in uplands. (p. 26-27)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, 8. See also Section 5.4 Agency Summary Response. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV. Evaluating the presence or absence of a hydrological connection is part of the analysis that would be conducted during a case-specific significant nexus determination. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, as well as other case law, see Technical Support Document Section I. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.**

5.318 The agencies should advance scientifically defensible and quantifiable methods for determining "a measure of significance" that can be used to determine when a given

water has the ability to significantly affect the chemical, biological, and physical integrity of traditional navigable waters.

This is a necessary step to apply Justice Kennedy's standard accurately.

The proposed rule must provide a quantifiable definition of "relatively permanent waters" that determines when a tributary connection meets the standard for "significance".

Small, intermittent, and ephemeral conveyances should require case-by-case analysis to determine significant nexus and should not be jurisdictional by rule.

Quantifiable metrics for determining the presence of subsurface connections and their influence on TNW are necessary to establish significant nexus. (p. 33)

Agency Response: See Section 5.0, Agency Summary Responses to comments Introduction, and summary response to comments 4, 7, 5, 8. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II, VII and VIII. See also Response to Comments Compendium Topic 9 - Science.

5.319 "Lack of hydrologic connection" as evidence of a significant nexus should be removed from rule as it is inappropriate for determining significant nexus. (p. 33)

Agency Response: In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic

connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Sections III and IV, Technical Support Document Sections I, II, VII, VIII and IX, Response to Comments Compendium Topics 4 – Other Waters and 9 - Science.

RiverStone Group, Inc. (Doc. #10742)

5.320 The proposed rule would sweep in many marginally aquatic areas that only have a remote and insubstantial impact on traditional navigable waters. In effect, the rule removes "significant nexus" and replaces it with "any nexus." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 3, 4 and 5, 7 and 8, Section 5.4 Agency Summary Response, Technical Support Document at Sections II, VII, and VIII and IX and Preamble to Final Rule at Sections III and IV. See Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Reclamation and Abandoned Mine Lands Divisions, Public Service Commission, North Dakota (Doc. #12857)

5.321 As proposed by the rulemaking, it appears almost all watercourses and water bodies, with a few exceptions, will be considered "waters of the United States". The discussion of 'significant nexus' throughout the proposed rulemaking seems to imply that if a watercourse or water body has a possible connection or relationship to a navigable water, it will likely be considered a significant nexus. The proposed rule does not quantify what will be considered 'significant' and thus creates further ambiguity. The overreach and uncertainty by the agencies proposal will greatly increase the number of Section 404 permits that will be needed for activities affecting water flows and those that occur in or near natural or many man-made water bodies. This will delay or prevent many projects from moving forward if the proposed rule is adopted. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 7, and 8 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II.

Pennsylvania Coal Alliance (Doc. #13074)

5.322 Surface and underground mine sites in Pennsylvania can encompass hundreds of acres. If haul roads are lengthy, the acreage can increase significantly. Before mining can be conducted, the affected area and a reasonable buffer must be examined for possible impacts to streams and wetlands under state and federal law. The Proposed Rule would significantly increase the scope and extent of stream and wetland evaluations to ensure that all possible jurisdictional connections were identified. Among other things, the evaluations would need to assess a much larger area to determine whether surface or subsurface hydrologic connections exist, whether a bed/bank exists upstream or

downstream from a tributary or whether a significant nexus exists with an "other water" when considered in combination with similarly situated waters within the same region. In addition, springs and seeps that are precipitation –controlled and dry during most of the year would now be considered to be jurisdictional waters. Additional efforts would be required to identify these "waters" during dry conditions. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 7, and 8 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II and Section 5.1 Agency Summary Response, Section 5.2 Agency Summary Response and Section 5.3 Agency Summary Response.

American Exploration & Mining Association (Doc. #13616)

5.323 The proposed rulemaking creates confusion rather than clarity. For example, "significant nexus" is the lynchpin concept of the agencies' proposed rule, but the rule provides no metrics or criteria for how to measure "significance" of effects. Moreover, the proposed rule identifies factors that could be evidence of a significant nexus but provides no guidance on when the presence of these factors rise to the level of significance and instead seems to suggest that merely the presence of any of these factors is sufficient to satisfy the significant nexus standard. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX as well as Compendium Topic 9 – Science.

5.324 Additional uncertainty is created by:

- according "interstate waters" the same status as traditional navigable waters while failing to provide a definition of "interstate waters,"
- allowing certain features to be considered jurisdictional based on their relationship to "impoundments" while leaving "impoundment" undefined,
- using the confusing concept of ordinary high water mark (OHWM) as the key identifier for tributaries,
- extending the concept of "adjacency" to non-wetlands without providing a limit to "waters" that can be considered adjacent,
- relying on vague and undefined concepts such as "floodplain," "riparian area," and "shallow subsurface hydrologic connection" to identify "adjacent waters,"
- creating exemptions for certain ditches, but making the exemptions so narrow that few ditches can meet the criteria, and
- allowing for exempted features, such as groundwater, gullies, and rills to serve as connections that can render a feature a jurisdictional "adjacent water" or "other water."

These are just a few examples of the ambiguity and uncertainty created by the proposed rule. Unfortunately each of these examples fails to provide the necessary clarity on which to base a regulatory program and will likely cause regulatory confusion, inconsistency, and litigation. (p. 3-4)

Agency Response: See Preamble to the Final Rule Sections III and IV, Technical Support Document Sections I, II, III, IV, VI, VII, VIII and IX. See Also Compendia Topic 3 – Adjacent Waters, Topic 4 Other Waters, Topic 6 Ditches, Topic 7 Features and Waters Not Jurisdictional, and Topic 8 Tributaries.

National Stone, Sand and Gravel Association (Doc. #14412)

5.325 … The agencies have failed to articulate the distinction between "any nexus" and "significant nexus", which is essential in fairly interpreting and applying Justice Kennedy's opinion.

> Indeed, it is reasonable to look to the dictionary for a "plain language" meaning of the term in analyzing Kennedy's opinion. "Significant," of course, means "important or influential" [137] "Significant" also means "suggesting some specific cause, not due merely to chance," as in "a significant increase in population." Id. [79 Fed. Reg. at 22262] "Nexus" is a "connection or link, often a causal one," as in "cigarette packages must inform consumers of the nexus between smoking and lung cancer."[138] Combining the two, a significant nexus is thus an important, causal connection. By its very words, the term limits a cause-and-effect relationship to something that is not ordinary and certainly not just insignificant. This "plain language" interpretation is reflected in Justice Kennedy's opinion, where he refers to "ecologic interconnections" that are "significant enough" to perform important functions for an aquatic system incorporating navigable waters. (emphasis added) Rapanos, 126 S. Ct. 2248.[139] (p. 17-18)

[137] Webster's New Lexicon Dictionary (1990).

[138] Black's Law Dictionary (8th Ed. 2004.) Another commentator has noted the Supreme Court's use of the term "nexus" in the context of a test "to determine whether there is an extremely close, precise, and definite fit, as when it is evaluating whether the actions of a private individual should be considered to be the responsibility of another seemingly unrelated party." Ass'n of State Floodplain Managers, What the Rapanos-Carabell Wetlands Decisions Mean to Floodplain and Stormwater Managers (citing Blum v. Yaretskv, 457 U.S. 991, 1004 (1982), available at http://www.floods.org/PDF/Rapanos_Carabell_10-9-06.pdf. That same publication noted that, in "takings" cases, "the Court uses the term 'nexus' to determine whether a claimed relationship between an articulated government interest and the exaction imposed on a development permit seeker have any reality whatsoever." Id. (citing Nollan v. Cal. Coastal Common, 483 U.S. 825 (1987), and Dolan v. Tigard, 512 U.S. 374 (1994)). In other contexts, the lower courts have used the term "significant nexus" to similarly indicate that certain relationships must be more than mere careless connections. See, e.g., NYSA-ILA Pension Trust Fund By and Through Bowers v. Garuda Indonesia, 7 F.3d 35, 38 (2d Cir. 1993)(In construing the commercial activity exception, courts have required that a significant nexus exist between the commercial activity in this country upon which the exception is based and a plaintiffs cause of action"); Thames v. DOA, 195 Fed. Appx. 850 (11th Cir. 2006) ("to be considered a nominal officer or director, a person must show that he lacks any 'actual, significant nexus with the violating company').

[139] NSSGA submits that the time-tested principles of proximate causation and foreseeability, which have been adopted for other environmental statues such as the ESA and NEPA, can provide a useful legal paradigm to give meaning to Justice Kennedy's limiting principles. See Liebesman, Petersen and Galano, "Rapanos v. United States: Searching for a Significant Nexus Using Proximate Causation and foreseeability Principles," 40 ELR 11242 (Dec. 2010).

Agency Response: **The agencies have reasonably relied on the goals, objectives, and policies of the statute, the Supreme Court case law, the relevant and available science, and the agencies' technical expertise and experience to interpret the scope of the "waters of the United States" for the CWA. The definition reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. Justice Kennedy was clear that to be covered, waters must significantly affect the chemical, physical, or biological integrity of a downstream navigable water and that the requisite nexus must be more than "speculative or insubstantial," *Rapanos*, at 780. The agencies define significant nexus in precisely those terms. Under the rule a "significant nexus" is established by a showing of a significant chemical, physical, or biological effect. Since the agencies have used the precise language Justice Kennedy used in his opinion, the agencies disagree that this definition is inconsistent with Justice Kennedy's opinion. Further, the agencies disagree that a dictionary definition of the word "significant" is more representative of Justice Kennedy's opinion than Justice Kennedy's opinion itself. In *Rapanos*, Justice Kennedy stated that in both the consolidated cases before the Court the record contained evidence suggesting the possible existence of a significant nexus according to the principles he identified. *See id*. at 783. Justice Kennedy concluded that "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." Id. Justice Kennedy remanded the cases because neither the agency nor the reviewing courts properly applied the controlling legal standard – whether the wetlands at issue had a significant nexus. *See id*. Justice Kennedy was clear however, that "[m]uch the same evidence should permit the establishment of a significant nexus with navigable-in-fact waters, particularly if supplemented by further evidence about the significance of the tributaries to which the wetlands are connected." *Id.* at 784.**

CONSOL Energy, Inc. (Doc. #14614)

5.326 The proposed rule needs to more substantially address the interconnectivity of groundwater in terms of its relation to a "significant nexus". It was never the intent of the CWA to include groundwater as jurisdictional "waters of the US". If groundwater that connects surface waters are intended to be included as jurisdictional waters, more detail is needed to define authority over groundwater within the intent of the proposed rule. As written, the relationship between groundwater and surface water is far too broadly described to make logical, consistent, scientifically based determinations of jurisdiction. (p. 4)

Agency Response: **The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by**

a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Preamble to the Final Rule Sections I and II and Technical Support Document Sections II and IX. See also Response to Comments Compendium Topic 9 – Science.

The Mosaic Company (Doc. #14640)

5.327 The agencies acknowledge that a mere hydrologic connection may not be sufficient to establish CWA jurisdiction, yet the proposed rule determines that some waters with no hydrologic connection still have a significant nexus to traditional navigable waters. With the extremely broad concept of "connection" used in the proposed rule, a quantifiable and scientifically defensible measure of significance is paramount. (p. 19)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8. See also Section 5.4 and Compendium Topic 4 – Other Waters and Topic 9 – Science and Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX.

5.328 The preamble of the proposed rule describes how the determination was made that certain waters have a significant nexus to downstream traditional navigable waters. The proposed rule states "The data and conclusions in the EPA Connectivity Report concerning the strength of the relevant connections and effects of certain types of water on downstream waters provide a foundation for the agencies' determinations that certain waters have effects on the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, or the territorial seas that are 'significant' and thus constitute a significant nexus" (79 Fed. Reg. at 22,196). Furthermore, "for an effect to be significant it must be more than speculative or insubstantial" (79 Fed. Reg. at 22,196). However, the terms "speculative" and "insubstantial" are not defined in the proposed rule or preamble, and hence provide no information or guidance on how the agencies made the determinations that certain waters have a significant nexus to downstream traditional navigable waters. In order to interpret the strength of relevant connections as a significant nexus, as described in the proposed rule, the agencies must have made judgments and determinations concerning when, how, and under what circumstances a connection was "significant', but that information is lacking in the proposed rule. Failing to disclose how or if the agencies made such determinations does not provide clarity to stakeholders, in contrast with the stated goal of the proposed rule.

> In order to accurately and properly apply Justice Kennedy's significant nexus standard, the proposed rule must include a scientifically defensible measure of the significance of the connection to downstream water quality. This is an omission from the proposed rule. The failure to provide and rely on any such measure of

significance results in flawed determinations of significant nexus throughout the proposed rule. Specific descriptions of these flaws are provided below along with recommendations to remedy these issues. (p. 19-20)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX as well as Compendium Topic 9 – Science.

5.329 The agencies should determine, using quantifiable metrics, what conditions (slope, soil type, permeability, flow rate, distance, etc.) are sufficient to establish that a water with no surface hydrologic connection has a significant nexus to a traditional navigable water. This must include a measure of the significance of the connection, as required by Justice Kennedy's standard in *Rapanos.* (p. 23)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX as well as Compendium Topic 9 – Science.

5.330 Lack of Hydrologic Connection for "Other Waters" is Insufficient to Establish Significant Nexus

Under the proposed rule, the lack of a hydrologic connection can be the water's function in relation to traditional navigable water (79 Fed. Reg. at 22,213-22,214). Under this approach the lack of a hydrologic connection between a water (wetland) and a traditional navigable water would be the function that affects the integrity of the downstream water by acting as sink for pollutants (79 Fed. Reg. at 22,214). This language and potential method for determining significant nexus comes from Justice Kennedy's concurring opinion in *Rapanos.* Justice Kennedy's *Rapanos* opinion states "it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme" (79 Fed. Reg. at 22,213-22,214). However, there is not sufficient scientific evidence to support how the lack of a hydrologic connection is used as a means of establishing significant nexus. In fact, the EPA Connectivity Report refutes this claim. Regarding unidirectional wetlands, the EPA Connectivity Report concludes:

> *"The literature we examined on unidirectional wetlands indicates that these systems have important hydrologic, water quality, and habitat functions that affect downstream waters and rivers* ***if a connection exists between the wetland and downstream water.*** *The problem then, is to identify which unidirectional wetlands have such a connection. Answering this is difficult, because most wetland studies do not investigate their effects on downstream waters or, if they do, they rarely address connectivity explicitly"* (EPA Connectivity Report page 5-37, lines 25-30) [emphasis added].

> The EPA concludes that the scientific literature is insufficient to determine the effects of hydrologically isolated wetlands on downstream waters. Therefore, it is inappropriate to propose that the lack of a hydrologic connection can be the function that meets the significant nexus test for jurisdiction. Based on the EPA's conclusions in the draft EPA Connectivity Report, a hydrologic connection must be a prerequisite during site-specific determinations for establishing jurisdiction. This distinction should be made in the proposed rule. The lack of a hydrologic connection was the underlying basis for the Court's ruling in SWANCC. In fact, the isolated ponds present in that case provide equivalent, or improved, floodwater retention and pollutant sink functions when compared to the wetlands addressed in the draft EPA Connectivity Report. Under this rationale, every retention pond, borrow pit, and excavated pond could be jurisdictional due to these beneficial functions, especially those excavated in uplands. (p. 26-27)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, 8. See also Section 5.4 Agency Summary Response. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1)**

through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV. Evaluating the presence or absence of a hydrological connection is part of the analysis that would be conducted during a case-specific significant nexus determination. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, as well as other case law, see Technical Support Document Section I. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

5.331 "Lack of hydrologic connection" as evidence of a significant nexus should be removed from rule as it is inappropriate for determining significant nexus. (p. 33)

Agency Response: **In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas.**

See Preamble to Final Rule Sections III and IV, Technical Support Document Sections I and II and Response to Comments Compendium Topic 9 - Science.

Corporate Communications and Sustainability, Domtar Corporation (Doc. #15228)

5.332 Language in the preamble states the proposal does not change existing law and regulation that groundwater is not subject to federal jurisdiction. However, a groundwater "subsurface connection" can provide the basis for a significant nexus finding between a WOTUS and a water that would not otherwise be a WOTUS. Agency staff have stated that there is a geographic component to a possible subsurface connection finding. Similarly the preamble states that the "distance between water bodies may be sufficiently great that even the presence of an apparent hydrologic connection may not support an adjacency determination. The greater the distance, the less likelihood that there is an actual shallow subsurface or confined surface hydrologic connection." 79 Fed. Reg. at 22211. Any final rule text should include a geographic boundary within reasonable close proximity. In addition any "significant nexus" test has to have a "substantial connection" i.e. can be proven. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Compendium Topic 9 – Science, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II, VII, VIII and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

Illinois Coal Association (Doc. # 15517)

5.333 The Proposed Rule treats all hydrological connections as significant, regardless of flow, duration and importance of connection with a downstream navigable water.

We note that the Agencies treatment of "significant nexus" in the Proposed Rule also fails to conform to the edict from the Supreme Court in SWANCC and Rapanos that significance must be demonstrated. In other words, under these cases,

the mere demonstration of some arbitrary level of connection does not establish significance. Rather, to confer jurisdiction, the "connection" must be "significant," with such connectivity playing an important role in the ecological integrity of downstream TNW. If no physical connection exists or the connection is not significant in terms of downstream water quality, jurisdiction cannot stand. Unfortunately, the Agencies' attempts to define "significant nexus" ignore this binding principle and are thus legally deficient. The ordinary meaning of "significant" connotes something of importance or of meaningful consequence, and as Justice Kennedy opined, involves an effect on traditional navigable waters that is more than speculative or insubstantial. See Rapanos, 547 U.S. at 780. Notably, Kennedy rejected the dissent's theory of jurisdiction based on "any hydrologic connection" arguing that it "would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote and insubstantial, that eventually may flow into a traditional navigable water." Id. at 784-85 ("mere hydrological connection should not suffice in all cases; the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood."). Yet, this is precisely what the Proposed Rule would do. Apart from a limited category of excluded upland ditches , which may be more fanciful than actual, the Proposed Rule would deem hydrologic connections as per se significant and sufficient to establish jurisdiction. We believe such an approach clearly crosses the boundaries of controlling law. (p. 15-16)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Sections, 5.4 Agency Summary Response, Compendia Topic 3 – Adjacent Waters, Topic 4 Other Waters, Topic 6 Ditches, Topic 8 – Tributaries, and Topic 9 – Science, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX.

Alpha Natural Resources, Inc. (Doc. #15624)

5.334 This proposed definition of "significant nexus" drastically expands the range of impacts on downstream waters that are deemed to be significant. To define anything that is "***more than* speculative or insubstantial**" as "significant" ignores the wide range of effects that various waters may have on downstream navigable waters.

The agencies' tendency to view regulation in overly dichotomous terms (insignificant vs. significant) extends to EPA's Connectivity Report underlying the proposed rules. The SAB explained that the agencies should view connectivity as a range rather than a dichotomous choice.

> If the goal of defining and estimating connectivity is to protect downstream waters, the interpretation must move from a dichotomous, categorical distinction (connected vs. nonconnected) towards a gradient approach that recognizes variation in the strength, duration, and magnitude and effect of those connections.

SAB Report, 8/11/14, p. 60. (p. 15-16)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX as well as Compendium Topic 9 – Science.**

5.335 Developing a standardized approach to delineate waters with significant nexus from those lacking a significant nexus is certainly not an easy task. That said, the agencies have erred by drawing the demarcation much too close to the non-significant side, so that waters with effects that are "more than speculative or insubstantial" are automatically deemed jurisdictional. To stay true to Rapanos, however, the line should be drawn so that any waters or features whose effects on downstream navigable waters are less than significant, by any amount, should be non-jurisdictional. The agencies' attempt in the proposed rule to manipulate the wording of Rapanos to afford themselves authority over the maximum extent of waters is unreasonable and unlawful. (p. 16)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX as well as Compendium Topic 9 – Science.**

Frasier Farms (Doc. #18660)

5.336 Of greatest concern to me as a producer, is the introduction of the term "Significant Nexus". The fact that scientific literature does not use this term is acknowledged in the Executive Summary to the Proposed Rule. At issue is the scientific term "connectivity" of waters adjacent to waters that are jurisdictional. It is the position of the EPA that determination of connectivity is case-specific, and need not necessarily depend upon a continuous surface water connection. There is no singular definition on which regulators or operators may rely, leaving the term open to subjective interpretation and an unfortunate degree of uncertainty. (p. 1)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.**

Washington Cattlemen's Association (Doc. #3723)

5.337 This proposed rule represents an enormous erosion of private property rights with the EPA's ability to regulate via "connectivity". The vagueness of this proposal is purposeful. This proposed rule EPA can find a way to reach any piece of property through connectivity. (p. 2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.**

Colorado Livestock Association (Doc. #7930)

5.338 Scientific literature does not use the term "significant nexus", a fact acknowledged in the Executive Summary to the Proposed Rule. At issue is the scientific term "connectivity" as applied to waters adjacent to waters that are jurisdictional. It is the position of the EPA that determination of connectivity is case-specific, and need not necessarily depend upon a continuous surface water connection. The connectivity may be hydrologic, or have an association that is geographical, topographical, or ecological, including mutual dependence by migratory forms of wildlife, or may be grouped by class with other waters that have previously been determined. There is no singular definition on which regulators or operators may rely. Other views, not held by the EPA, define connectivity as a "continuous surface water connection". (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Compendium Topic 9 – Science.

5.339 The term "Significant Nexus" is open to subjective interpretation and the degree of certainty regarding that connectivity is not specified. Short of a case-by-case determination, there is little factual basis for regulators or the regulated community to know if a water will be considered to have a Significant Nexus. In addition, the use of "best professional judgment" by the regulator in making a determination of Significant Nexus leaves the entire determination to be potentially based on subjective measures using little to no scientific data. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Compendium Topic 9 – Science.

5.340 The final definition will be precedent setting and applicable to the entire CWA. As such, it must provide clarity of meaning while allowing flexibility in application to diverse and complex ecosystems. Agriculture is quite familiar with augmentation ponds, wells, and streams being connected hydrologically to rivers. We recognize and acknowledge the existence of surface *and* subsurface connections, directly and indirectly, from one body of water to another and finally to WOTUS. However, the proposed definition also requires that a significant Nexus have "more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of a traditional navigable water", and "the burden shall be on the entity seeking to apply jurisdiction to demonstrate such impact." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. The rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The rule,

promulgated under authority of Section 501 of the CWA, does establish a binding definition of "waters of the United States."

Michigan Farm Bureau, Lansing, Michigan (Doc. #10196)

5.341 That Supreme Court decision [SWANCC] established limits to EPA and USACE's jurisdiction over such isolated waters, which seems to be ignored in the current proposed rulemaking. For instance: when EPA and USACE write in Section *II C. (2), Summary of Significant Nexus Conclusions,* about tributary streams' biological connections, they name both aquatic and semi-aquatic organisms and identifies both their life cycles and food sources without limitation. Such a broad interpretation of biological connection leaves virtually any water open to being defined as connected to jurisdictional waters. Chemical and physical connections are equally poorly defined, suggesting that the mere presence of similar chemicals or physical properties in a water feature to those of jurisdictional waters would allow a person to conclude the waters are connected – and not only connected, but *significantly* connected such that EPA and USACE should claim jurisdiction over them. (p. 3)

Agency Response: Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule. See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Response to Comments Compendium 9 - Science.

5.342 …while EPA and USACE state that the adjacent water must have a significant nexus to a jurisdictional water to be regulated, the term "significant nexus" and the means for determining *significant* biological, chemical, and physical effect is far from certain. This presents much uncertainty for determining whether a water would qualify as adjacent, particularly when separated by physical barriers such as dikes, berms, dunes, etc. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Response to Comments Compendium 9 - Science.

Pershing County Water Conservation District (Doc. #12980)

5.343 "Significant Nexus" is not defined with particularity. Depending on how far the EPA wants to interpret the "significant nexus" application of the proposed rule, interconnectivity with underground water to surface streams might be included, so even

water that is not returned to a navigable waterway, in many ways may still be subject to federal jurisdiction. This is a slippery slope and appears to be a catch-all category to over-reach the EPA's jurisdiction. (p. 2-3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.**

North American Meat Association and American Meat Institute (Doc. #13071)

5.344 The "Significant Nexus" Standard Overreaches. The proposed rule provides that any effect on jurisdictional waters not thought to be "speculative or insubstantial" will be considered "significant." The agencies propose that, if there is any effect, it is significant. This concept expands federal authority beyond the breaking point and is unjustified. The "significant nexus" concept came about in a narrow context involving wetlands areas that abutted, and "inseparably bound up with," traditionally navigable waters. The proposal, however, would require an analysis of whether an isolated water could theoretically affect, or be affected by, any other water within a region of indeterminate size. Because the proposed definition of "significant nexus" unjustifiably ensures that virtually any impact on downstream waters will be deemed significant it should be withdrawn. (p. 8)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. For a discussion of the "significant nexus" standard in the case law, see Technical Support Document Section I.**

Kennewick Irrigation District, Kennewick, WA (Doc. #13571)

5.345 The inclusion on a case-by-case basis of "other waters" having a "significant nexus" to tributaries and traditional navigable waters is also of concern. A study done in 2009 by the United States Geological Survey (USGS) on the hydro-geologic framework of the Yakima River basin (where a large portion of the KID-served lands is located, and where KID diverts its water supply from) revealed that lateral hydraulic conductivity of the units making up the aquifer system varied widely. While connectivity between upland groundwater and lowland surface water was evident, factors such as geologic structure and topography have an impact on the rate of movement of groundwater in the basin. The demonstrated heterogeneity of the aquifer system in the Yakima River basin should lead the EPA and the USACE to use extreme caution when asserting the "significance" of surface-groundwater connectivity at any given location in the basin. Scientific information such as this raises the question of what constitutes a "significant" nexus. The proposed rule actually concedes that "significant nexus" is not a scientific term; therefore it is difficult to imagine a scenario where "significance" can be accurately measured, determined, and applied to any given system. The definition of "significant" as having an effect that is "more than speculative or insubstantial" that is given in the proposed rule is vague at best, not measureable, and subjective to the point of being useless. (p. 6)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See also Compendium Topic 9 – Science.**

5.346 A related concern is that unlined irrigation canals seep into the groundwater table, re-emerge to create artificial wetlands, and contribute water to drains and wasteways, eventually connecting with navigable rivers and other "waters of the United States." Here the connection is evident, yet it is a "nexus" that cannot be measured as "significant" under the definition in the proposed rule. Another study done by the USGS

in 1986 in the portion of the Columbia Plateau eco-region that includes the KID found a relationship between water in the KID Main Canal and water levels in a roadside ditch / irrigation drain; yet again an example of a "nexus," but with no way to measure or determine "significance" under the proposed rule. Another study conducted by CH2M Hill in 1983 concluded that saturated areas located within the Badger Coulee area of the KID were the result of rising water tables caused by the infiltration of water from outside of the basin. The study estimated that 60 to 70 percent of the water table rise was attributable to water seeping from the canals in the area, and that 30 to 40 percent was due to excess water applied for irrigation that was not consumed. Again, this study demonstrates the presence of a "nexus" between artificial canals and artificial wetlands, but there is no way to determine if the nexus is significant under the proposed rule. As you can see, science can show a "nexus," but it is difficult if not impossible to determine "significance" of these connections without scientific metrics that would allow for a quantification of what "significance" is. KID does not believe that such determinations should be made on a "case-by-case basis" without a sound scientific methodology in place to measure and thus define "significant nexus." (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Response to Comments Compendium Topic 9 - Science.

North Carolina Soybean Association (Doc. #13621)

5.347 The proposed rule wrongly applies the "nexus" test to all waters nationwide by proposing to consider as jurisdictional all waters that may have a nexus to waters covered under the Clean Water Act. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Sections 5.1, 5.2, 5.3 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

Illinois Corn Growers Association (Doc. #13996)

5.348 The notion of global or categorical classification of water body types as jurisdictional is improper and illegal under the recent Supreme Court jurisprudence; rather, a case-by-case analysis which starts with a specific factual situation and a boots-on-the-ground analysis is what is required to establish in a specific instance "significant nexus" sufficient to invoke the agencies' jurisdiction. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Sections 5.1, 5.2, 5.3 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

Boone County Farm Bureau, Inc. (Doc. #14073)

5.349 Terms used to determine the significant nexus are often vague, and are definitely not always based on sound science. Many times the terms are undefined relying on the best professional judgment of an observer. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, and Section 5.4 Agency Summary Response, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX and Response to Comments Compendium Topic 9 - Science.

North Dakota Soybean Growers Association (Doc. #14121)

5.350 The agencies propose that any effect on jurisdictional waters that is not thought to be "speculative or insubstantial" (Justice Kennedy) will be considered "significant." The agencies essentially propose that, if any effect exists, it is significant unless proven otherwise. This expansion of federal authority is totally unjustified and nonsensical. "Significant nexus" historically arises in the narrow context of wetlands areas that actually abutted, and "inseparably bound up with," traditionally navigable waters. The agencies' proposal would include an inquiry about whether isolated water could theoretically be inseparably bound with, or be impacted by, any other water within a region of indeterminate size. The meaning of "significant nexus" in the context of chemical, physical, and biological effects will likely occupy the federal courts for decades to come.

> The proposed definition wrongly ensures that virtually any impact on downstream waters will be deemed significant. That definition, coupled with the "cumulative effects" concept as well as the likelihood that a single water will determine the jurisdictional fate of small waters spread over vast areas that are deemed to be "similarly situated," means that the agencies' proposal effectively leaves nothing outside the "other waters" category. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, and Sections 5.1, 5.2, 5.3 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX.

Indiana Farm Bureau, Inc. (Doc. #14124)

5.351 Transitioning to the specific terminology used in the proposed rule, we begin by noting our concern with the standard used to establish the requirement for a "significant nexus." In Rapanos v. United States, Justice Kennedy noted that a significant nexus exists if the water "significantly affect[s] the chemical, physical and biological integrity of other covered waters." 547 U.S. 715, 780 (2006) (emphasis added). In this rule proposal, "significant nexus" is defined to exist if there is a significant effect on the "chemical, physical or biological integrity" of a water. 79 Fed. Reg at 22,263 (emphasis added). There is substantial difference in these standards based upon the simple change from an

"and" to an "or." Additionally, we remain concerned about the connectivity report and the attempt by the agencies to classify nearly everything that contains water at some point as having a significant nexus to another water. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6. 7 and 8, and Sections 5.1, 5.2, 5.3 and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium 9 – Science.

Western Growers Association (Doc. #14130)

5.352 Lastly during most of the discussion in Rapanos and SWANCC not only does the Court look at water quality aspects of the Act but they look to the Corps' own standards of volume and flow to determine a connection between waters to claim jurisdiction.[140] Therefore, in both the plurality and concurrence in Rapanos as well as SWANNC the Court shows us that in protecting or preventing pollution of waters the hydrologic connections are what primarily gives the EPA or Corps jurisdiction under the Act. The reason we emphasize this is that throughout the Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, and the Proposed "Definition of 'Waters of the United States' Under the Clean Water Act", biological connections and protection of aquatic organisms is highlighted as a separate way to establish a "significant nexus" which expands the scope and extent of "waters of the U.S." beyond the primary drivers articulated by the Court.[141]

> If the proposed rule as applied allows for only biological connections to satisfy the "significant nexus" requirement then the EPA and the Corp go well beyond the limits of the Act and the limits set by the Court in Rapanos and SWANNC. Indeed, the EPA and Corps tacitly acknowledge the SWANCC decision when they highlight that "non-aquatic species or species such as non-resident migratory birds that are not demonstrating a life cycle dependency on the identified aquatic resources are not evidence of biological connectivity for the purpose of this rule"[142] Despite the agencies acknowledgement of the SWANNC decision, it is clear in crafting the rule EPA and the Corps stretch the boundaries of significant nexus and claim jurisdiction for waters using wildlife indicators – in this case aquatic rather than avian – to justify connectivity. Moreover, within the rules and discussion surrounding the definition of "other waters" the EPA and the Corps highlight that

[140] Rapanos v. United States, 547 U.S. 715, 781 (2006)

[141] Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (External Review Draft), 78 Fed Reg 58536; EPA-HQ-OW-2011-0880-0004. Authored Sep 1, 2013. Cites wildlife indicators as one vector showing connectivity, potentially standing alone to show connectivity: "Connectivity is determined by the characteristics of both the physical landscape and the biota of the specific system… Similarly, aquatic food webs connect terrestrial ecosystems, streams, wetlands, and downstream waters….Numerous factors influence watershed connectivity. Climate, watershed topography, soil and aquifer permeability, the number and types of contributing waters, their spatial distribution in the watershed, interactions among aquatic organisms, and human alteration of watershed features, among other things, can act individually or in concert to influence stream and wetland connectivity to, and effects on, downstream waters." 1.3. CONCEPTUAL FRAMEWORK OVERVIEW

[142] Proposed "Definition of 'Waters of the United States' Under the Clean Water Act" 40 CFR 230.3

> "evidence of a biological connectivity and the effect on waters can be found by identifying resident aquatic or semi-aquatic species present in other waters and the tributary system."[143] Establishing jurisdiction using wildlife indicators, as the EPA and Corp did when it used the Migratory Bird Rule, is beyond the Act's intent, language, and statutorily controlled jurisdictional reach. The primary purpose of the statute is pollution prevention of waters, which are inextricably linked to hydrological features, and while biological connections may serve as indicators of a significant nexus/indicators of hydrological connectivity, they cannot replace such factors. Biological connections inform rather than control.
>
> In writing the proposed rule the agencies too often point to biological connectivity as a potential single indictor of a significant nexus rather than using biological indicators to research and document whether true hydrological connections exist which is clearly the heart of any jurisdictional finding. Given the pervasiveness of the agencies use of wildlife indicators we contend that the proposed rule should be struck down and reconsidered in full. (p. 6-7)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7 and 8, and Section 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science. The agencies have finalized the rule. See Response to Comments Compendium Topic 13 – Process Concerns and Administrative Procedures. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.**

Mississippi Farm Bureau Federation (Doc. #14464)

5.353 The definitions of "tributaries," "significant nexus," and "neighboring waters" are overly broad and subjective. These terms should be definitive and give landowners some clarity over what are and what are not considered waters. This is particularly important considering that many times these terms will include what is normally dry land. … The definition of "significant nexus" includes "even a shallow groundwater connection," which makes it virtually impossible for a reasonably logical person to identify and determine that the dry land between two waterbodies is jurisdictional. (p. 2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7 and 8, and Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response. See also Preamble to the Final Rule Sections III and**

[143] Id.

IV and Technical Support Document Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science. While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation.

California Association of Winegrape Growers (Doc. #14593)

5.354 Specific examples of improper expansion of jurisdiction include: …

> Finds that a hydrological connection is not necessary to establish a significant nexus; (p. 5)

Agency Response: In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have

quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Sections III and IV. See also Technical Support Document Sections I and II, Response to Comments Compendium Topic 9 – Science.

National Pork Producers Council (Doc. #15023)

5.355 We strongly encourage the Agencies to take time to work through the science record to develop some concrete, quantitative measures of the degree of effects between non-navigable and navigable waters. This is the case whether the Agencies accept our view that those effects must be grounded in the concept of navigability or rely on the broader chemical, physical or biological effects investigated in the *Connectivity Report.* We note that the Science Advisory Board's comments to the Agencies on the *Connectivity Report* took direct note of the fact that clear gradients of effects do exist, and it encouraged the Agencies to develop that science and thinking further. We could not concur more. (p. 20)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 4, 5, 7 and 8 and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX, and Response to Comments Compendium Topic 9 – Science.

National Alliance of Forest Owners (Doc. #15247)

5.356 (…) [T]he proposed rule does not identify any practical, scientifically-based methods for evaluating significance. There is no substantive discussion of either methods that could be developed to measure (i.e., quantify) connections among wetlands, waters, and traditional navigable waters or criteria that policy makers might select for distinguishing significant connections from other connections. Instead, the proposed rule either categorically concludes that "significance" is present or merely provides a laundry list of factors that might provide evidence of chemical, physical, or biological connections without explaining how the Agencies will determine significance based on those factors.[144] There are so many possible combinations of the different types of connections that may be present that regulators will have no problem concluding that a significant nexus exists. Distinguishing between insignificant and significant connections is of critical importance. Otherwise, if the Agencies can assert CWA jurisdiction over all connections, such a rule would reopen the door to the "any hydrological connection" standard that was struck down in Rapanos. (p. 8)

[144] See 79 Fed. Reg. at 22,213-14.

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

5.357 The Agencies Should Not Rely on Non-Jurisdictional Waters to Establish Connections. Although NAFO supports the Agencies' effort to clarify that certain waters are *per se* non-jurisdictional, we are nevertheless troubled by the discussions in the preamble that provide that those non-jurisdictional waters can serve as connections for purposes of establishing adjacency or a significant nexus between an "other water" and a jurisdictional water.[145] The use of non-jurisdictional waters to establish connections effectively revives the "any hydrologic connection" test that the Supreme Court invalidated in *Rapanos*. By taking the position that rainwater flowpaths, sewer systems, and other non-jurisdictional features are all that is needed to prove adjacency or a significant nexus, the Agencies have failed to give any meaning to the term "navigable" in the statute. (p. 24-25)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Section 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters, Features and Waters Not Jurisdictional and Topic 9 – Science.**

National Sustainable Agriculture Coalition (Doc. #15403)

5.358 Additionally, many in the agricultural community have expressed concern that surface connections like overland flow, or "fill-and-spill" events, could be used to make otherwise isolated unidirectional wetlands jurisdictional. Fill-and-spill events are generally the result of one or several intense precipitation events. Therefore, this surface connection between wetlands is not perennial in nature and should not warrant a designation of "similarly situated" as jurisdictional other waters.

> Recommendation: Clarify the functions that waters perform collectively in order to be considered "similarly situated" and create a watershed-based geographic limit for this designation, such as a 12-digit Hydrologic Unit Code sub-watershed of an a(1) through a(3) water. Explicitly state that overland "fill-and-spill" events are not sufficient connections to warrant a designation of "similarly situated." (p. 7)

Agency Response: **See Sections 5.0, 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, and in particular with respect to "fill and spill" events, see Technical Support Document Section IX. See also Response to Comments Compendium Topic 4 – Other Waters, Features and Waters Not Jurisdictional and Topic 9 – Science.**

[145] *Id.* [See 79 Fed. Reg. at 22,218.]

Kentucky Soybean Association (Doc. #16345)

5.359 Because a hydrologic connection is not necessary to establish a significant nexus, typical practices on Kentucky farms like sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, export of organic matter, export of food resources, or the provision of aquatic habitat might demonstrate a significant nexus under the Proposed Rule. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science

Bayer CropScience (Doc. #16354)

5.360 BCS is concerned that relying on agency BPJ [best professional judgment] to make jurisdictional determinations of "significant nexus" will be speculative for the proposed rule includes no chemical, physical or biological metrics for determination of jurisdictional importance. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

National Association of County Engineers (Doc. #14981)

5.361 The reality is that everything in a watershed is connected, in some form. That does not make it a "Water of the U.S." There is no new science in the connectivity study to justify the proposed rule. Physical, chemical, and biological connection has no relevance in the connectivity issue because it could be easily argued that everything is physically, chemically, and biologically connected. There must be limits placed on connectivity to define what is jurisdictional. These limits must be clear, concise, and based on accepted engineering practice. Some approaches to consider are using a minimum watershed size, such as one square mile, a percentage of the watershed, or "blue lines" on USGS maps. Regardless of the determining criteria, it is critical that these "waters" be identified on maps so there is no confusion over what is regulated. While we recognize that it will require resources to delineate regulated waters, it is a reasonable requirement. Other regulated hydrologic features are identified on maps, thus, so should be Waters of the U.S. The costs associated with this identification are minimal compared to the costs of compliance. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science. Consistent with the more than 40-year practice under the Clean Water Act, the agencies make

determinations regarding the jurisdictional status of particular waters almost exclusively in response to a request from a potential permit applicant or landowner asking the agencies to make such a determination. Determination and mapping of all "waters of the United States" would be prohibitively expensive and intrusive.

Airports Council International – North America (Doc. #16370)

5.362 On page 22241 of the Proposed Rule, text addressing waterway chemical, physical, or biological integrity defines confined surface connections as:

> "…permanent, intermittent or ephemeral surface connections through directional flowpaths, such as (but not limited to) swales, gullies, rills, and ditches."

The above text raises a question as to how directly connected to a WOTUS a water or wetland has to be to establish a "significant nexus". (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters, Topic 6 – Ditches, Topic 7 – Features and Waters Not Jurisdictional and Topic 9 – Science.

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)

5.363 Page 22193 states that "The existence of a connection, a nexus, does not by itself establish that it is a 'significant nexus.' We request that this direction be carried out into the new rule and definitions. The current proposed definition, while an improvement from the previous lack of definition, provides no implementable guidance on what would be "more than speculative or insubstantial." (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX.

5.364 While Caltrans appreciates the inclusion of a definition of "significant nexus", the proposed definition is not clear as to which waters will meet the test. Please provide additional guidance or definitions to clarify how to assess whether a connection is "more than speculative or insubstantial." As mentioned in comment 1 [previous comment], Caltrans objects to the use of the term 'significant' when paired with a definition that varies so drastically from the existing definition under the National Environmental Policy Act. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. The term "significant nexus" as used in this context is specific to the CWA, and the agencies do not believe that using this term creates an inherent conflict between NEPA and the CWA.

Department of Public Works, City of Northglenn, Colorado (Doc. #14990)

5.365 Significant Nexus. The proposed rule would remove the requirement that a subject water would need to affect the physical, chemical and biological integrity of a downstream water. Rather, the subject water would only need to affect one of those attributes (physical or chemical or biological integrity). The subject water does not need to be a part of the tributary network to the downstream traditional navigable water. As a result, the proposed rule would broaden the geographic scope of waters that can be jurisdictional through establishment of a significant nexus. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters, Topic 8 – Tributaries and Topic 9 – Science.

Orange County Public Works, Orange County, California (Doc. #14994)

5.366 …[T]he "significant nexus" test should not be adopted and is legally unsupported by the plurality opinion in Rapanos. Furthermore, the Agencies inaccurately define a jurisdictional water as having "a significant nexus affecting the chemical, physical, or biological integrity of water of the United States." The test articulated by Justice Kennedy in his concurring opinion contained the conjunction "and," not "or" such that the water must affect the "chemical, physical, and biological integrity" of a jurisdictional water. This minor change in syntax precipitously lowers the threshold for what constitutes "waters of the U.S." inappropriately expanding federal jurisdiction. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 3, 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters, Topic 8 – Tributaries and Topic 9 – Science.

National Association of Clean Water Agencies (Doc. #15505)

5.367 Use of Groundwater to Establish Connection Needs Additional Explanation NACWA is also pleased that the draft rule includes an explicit exemption for groundwater in line with previous Association comments. Consistent CWA application dictates the preservation of the traditional groundwater exemption and ensures that groundwater appropriately remains outside the CWA's scope. NACWA members in arid regions of the country, in particular, appreciate that groundwater, including groundwater drained through subsurface drainage systems, is not jurisdictional. However, the proposal frequently references groundwater to establish a jurisdictional connection between ditches, tributaries and "adjacent waters", meaning water management features that may interface with groundwater have the potential to be deemed WOTUS. This leaves many clean water utilities uncertain of the regulatory status of certain facilities such as treatment control BMPs, infiltration basins, or storage ponds that may have a hydrologic connection to groundwater. The Agencies must clearly delineate what factors would be

evaluated to establish hydrologic groundwater connections for purposes of determining jurisdiction. (p. 3)

Agency Response: The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.

Texas Water Development Board (Doc. #16563)

5.368 EPA and the Corps should rely on connectivity rather than significant nexus particularly a significant nexus that is based on something merely "more than speculative or insubstantial." These terms do not constitute a showing of significance. (p. 7)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Western States Water Council (Doc. #9842)

5.369 WSWC urges EPA and the Corps to ensure that the rule:

> …Recognizes that Justice Kennedy's "significant nexus" test in Rapanos require a connection between waters that is more than speculative or insubstantial to establish jurisdiction. The rule should also quantify "significance" to ensure that the term's usage does not extend jurisdiction to waters with a de minimis connection to jurisdictional waters. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

5.370 … While the WSWC appreciates language in the rule stating that effects to jurisdictional waters must be "more than speculative or insubstantial," further work is needed to quantify the concept of significance, particularly the term "significantly affects" in paragraph (u)(7) [(a)(7)], and to flesh out a transparent process for your agencies to use when making significance determinations.[146] (p. 4-5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

5.371 To address this uncertainty, the WSWC believes the rule should use a specific, quantifiable measure or measures to determine significance rather than only stating that the water's effect on another, jurisdictional water must be more than speculative or insubstantial. Under this proposal, waters that satisfy the specified measures would be presumed to have a significant connection to the waters identified in paragraphs (s)(1) through (3) of the rule, while waters that do not would be premed to lack a significant connection. Under this general framework, parties could still provide evidence to rebut a presumption of significance or nonsignificance. Consequently, the use of specific, quantifiable measures would provide much needed clarity by providing a starting point for significance determinations. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science. Additionally, the rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The rule, promulgated under authority of Section 501 of the CWA, does establish a binding definition of "waters of the United States."

Northwest Colorado Council of Governments Water Quality/ Quantity Committee (Doc. #10187)

5.372 This significant nexus test is based on Justice Kennedy's concurring opinion in Rapanos[147] and existing agency guidance.[148] Although QQ is in favor of a case-specific analysis as described in the rule, we are concerned that the definition of "significant" may need further work so that waters are not inappropriately brought under jurisdiction of the CWA with too minor a connection to a traditionally navigable water. The rule would benefit from examples of what constitutes a significant nexus so that there is less

[146] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22,269 (April 21,2014) (to be codified at 40 CFR Part 230.3).
[147] 547 U.S. 715, 780 (2006), stating that a "significant nexus" exists "if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical and biological integrity" of navigable waters.
[148] EPA and Army Corps of Engineers Guidance Regarding Identifications of Waters Protected by the Clean Water Act ("Guidance"), 72 Fed. Reg. 67304 (Nov. 28, 2007), available at: http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf.

uncertainty about what might fall under the definition of waters of the United States. This is particularly important given EPA's stated intent to simplify jurisdictional scope of federal authority. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Mohave Electric Cooperative, Inc. (Doc. #10953)

5.373 The draft science Report upon which the Proposed Rule is predicated is critically flawed. … The aggregation approach to significant nexus analyses promoted by the Proposed Rule ignores Justice Kennedy's common sense observation. The draft Report, therefore, makes no effort to provide any data or discussion that would allow agencies or the regulated public to identify those surface water features that are too small, too remote, or have such minimal flow that they do not provide a significant contribution to the function of downstream TNWs and should therefore not be considered waters of the U.S. These errors are compounded in the draft Report by the EPA's conflation of intermittent and ephemeral streams (thereby biasing ephemeral streams toward federal jurisdiction), and the inappropriate application of analyses completed on very large, higher order ephemeral washes to the smaller, lower order washes most commonly considered in jurisdictional determinations (JD) in the arid Southwest. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, 5.1, 5.2, 5.3 and 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 – Science. The agencies have noted in the Preamble to the Final Rule that in the arid West, the agencies recognize there may be situations where the single point of entry watershed is very large, and it may be reasonable to evaluate all similarly situated waters in a small watershed. Under those circumstances, the agencies may demarcate catchments surrounding the water to be evaluated that, in combination, generally no smaller than a typical 10-digit hydrologic unit cod (HUC) watershed in the same area. This combination of catchments would be used for conducting a significant nexus evaluation under (a)(7) or (a)(8) under those situation. The basis for such an approach in very large single point of entry watersheds in the arid West should be documented in the jurisdictional determination.

Duke Energy (Doc. #13029)

5.374 The Proposed Definition of "Significant Nexus is Circular and Ambiguous. The proposed rule includes a new definition for the term of "significant nexus'… [149]

> This definition is anything but clear, as it suggests that a significant nexus can be established if the chemical, physical or biological integrity of a TNW, an interstate water or territorial sea is affected significantly. This circular logic is not

[149] 79 Fed. Reg. at 22,263

sufficiently explained through the ambiguous statement that to be significant, it must be more than speculative or insubstantial. Just because a connection is more than "speculative or insubstantial" does not necessarily mean that it is "significant." There are no metrics associated with determining what is more than speculative or when it would be insubstantial, and this will result in inconsistent interpretations and unpredictable results. Also with such a low threshold to determine a "significant nexus," this concept is in conflict with a literal meaning of the word significant (i.e. "important" or "having or likely to have a major effect"), and more closely resembles the "any hydrologic connection" standard that Justice Kennedy explicitly rejected in the Rapanos case. (p. 41-42)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 6, 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

5.375 The agencies also list types of evidence that could support a conclusion that there are chemical, physical or biological effects.[150] However, actually coming to a significant nexus conclusion based on this definition is anything but straight-forward. Is there a significant nexus if any of these indicators are present? What about if three indicators are present? Does it matter if all indicators present only come from biological, but not physical or chemical effects? What is required for a "more than speculative or insubstantial" showing? Or is this determination simply left to the agencies' "best professional judgment?" (p. 42)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 6, 7 and 8, 5.4 Agency Summary Response, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

NRG Energy, Inc. (Doc. #13995)

5.376 According to the results of the recently published SAB review of the Connectivity Report[151], everything is connected along a spatial and temporal gradient, and can be considered to have some influence on all continuous physical, hydrological (surface and subsurface), chemical, and biological flowpaths that connect watersheds. While this may be correct, there has been no guidance provided to allow EPA to delineate which connections are significant, in terms of possible negative impacts, and should therefore be regulated under the proposed rule, and which connections should not. This leaves the Agencies with the untenable position of having to regulate EVERY form of water in, on and under the landscape, regardless of import. Clearly, this cannot be what the Agencies intended, as it would create an endless burden for both regulators and regulated entities that is not warranted or appropriate. Instead, the Agencies must go back and clearly

[150] 79 Fed. Reg. at 22,214

[151] SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review And Synthesis of the Scientific Evidence, dated October 17, 2014 (EPA-SAB-15-001)

determine and define which nexuses are "significant" from a biological and/or water quality standpoint to prevent subjecting the regulated community to potentially inconsistent individual interpretations and unwarranted, overarching authority upon waters that should not be regulated. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Southern Company (Doc. #14134)

5.377 For a Nexus to Be "Significant," at a Minimum, It Must Be More Significant than the Nexus between TNWs and Uplands. Should the agencies retain their tortured application of the "significant nexus" test, they must at least limit the term to capture only those other waters that have a more significant nexus to TNWs than upland features. The Act simply does not support the proposition that the agencies may regulate land simply because it is wet or exhibits a minor hydrologic connection. Doing so would completely undermine the explicit Congressional reference to "navigable" throughout the Act and contravene Supreme Court precedent.

> The agencies claim to be operating under the premise that the relationship between a water and navigable water must be more than "speculative or insubstantial," 79 Fed. Reg. at 22192 (quoting J. Kennedy). The plain meaning definition of significant means "very important" or "large enough to be noticed or have an effect." Yet the agencies' definition of "significant" is anything more than "speculative," which means theoretical or hypothetical, or more than "insubstantial," not substantial or real. Under the government's current position, any connection that is not theoretical or is anything more than insubstantial must then be significant. This cannot be. There is a large chasm between something that is significant or substantial and something that is theoretical or hypothetical. Yet the agencies have concluded that any connection – an iota more than hypothetical or speculative – is sufficiently significant. This is an impermissible construction of Kennedy's test, which requires a close physical connection and more than "minor water volumes." As proposed, the agencies' notion of significant turns Justice Kennedy's "significant nexus" test on its head.
>
> Even assuming the agencies' definition passes legal muster, which Southern Company disputes, members of the SAB Panel found the agencies' definition of "significant nexus" to be vague, confusing, and unhelpful. For example, in criticizing the agencies' failure to better define the concept of significance in terms of the strength in connection, Dr. Genevieve Ali offered the following perspective,
>
> > [I]t is reasonable to assume that "all is connected" to a certain extent, although the magnitude, frequency and duration of the connections are highly variable. The EPA science report did not, however, explicitly discuss the notion of significance . . . The proposed rule goes on to say that 'for an effect to be significant, it must be more than speculative or insubstantial',

but it does not put forward any threshold for deciding what is not speculative or insubstantial. This definition of "significant nexus" is especially problematic when it comes to "other waters" and the case-specific analyses needed to determine jurisdiction. The proposed rule would be more robust if the definition of significant nexus itself hinted at a tangible tool or methodology to make the job of the Corps Districts more straightforward and transparent when it comes to deciding what is not speculative or insubstantial.

SAB Panel Memo, Ali Comments at 6. (p. 27-28)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Colorado Water Congress Federal Affairs Committee (Doc. #14569)

5.378 Are there any temporal metrics for determining if groundwater flow is adequate to make the jurisdictional connection (for example, if it takes ten years for the subsurface flow to go from the source to the TNW, is the source jurisdictional); (p. 9)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Metropolitan Water District of Southern California (Doc. #14637)

5.379 Currently, guidance documents specifying the procedures required for determining physical, chemical, and biological connectivity of landscape features to waters of the U.S. are found in manuals and guidance documents that are not always made available for public review; the regulated community cannot provide input to the Agencies regarding the feasibility, accuracy, and unintended consequences of such guidance. Therefore, Metropolitan requests that any guidance documents specifying the procedures required for determining physical, chemical, and biological connectivity of landscape features to waters of the U.S. be distributed for public review and comment before the proposed rule is finalized. (p. 7)

Agency Response: The rule establishes binding requirements and provides additional clarity as to the functions the agencies will assess when making a case-specific determination in the narrow circumstances identified in (a)(7) and (a)(8). The agencies may later decide that guidance for making case-specific significant nexus determinations would be useful for agency staff and the public. While the agencies may choose to seek public comment on any such guidance, that is not required by the Administrative Procedure Act.

Nucor Corp. (Doc. #1493)

5.380 Even if, the Agencies' adoption of the "significant nexus" test was appropriate, the proposed rule provides no guidance to the regulated community with respect to how the test will apply or be implemented. The Agencies have failed to shed any light on the analysis in more than general terms. The proposed rule identifies factors that may be indicative of "significance" but does not actually elucidate upon how they rise to the level of being significant. The rule provides that hydrologic connectivity, nutrient recycling, flood water or sediment retention or runoff storage could all indicate a nexus, but does not establish how it is determined when their mere presence rises to the level of "significant". *See* 79 Fed. Reg. 22214. The preamble sets forth a number of examples (i.e., chemical , physical or biological connectivity) but gives no specific information regarding what level of connectivity rises to "significant". *ld.* Furthermore, although the determination is typically, for "other waters", made on a case-specific basis, the preamble provides that justification for jurisdiction need not be specific to the water whose jurisdictional status is being evaluated while at the same time claiming that any determination is a resource intensive analysis. *ld.* These two inconsistent statements within the preamble (indeed, within adjacent paragraphs) demonstrate just how little clarity is provided by the proposed rule.[152] (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.

Utility Water Act Group (Doc. #15016)

5.381 The Agencies clearly equate significant nexus to the *high dependence* of downstream water structure and function to imported (*i.e.,* upstream or lateral) material transport. Similarly, the Agencies characterize those materials being transported *as being highly influential* to the function of downstream waters, in a deterministic obligate manner, by stating that:

> The [Draft Connectivity] Report concludes that the scientific literature clearly demonstrates that streams, *regardless of their size or how frequently they flow*, strongly influence how downstream waters function. Id. at 22,196 col. 1 (emphasis added) [79 Fed. Reg. at 22,196 col. 1].
>
> UWAG understands the use of the phrases "highly dependent" and "highly influential" to mean two things. First, the sustenance of downstream function is virtually obligatory, *i.e.,* the normal function of downstream waters is so dependent on upstream and lateral transport that under no circumstances can

[152] The Agencies' assertion that the administrative record will include "information supporting the determination" (79 Fed. Reg. 22214) is of little value to the regulated community. As the Agencies are fully aware, a number of Courts have held that a jurisdictional determination is not "final agency action" subject to review under the Administrative Procedures Act. See, Belle Company L.L.C. v. United States Army Corps of Engineers, 13-30262 slip op., (5th Cir. July 30, 2014). Hence, the regulated community must be afforded clarity in the rule itself, rather than having to obtain a Section 404 perm it and then appealing a faulty determination.

> waterbody function be sustained by autochthonous-derived energy and the processing of this energy by autochthonous biotic assemblages. Second, conditions of hydrological disconnectivity, no matter their duration or magnitude, nonetheless still reduce downstream water function because that function is virtually dependent on upstream or lateral transport, or even the lack of such transport. (p. 108)

Agency Response: **The interpretation of the statements from the proposed rule's preamble is incorrect. The scientific literature demonstrates that the transport of materials from upstream waters (or, in the alternative, retention of materials in them) determines, to a large degree, the structure and function of downstream waters. The agencies, and the scientific literature, did not conclude that no downstream waters can function without inputs from other waters. See Preamble, III and Technical Support Document, II.**

5.382 Technical Concerns: Connectivity Between Waters. Lack of Concise Metrics or Parameters Supporting a "Significant Nexus."

> Markedly absent from the Proposed Rule is how the principal factors of ecological disturbance affect the legal and scientific meaning of "significant nexus," as one of several prerequisites for CWA jurisdiction, specifically: frequency (number of recurring events per unit time), magnitude (absolute strength of the disturbance), and duration (the length of a disturbance event). Logically, these factors should be used to empirically characterize the connectivity or disconnectivity between waters. The Agencies acknowledge that connectivity exists along a gradient, and common sense would dictate that a waterbody's specific location along a gradient should be a factor in evaluating the scientific significance of its connectivity:
>
> > The existence of a connection, a nexus, does not by itself establish that it is a "significant nexus." There is a gradient in the relation of waters to each other, and this is documented in the [Draft Connectivity] Report.
>
> 79 Fed. Reg. at 22,193 col. 2. This notion of a gradient was recognized in Rapanos. 547 U.S. at 767 (Kennedy, J., concurring) ("[T]he 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. In other instances, as exemplified by SWANCC, there may be little or no connection. Absent a significant nexus, jurisdiction under the Act is lacking."). (p. 114)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I.**

Tri-State Generation and Transmission Association, Inc. (Doc. #16392)

5.383 As indicated in the SAB comments, two panelists objected to the inclusion of all tributaries by rule since connectivity occurs along a gradient rather than in a binary fashion, necessitating case-by-case examination.[153] Tri-State shares this opinion and more specifically are concerned that there is no allowance for case-by-case review for very small intermittent and ephemeral headwaters tributaries where there could be a questionable or limited nexus with a downstream navigable water, even when aggregated with similarly situated waters in the same region. While many perennial tributaries have a clear nexus with a downstream traditionally navigable water, the nexus is often unclear between intermittent and ephemeral tributaries particularly in headwaters regions in arid western states. Dr. Josselyn highlights this point as"[t]hese low order features may have flow for only a few hours or days following storm events and are the most likely candidates for being on the low end of the gradient where effects on downstream systems are lowest or minimal."[154] Alluding to the geographical differences, the SAB further recommends to EPA that the final report "compare and contrast the temporal scales of connectivity in the East and Southwest." Tri-State agrees with this recommendation. Many landscape features in the arid west that present as ephemeral channels are likely due to naturally sparse vegetation, slope, and erodible soils. In the eastern U.S. many of these landscape features would not occur as channelized flow due to relatively greater vegetative cover. Put another way, many small ephemeral channels in the arid west would be equivalent to sheet flow in the more humid east.

> Dr. Josselyn further comments regarding the concept of the connectivity gradient, "[m]y point during the discussion was not that connectivity has not been demonstrated; but whether such connectivity meets the standard of being more than 'insubstantial' and that all tributaries should be jurisdictional 'by rule'.[155] Similarly, the SAB notes in their review of the draft Connectivity Report that "at sufficiently large spatial and temporal scales, all waters and wetlands are connected. More important are the degree of connection (e.g., frequency, magnitude, timing, duration), and the extent to which those connections affect the chemical, physical and biological integrity of downstream waters.'[156]
>
> Dr. Murphy indicated a similar statement in his comment regarding the binary approach to significance in the Connectivity Report, "The significance of the connection must be defined by the likelihood of a measurable effect, which is controlled by the transport mechanism and pathway through the watershed.''[157] Further, Dr. Murphy comments on jurisdiction by rule based on the binary approach (e.g., either connected or not connected), "[n]ature rarely gives yes or no answers. For this reason, jurisdiction by rule based upon dichotomous categories is simply

[153] Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' Under the Clean Water Act". at page 42
[154] Id. at page 22.
[155] Id at page 44.
[156] SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence. Page 17.
[157] Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' Under the Clean Water Act". at page 91

not scientifically valid and appears to be based upon legal convenience. Jurisdiction by rule, as applied in the Proposed Rule, is not supported by the best available science.''[158]

Dr. Murphy's summary comment on page 99 of the SAB report indicates that inclusion of all ephemeral tributaries by rule is not supported by science in particular in the arid west, "[i]n summary, while ephemeral headwater streams in the arid West are always 'important,' their effects on downstream waters are scaled by temporal and spatial variability in the transport of mass and energy and the magnitude, frequency, duration and predictability of flow events. This variation supplies the scientific basis of their significance to downstream jurisdictional waters. For this reason, inclusion by rule of all ephemeral tributaries, 'regardless of size or flow duration,' is not scientifically justified." (p. 11-12)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rules Sections III and IV, Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comment Compendium Topic 9 - Science.**

Natural Resources Defense Council and Southern Environmental Law Center (Doc. #10578.4)

5.384 [Citing Comments on "Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States " and "Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters by Paul H. Zedler, 7 Oct. 2014]:

… From a scientific point of view the reports are highly credible, and a suitable basis for evaluating the function and value of these wetlands. I concur with the authors' assertion that the set of ephemeral wetlands is remarkably diverse and is best thought of as a continuum with respect to hydrology and function. (p. 1)

Agency Response: **The agencies appreciate the contribution of these reports and agree that the wetlands described in the two reports occur on a continuum, or gradient of connectivity. In the final rule, the agencies have made scientifically and technically informed judgments that there is adequate evidence at this time supporting the conclusion that Prairie potholes, Carolina bays, Delmarva Bays, pocosins, western vernal pools in California, and Texas Coastal Prairie wetlands each, as a class, are within a higher grade of connectivity and are similarly situated because have similar influence on the physical, chemical and biological integrity of downstream waters and are similarly situated on the landscape. The agencies have determined that wetlands in each of the five categories have similar functions and are sufficiently close to function together when in the same point of entry watershed. The agencies at this time do not believe that the five subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate water, or the territorial seas. This is because individual waters of the class vary in the level of connectivity and the effects of that connectivity to downstream waters. However, the agencies believe that the science supports that such water, particularly when**

[158] Id. at page 90.

considered in combination with similarly situated waters, can on a case-specific basis have a significant nexus to (a)(1) through (a)(3) waters in light of their numerous functions that can impact downstream water integrity. *See* summary response 5 in 5.0 Agency Summary Response, the preamble to the final rule at Sections III and IV, and the Technical Support Document at Section IX.A. See also Section 5.3 Agency Summary Response and Response to Comments Compendium Topic 9 – Science.

5.385 An appeal for recognition of larger systems, longer time scales, and the inherent interconnectedness of everything. From an ecological point of view, the human use of landscapes imposes burdens on the environment. It is understood that this is necessary if the human race is to meet its needs. Soils must be plowed and exposed to wind and water erosion if crops are to be grown. Unlike any other animal, however, humans have the capacity to understand how their activities can have cumulatively negative affects on the ability of the earth to provide the needed resources. There is abundant evidence that thinking only about the immediate future (can I increase my profit if I discharge into this pond?) and only about one small part of the earth (should we fill in this ephemeral wetland?) can have bad effects at the regional and global scales. From this view, the "waters of the United States" include every part of the system where liquid water collects – from a rill that flows only for a few hours to the Mississippi River and the Great Lakes. Therefore there is a nexus in both the biological and physical sense, and it is cumulatively significant. By ecological reasoning all parts of this continuum deserve protection. (p. 1)

Agency Response: The final rule regarding "waters of the United States" reflects the judgment of the agencies when balancing the science, the statute, the Supreme Court opinions, the agencies' expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public health. See Preamble to the Final Rule Sections III and IV and Technical Support Document.

5.386 The case for the hydrological "nexus"?

> *Storage Function*. With the exception of certain types of seepage wetlands, there cannot be a wetland without a basin. Because of this, wetlands perform a water storage function, reducing peak flows and except where basins are on impermeable substrates, recharging groundwater. Whether this reduction has significant effects downstream depends on precipitation amounts and patterns and the likelihood that water moving through the wetlands will reach larger bodies. In regions with higher and more consistent precipitation, overflow and contributions to groundwater will be frequent. In regions with less precipitation these connections will be less frequent and of shorter duration, but because of the greater aridity the contributions of the storage function may be relatively much more significant. Given that more intense episodes of precipitation are predicted for the future, this function will only become more important for wetlands across the precipitation gradient, and natural capacity for flood attenuation proportionately more demanding of protection. (p. 2)

Agency Response: The agencies have included "retention and attenuation of flood waters," "runoff storage," and "contribution of flow" as three of the nine functions that case-specific significant nexus evaluations will consider. See Section 5.0 Agency

Summary Response, Introduction and summary response to comment 8, Preamble to the Final Rule Sections III and IV and the Technical Support Document at II.D.

5.387 *Water quality improvement function*. The reports indicate several ways in which ephemeral wetlands can improve water quality. Most notable is related to the storage function. Water collected in basins will cause suspended solids to settle, a fact that justifies the creation of artificial basins when engineering solutions are employed to offset the negative affects of the expansion of impermeable substrates. For certain wetlands and conditions nitrogen can be removed through denitrification. Phosphorus can be sequestered in plant material and if a wetland is of a type to accumulate organic matter can remove it from regional cycling. The reports note that the value of natural ephemeral wetlands has been demonstrated by situations in which the drainage patterns have been disrupted by channelization, and other human disturbances resulting in increased siltation and decreased water quality for downstream sources. (p. 2)

Agency Response: The agencies have included "sediment trapping" and "pollutant trapping, transformation, filtering, and transport" as functions that case-specific significant nexus evaluations will consider. See Section 5.0 Agency Summary Response, summary response to comment 8, Section 5.4 Preamble to the Final Rule and the Technical Support Document at II.D. See also Response to Comments Compendium Topic 9 – Science.

5.388 The case for a biological "nexus." A biological "nexus" can be said to exist if organisms or their propagules (seeds, eggs) are regularly exchanged between ephemeral wetlands and the more permanent wetlands and bodies of flowing and standing water. It is clear from the many examples cited that there is in this sense a strong and biologically significant nexus. Further, ephemeral wetlands have unique ecological functions within this nexus that either cannot be provided by larger more permanent bodies of water as well as others that are provided at higher levels. Most notable among these biological attributes is the common absence or delayed arrival of larger predators which makes the ephemeral wetlands important habitat for predation susceptible animals both vertebrate and invertebrate. A significant proportion of the biota of ephemeral wetlands consists of species that are locally and even regionally migratory, opportunistically exploiting wetlands across seasonal and longer term fluctuations in wetland filling and drying. Commonly species move between ephemeral and more permanent bodies of water. Truncating a portion of the possible habitats cannot help such species, and may result in significant population losses. Many ephemeral wetlands play a crucial role for migratory waterfowl, serving as breeding habitat and stopover sites during migration. The loss of these wetlands would significantly diminish the capacity of landscapes to support waterfowl. (p. 2)

Agency Response: The agencies agree that biological connectivity can be sufficient to establish jurisdiction based on a significant nexus and have included "nutrient recycling," "export of food resources," and "provision of life cycle dependent aquatic habitat" as functions that case-specific significant nexus evaluations will consider. *See* response 6, 8 in 5.0 Agency Summary Response, Preamble to the Final Rule Sections III and IV and the Technical Support Document at Sections I and II. The agencies note that they considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream

traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

5.389 Can the ecological services provided by ephemeral wetlands be sustained against the pressure of economic expediency? The continual erosion of natural habitats is fostered by economic and political systems that fail to properly weight cumulative effects. Resources that consist of multiple small sites over a large area are especially vulnerable. Collections of ephemeral wetlands often occur in multiple ownerships and jurisdictions, making it difficult to do an accounting of collective loss of function. The well know process in which at each stage the loss of "just one small puddle" can be shown as economically and even biologically insignificant relative to the value to be gained by its destruction works strongly to the disadvantage of these small bodies of water. These reports make a strong case for why a more enlightened approach to preservation of ephemeral wetlands requires a regional and national view. (p. 3)

Agency Response: See Sections 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections II, VII, VIII and IX and Response to Comments Compendium Topic 9 – Science.

Ducks Unlimited (Doc. #11014)

5.390 Justice Kennedy's language places the science of connectivity between wetlands and downstream navigable waters (or other jurisdictional waters in the context of the proposed rule) front and center. He makes it clear that if there is a "significant nexus" between these waters, they should be considered jurisdictional to help fulfill the fundamental purpose of the Act. His apparent understanding that a *lack* of connectivity via surface waters can provide the basis for a significant nexus, particularly when viewed in the aggregate, in some cases (such as the prairie potholes), is insightful and demonstrates his acceptance and intent that science be the foundation for jurisdiction.

> It is also useful to examine one of the primary examples he referenced in his opinion to gain insights into his view of the intent and purpose of the Act, and of his view of the end product of defining and applying CWA jurisdiction. Justice Kennedy states:
>
> > "Important public interests are served by the Clean Water Act in general and by the protection of wetlands in particular. To give just one example, amici here have noted that nutrient-rich runoff from the Mississippi River has created a hypoxic, or oxygen-depleted, "dead zone" in the Gulf of Mexico that at times approaches the size of Massachusetts and New Jersey [cites omitted]. Scientific evidence indicates that wetlands play a critical role in controlling and filtering runoff [cites omitted]. It is true, as the plurality indicates, that environmental concerns provide no reason to disregard limits in the statutory text, but in my view the plurality's opinion is not a correct reading of the text. The limits the plurality would impose, moreover, give

> insufficient deference to Congress' purposes in enacting the Clean Water Act and to the authority of the Executive to implement that statutory mandate."
>
> Justice Kennedy's choice of the Gulf of Mexico's perennial hypoxic zone is informative and important in that the development of this particular example of degradation of the Nation's waters could not have been prevented or ameliorated by applying jurisdiction to only navigable-in-fact waters, their tributaries, adjacent waters, and wetlands that occur in floodplains. Only through safeguarding the functions provided by the millions of wetland basins and tens of millions of acres of wetlands that are (or were) distributed across much 1.2 million square mile Mississippi River watershed could the situation of the Gulf of Mexico hypoxic zone have been potentially prevented or managed at a lesser scale. It is in part because significant nexuses existed between these now long-gone wetlands, in the aggregate, and downstream waters ultimately leading to the Mississippi River and the Gulf of Mexico, that the hypoxic zone is as expansive as it is today. This fact, in conjunction with Justice Kennedy's follow up language regarding "deference to Congress' purposes in enacting the Clean Water Act," seems a clear indication of the breadth of jurisdiction to which he opens the door, assuming that the weight of the scientific evidence for significant nexus exists.
>
> Despite the expansive view he expressed regarding the purpose of the Act and choice of the hypoxic zone as an example of the kind of situation it was intended to prevent, Justice Kennedy's language in its totality places an outer limit on jurisdiction so that not every, tiny water body with an inconsequential connection to downstream waters could fall within the scope of the Act. There must be a "significant nexus" of wetlands and other waters, in the aggregate, with downstream navigable waters, recognizing that even wetlands lacking a surface connection can have the required significant nexus. Thus, his language provides the basis for placing wetland, hydrologic, and related sciences at the forefront of determining jurisdiction such that, as long as his conditions are met, jurisdiction can be applied in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," including that required to prevent the degradation of the Gulf of Mexico. (p. 7-8)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 – Science. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional**

navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Section IV.

5.391 Significant Nexus: Additional Science-based Comments Regarding Connectivity. Because Ducks Unlimited has over time focused its conservation efforts and developed its expertise in some regions more than others in relation to their relative importance to waterfowl conservation, our preceding analyses have concentrated most on those regions. However, as is evident from the Connectivity Report and the draft report of the SAB's special panel on connectivity, the scientific literature clearly documents that many other wetlands and wetland subcategories falling within the proposed rule's "other waters" classification have similar types of significant nexuses with downstream navigable waters. The remainder of our comments will highlight some of the science regarding the existence, geographic extent, and general pervasiveness of those avenues of significant nexus. We have primarily organized this additional information by hydrologic and ecologic functions, and divide our contributions into the four categories of "*Surface water storage and flood abatement*," "*Groundwater recharge and base flow maintenance*," "*Water quality relationships*," and *"Biological nexus."* It should be clear from the regional examples cited above, however, that these individual wetland functions and avenues of significant nexus can and do interact in important ways.

Obviously, we will not attempt to duplicate the exhaustive amount of work that went into reviewing and synthesizing the well over 1,000 scientific publications

synthesized within the Connectivity Report and, importantly, the report of the SAB's special panel on connectivity. Instead, our intent in providing these additional comments regarding the significant nexus of "other waters" with downstream navigable waters is to encourage and provide support for the agencies' consideration to several key points.

First, we desire to contribute additional science and science-based perspective to the work that the agencies have already conducted, that will be added to by the public comments, and ultimately further synthesized in the form of the final rule. We also want to provide further encouragement to the agencies to use a "weight of the evidence" approach in making decisions regarding how "other waters" will be treated in the final rule. Our earlier comments offer what we believe is a compelling, multifaceted rationale for using that conceptual framework as the foundation for distilling the existing and emerging science into the final rule. However, we believe that, in addition to the science already presented, while not focused on particular regions, the following additional science and comment should help to foster a greater understanding of the breadth and general degree of linkages that exist to demonstrate a "nexus" between almost all "other waters" and downstream navigable waters. And finally, we hope to help convey a sense of the scientific reality that the cumulative effect of many small, scattered, seemingly isolated impacts to "other waters" ultimately has an impact on downstream navigable waters that can only be considered significant, as evidenced by the current state of the Nation's waters being a reflection of the past cumulative degradation and loss of "other waters." (p. 59)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.**

5.392 A. Surface Water Storage and Flood Abatement

Wetlands in any watershed, including "other waters," serve a critical function in storing and holding water and associated pollutants (including sediment) that otherwise would flow more rapidly and directly toward navigable waters. Thus, wetlands play a significant role in local and regional water flow regimes by intercepting storm runoff and storing and releasing those waters over an extended period, either through surface or groundwater discharges (Mitsch and Gosselink 1986). Floods continue to be the most economically significant natural hazard in the U.S., and have a significant negative impact on national, regional, and local economies, as well as taking a toll on human life, health, and general welfare.

We again encourage the agencies to carefully review Blann et al.'s (2009) thorough review of the effects of surface and subsurface drainage on aquatic ecosystems (>400 citations). They make an important contribution by collecting and effectively synthesizing information that relates to the effects of drainage, often involving either existing or former "other waters," on the chemical, hydrologic and physical,

and biological integrity of downstream waters. Their synthesis underscores the significance of the cumulative impacts of the upstream alterations of water bodies.

Another recent paper (McLaughlin et al. 2014) specifically examined geographically isolated wetlands from the standpoint of the current "significant nexus" context. They added to the many others who have found that these kinds of "other waters" moderated the frequency of both very high and very low water tables, and they also buffered stream base flows, thereby exhibiting a significant nexus with flowing waters. This functional connection between geographically isolated wetlands and navigable waters reduces the risk of downstream interests to flood hazards, and also reduces the erosion of stream banks and sediment movement and the physical, chemical, and biological consequences of those alterations to downstream hydrology. Additionally, groundwater exchange is controlled more by wetland perimeter than surface area, indicating the importance of many small wetlands. Importantly, their modeling work verified that given the same surface area of wetlands, landscapes with many small wetlands had more "capacitance" than landscapes with fewer large wetlands. They conclude that a significant nexus exists as a consequence of the influences of these "other waters," in the aggregate, on regional water tables and regulation of base flows.

The presence of wetlands in watersheds was found to be a significant factor in the reduction of 50- to 100-year floods (Novitzki 1978). In Wisconsin, Illinois, and the northeast U.S., wetland area within watersheds has been shown to be positively correlated with reduction in peak flows (Novitzki 1978; Novitzki 1982; Novitzki 1985; Demissie et al. 1988; Demissie and Khan 1993). Johnston et al. (1990) modeled the relationship between wetland flood storage and flood peak reduction and found that in watersheds with a wetland area of less than 10%, major effects on flood flows were associated with small additional losses in wetland area.

The decrease of 80% of the storage capacity of the Mississippi River floodplain as a result of levees and loss of forested and other wetlands (Gosselink et al. 1981) is widely considered an important contributing factor to the increasing frequency of flooding along the Mississippi River (Belt 1975). Hey et al. (2004) calculated that restoring 4 million acres of former wetlands in the Mississippi River floodplain could create approximately 16.5 million acre-feet of flood storage. Conversely, the loss of existing wetland acreage in the floodplain and watershed would increase flood flows on this navigable river. An increase in discharges from agricultural landscapes, at least in part due to wetland drainage, has been shown to be a primary contributing factor in carbon, nutrient, and pesticide exports to the Gulf of Mexico (Raymond et al. 2008).

Studies in landscapes with other types of non-proximate wetlands have similarly demonstrated that drainage of wetlands and other areas results in increased peak flows in navigable waters and their tributaries (Skaggs et al. 1980; Allan 2004). Ogawa and Male (1983) employed a hydrologic simulation model to demonstrate that for relatively low frequency floods (those occurring with 100-year interval or greater which are also those with the greatest potential for catastrophic losses) the increase in peak stream flow was very significant for all sizes of streams when wetlands were removed from the watershed. Brody et al. (2007b) analyzed 383

nonhurricane flood events in Florida, and their results suggested that property damage caused by floods was significantly increased by alteration of naturally occurring wetlands. Many or most of these floods were presumably in association with jurisdictional waters.

As with USDA programs in the PPR, Duffy and Kahara (2011) showed that wetlands restored by the Wetland Reserve Program in the Central Valley of California provided flood storage of 113 billion cubic feet in 2008. They also documented that, in the aggregate, that the palustrine, riparian, and vernal pool wetlands in the region provided flood storage of 4159, 2182, and 2140 cubic meters, respectively. Clearly, loss of wetlands in this region would ultimately increase flood flows in navigable rivers like the Sacramento and San Joaquin.

Viewed on the whole, studies like these provide examples of the general importance of wetlands in flood attenuation. The aggregate contributions of individual wetlands distributed across a regional landscape, and often located within topographically higher portions of the watershed and non-proximate to other jurisdictional waters, can nevertheless exert a very significant effect on flood volumes. Thus, many seemingly geographically isolated wetlands are in fact adjacent in functional sense, and exhibit a significant nexus with navigable waters that are clearly jurisdictional from the perspective of the Clean Water Act and federal interests such as flood and pollution control. (p. 60-61)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.**

5.393 B. Groundwater Recharge and Base Flow Maintenance

Attention is being increasingly focused on the growing problems associated with rapidly increasing use and diminishing supply of groundwater resources in many areas across the U.S. (Russo et al. 2014). That being the case, the development of the final rule should keep in mind the role that surface wetlands, particularly "other waters," play in the recharge of groundwater that very often also discharges to flowing waters.

There is a much greater degree of linkage between wetlands, including aggregations of wetlands classed as "other waters," and navigable waters via groundwater connections than is generally appreciated. As stated earlier, significant nexus analyses and functional adjacency should be considered in hydrologic and ecologic contexts, not merely within a physical or geographic one, in order for the regulatory environment to adequately address the stated purposes of the CWA and intent of Congress. Wetlands very often contribute to groundwater recharge, and this groundwater then continues to move downslope toward flowing streams and rivers, thereby ultimately contributing water to jurisdictional waters (Ackroyd et al. 1967; Winter et al. 1998).

Winter (1998) provided a good overview of the interconnections between streams, lakes, and groundwater systems. He concluded, "Groundwater interacts with surface water in nearly all landscapes," and provided examples from glacial, dune, coastal, karst, and riverine systems regarding these interactions. Hayashi and Rosenberry (2002) also reviewed these almost universally prevalent significant nexuses and cited many examples, coming to the same conclusions as Winter (1998). Woessner (2000) provided an overview of the interactions between groundwater and flowing waters in a fluvial plain setting, and highlighted the significant potential that exists for pollution of surface waters, such as jurisdictional waters, if groundwater becomes contaminated. (See later discussion for more on this topic.) Sloan (1972) stated that water seepage to groundwater was greater for ephemeral and temporary wetlands than for other wetland types. Other review papers and individual studies typically demonstrate that not only do connections almost always exist between wetlands, groundwater, and streams and rivers, but also that these interconnections are usually complex.

Gonthier (1996) documented the linkage and flow of water between an extensive bottomland hardwood wetland in Arkansas (a Ramsar-designated Wetland of International Importance), local flow of groundwater, and the Cache River up to ~2 miles away. However, the farther the wetland from the river, the more likely the water from the wetland was to enter groundwater flowing to the deeper Mississippi Alluvial Valley aquifer which discharges flows to major navigable rivers, including the Cache, White and Mississippi.

Flow of water and its chemical constituents from wetlands, via groundwater, to the water of the Great Lakes is extensive and important and has been frequently documented. Doss (1993) examined a coastal wetland complex in Indiana on the south shore of Lake Michigan and found strong hydrologic connectivity between the many interdunal wetlands and the lake, noting groundwater discharge to Lake Michigan was the only significant loss of water from the wetlands besides evapotranspiration. Holtschlag (1997) evaluated Michigan's entire Lower Peninsula, and estimated that groundwater discharge constituted 29.6 to 97.0% of the annual percentage of stream flow in the region. While he did not evaluate wetland interactions with groundwater per se, there presumably is significant recharge of the groundwater from wetland basins in the region, although this will require further review of data from the region to verify. Holtschlag and Nicholas (1998) estimated that 67.3% of stream flow in the Great Lakes basin is groundwater discharge, and represents 22-42% of the Great Lakes water supply, its largest component. A significant portion of this groundwater is likely the result of recharge from wetland basins. In Wisconsin, groundwater flow into Lake Michigan is between 7 and 11% of the river flow, a significant part of the lake's total water budget (Chekauer and Hensel 1986).

In the case of vernal pools in California, Hanes and Stromberg (1996) reported that wetlands with discontinuous or a weakly developed hardpan had high rates of seepage and therefore contributed to subsurface flow. Tiner et al. (2002) stated that during the wet seasons these geographically isolated wetlands formed hydrologically linked complexes that could drain into perennial streams.

"Other waters" that exist in karst topography are often directly linked to subsurface water flows of relatively high velocity, moving easily through underground channels, caves, streams, and cracks in the rock. There tend to be many springs and seeps, many with surface connections, which are the source of some large streams (Winter et al. 1998), and Winter (1998) stated that groundwater recharge in karst terrain is efficient. Entire streams can go subsurface and reappear in other areas and connect directly with wetland basins, and contaminants deposited in "other waters" are easily mobilized in these regions.

In addition to the direct hydrologic connections that exist between groundwater and streams, the nature of the groundwater discharge to streams can have impacts such as influencing benthic productivity (Hunt et al. 2006). The nature of recharge from wetlands to this pool of groundwater can therefore create an even more complex significant nexus between wetlands and navigable waters as a result of the interacting hydrologic, chemical, and biological relationships. Clearly, demonstrated linkages between wetlands, groundwater and navigable waters within a broad variety of wetland categories and across a diversity of landscapes and regions, indicate that adjacency and significant nexus should be interpreted from a functional perspective if water quality is to be protected as intended by the CWA. (p. 61-63)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.**

5.394 C. Water Quality Relationships

The importance of the relationships between wetlands and the water quality of navigable waters is central to an informed understanding of what should constitute jurisdictional wetlands under the CWA. It is well established that wetlands of all types have the capability to improve water quality by trapping, precipitating, transforming, recycling, and/or exporting many of its chemical and waterborne constituents (van der Valk et al. 1978; Mitsch and Gosselink 1986). Wetlands serve as a natural buffer zone or filter between upland drainage areas and open or flowing water. They can improve water quality by removing heavy metals and pesticides from the water column, and by facilitating the settling of sediment to which many pollutants are attached. (p. 63)

Wetlands remove excess nutrients, e.g., phosphorus and nitrogen compounds, by incorporating them into plant tissue or the soil structure and by fostering an environment in which microbial and other biological activity pulls these compounds out of the water, thereby enhancing water quality.

Importantly, water quality contributions by wetlands can occur no matter where the wetland occurs on the landscape, and "other waters" also serve as chemical and nutrient sinks, trapping and holding these compounds (Mitsch and Gosselink 1986; Mitsch et al. 1999). Retention time, obviously prolonged when waters flow into a wetland before leaving via surface runoff or through infiltration into subsurface groundwater that flows to a river, has been shown to be the most important factor in promoting nitrogen processing (Jansson et al. 1994). For example, when water naturally filters through Delmarva bays (a category of geographically isolated wetlands) instead of being circumvented through drainage canals to a navigable water, it flows through groundwater pathways to the Chesapeake Bay with much of its nitrogen having been removed (Laney 1988; Shedlock et al. 1991; Bachman et al. 1992; Fretwell et al. 1996). Nitrogen is one of the principal pollutants of concern in the waters of the Chesapeake Bay, and in many other waters that supply domestic, municipal, irrigation and commercial needs. In Michigan, Whitmire and Hamilton (2005) concluded that a remarkably small area of wetland can strongly influence water quality relative to nitrate and sulfates. Some of their study wetlands were connected to the groundwater system. In Lake Michigan and Lake Huron, the biota associated with wetlands near outlets from agricultural drainage systems was different than that of coastal wetlands not close to such outlets (Schock et al. 2014). These differences were associated with increased levels of nitrates, turbidity, and other chemical characteristics of the drainage water, thereby providing another example of the impacts related to upstream drainage of "other waters" that could have intercepted and improved water quality.

Lin and Terry (2003) demonstrated that wetlands in California were able to remove an average of 69% of the selenium contained within agricultural runoff they received, thereby providing a natural mechanism for reducing the availability of this trace element which becomes toxic if bioaccumulated in the food chain. Weller et al. (1996) demonstrated that riparian wetlands of all types in eight watersheds of Lake Champlain were important in reducing phosphorus loading of surface waters.

With increased flows being a direct result of wetland drainage and artificially increased connectivity with downstream waters, those increased flows in turn increase stream incision, the rate and nature of channel evolution, and the rate of erosion and sediment transport (e.g., Simon and Rinaldi 2006). Bellrose et al. (1983) and Mills et al. (1966) also described how sedimentation and stream bank erosion have created navigation and ecological problems on the Illinois River. One group of researchers stated that "discharge is a master variable that controls many processes in stream ecosystems" (Doyle et al. 2005). While recognizing the variability in response to increased or decreased flows, they categorized the impacts as affecting (1) transport, (2) habitat, (3) process modulation, and (4) disturbance. Thus, again, unregulated wetland losses that alter discharges and flow regimes of receiving waters would in turn result in alter the integrity of downstream navigable waters.

Fennessy and Craft (2011) examined the relationships of Farm Bill wetland conservation programs to nutrient and sediment loads contributed by the entire Glaciated Interior Plains, (encompassing much of a seven-state area from Minnesota to Ohio) to the Mississippi River and Gulf of Mexico. Wetlands involved included about 260,000 acres of a variety of wetland types scattered throughout the region. They estimated that these wetlands reduced the region's contribution of nitrogen, phosphorus, and sediment to the Mississippi River by 6.8%, 4.9%, and 11.5%, respectively. Given that excess nitrogen is widely accepted as the primary cause of the hypoxic zone (Moreau et al. 2008), these wetlands clearly exhibit a significant nexus and provided significant benefit to the Mississippi River and Gulf of Mexico. However, it is important to recognize that if analyzed on the basis of only single point of entry watersheds, they would likely not have been determined to be jurisdictional wetlands, and this benefit to the Mississippi River and Gulf would be lost if those waters were significantly impacted by the draining or filling of the wetlands. A disproportionately high percentage of the nitrate load that the Mississippi River exports to the Gulf of Mexico comes from this region (Hey 2002), with the loss of wetlands and their cleansing role from across the landscape being a significant factor (Hey et al. 2012). Donner et al. (2002) stated that increased nitrate export to the Mississippi River between 1966 and1994 involved an increase in drainage and runoff from across the landscape. Wetlands falling into the "other waters" class in the proposed rule would have been able to intercept, retain, and process a significant portion of this water before it flowed to the Mississippi River had the wetlands been protected and retained on the landscape. In turn, the increased level of nutrients in the increased discharge from the river into the Gulf of Mexico is the major driver in the annual development of the hypoxic zone there, a process which is operating within the Chesapeake Bay, as well (Diaz and Rosenberg 2008).

In an analysis of USDA programs in California's Central Valley, Duffy and Kahara (2011) calculated that wetlands restored via the Wetland Reserve Program in the valley could improve the quality of incoming water by removing substantial amounts of nitrate-nitrogen, thereby benefiting and exhibiting a significant nexus with downstream receiving waters. Human-induced eutrophication of lakes and rivers is a growing issue across the U.S., with total nitrogen and total phosphorus

for all EPA nutrient ecoregions exceeding reference median values (Dodds et al. 2009). In light of the scientific evidence, it is evident that loss of wetlands in the "other waters" class, in the aggregate, has played a significant role in this long-term trend. (p. 65)

There is a vast body of scientific literature dealing with the relationship of wetlands (including many that are "other waters") and water quality, and the literature cited above is only a small sample of what is available on the topic. Many studies, as indicated above, also document widespread and direct physical linkages between the water contained in wetlands, groundwater, and flowing waters and tributaries considered "waters of the United States." However, taken as a whole, it provides compelling evidence that to protect the Nation's water quality, as intended by the CWA and amendments, the aquatic resources that together comprise an interconnected system must be protected. Further, this body of information affirms that the definition of adjacency and significant nexus must be evaluated from within a context of wetland and water quality functions, not simply physical proximity. As Whigham and Jordan (2003) concluded in a review paper, from a water quality perspective, "so-called isolated wetlands are rarely isolated" from other "waters of the United States." (p. 65-66)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.**

5.395 Human Health Issues: A few examples of pollution of waters are informative regarding the risks associated with failing to recognize the significant nexus that exists between

"other waters," groundwater, and navigable waters, and failing to view them as a single system relative to determining CWA jurisdiction. Additionally, from the standpoint of interpreting these risks, some examples of "artificial" waters nevertheless serve as instructive surrogates for the potential water-borne pollution pathways for natural wetlands. For example, Ryan and Kipp (1997) assessed the impact of liquid wastes discharged from an enriched uranium recovery plant to evaporation ponds in Rhode Island. They identified chemical and radioactive constituents that infiltrated from the ponds to the groundwater aquifer, creating a plume that ultimately discharged into the Pawcatuck River.

> Superfund sites offer many examples of the hazards associated with the pollution of nonproximate waters, whether natural or artificial, to navigable waters. In Macomb County, Michigan, at a 100-acre site at which effluent from a waste oil reclamation facility was held in ponds (EPA Superfund ID No. MID980410823), groundwater was found to be contaminated with volatile organic compounds which flowed toward business and residences, causing residents to use bottled water for potable purposes. Fish collected in the nearby Clinton River had elevated PCB levels. The Vertac site in Arkansas (EPA RCRA ID No. ARD000023440) involved the contamination of an aquifer with dioxins, furans and other chemicals that eventually contaminated Bayou Meto, a traditionally navigable waterway. White and Seginak (1994) documented that as a result of the dioxins and furans in Bayou Meto, wood ducks breeding there experienced suppressed nest success, hatching success, and duckling production. Teratogenic effects, such as crossed-bills, were documented at the sites with the highest levels of contamination. Similar situations of contamination of navigable waters as a result of linkages to "other waters" and groundwater are unfortunately not uncommon. (p. 66)
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> More recently, concerns have arisen over coal ash settling ponds and their nexuses to navigable and other waters. At a site adjoining Lake Michigan and the Indiana Dunes National Seashore in northwest Indiana, Cohen and Shedlock (1986) noted elevated levels of boron, arsenic, and molybdenum in groundwater associated with a coal ash pond. Subsequent to the 1.1 billion gallon ash release from holding ponds in Tennessee, the Gibson plant in Indiana came under increased scrutiny as a result of boron concentrations (reported to cause nausea and diarrhea, among other potential adverse health effects) increasing in drinking water wells of East Mount Carmel (www.courier-journal.com February 23, 2009). Significantly elevated concentrations of selenium (teratogenic and toxic at high concentrations) in an associated cooling lake caused a closure to public fishing and raised concerns about nesting endangered least terns. Our understanding is that the EPA has been assessing the risks associated with coal ash more closely. While the question of the level of hazard associated with coal ash is not directly at issue with respect to the CWA, we encourage the EPA to look to those situations as examples of "artificial other waters" waters that can provide information and perspectives on the relevant question of the types and pervasiveness of avenues of significant nexus between "other waters" and downstream waters that exists across the country.
>
> Finally, harmful algal blooms are an increasing water quality problem that clearly has significant human health and economic implications (Falconer 1999; Dodds et

al. 2009). This problem has been exacerbated by the loss of the many, often small, isolated wetlands from across the landscape which, when protected, sequester nutrients (phosphorus and nitrogen) that lead to the unnatural blooms. High phosphorus loading is primarily responsible for the resurgence of algal blooms in Lake Erie (International Joint Commission [IJC] 2014). Much of the phosphorus input comes with runoff during spring snowmelt and heavy precipitation events (IJC 2014) draining agricultural areas south of the west end of the lake in Ohio. And perhaps not coincidentally, Ohio has lost more of its wetlands (90%) than any other state except California (91%; Dahl 1990). It is a reasonable presumption that many of those wetlands would have been classed as "other waters" and if they were still on the landscape they would have intercepted some of that runoff and processed the nutrients it contained, thereby benefitting the integrity of Lake Erie. (p. 63-67)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.**

5.396 D. Biological Nexus

As is the case with respect to wetlands and water quality, there is also a vast literature regarding the significance of wetlands of the United States to fish, wildlife, amphibians, and other biota of the country and the continent. However, the primary question with respect to the draft guidance is to what extent biological information can be used to contribute to the establishment of a significant nexus between wetlands and jurisdictional waters. In addressing the issue from that perspective, we will continue to focus our attention on "other waters." Leibowitz (2003) pointed to the need for examples of organisms that require both navigable waters and "isolated" wetlands, and we agree that additional effort should be placed on identifying such linkages. Nevertheless, even for "other waters," we can highlight a few important examples.

Changes to flow regimes of navigable waters that result at least in part from degradation and loss of "other waters" also have a direct impact upon the biota of navigable waters. Some species, for example, can be eliminated as a direct consequence of flows that are increased in magnitude and/or frequency (Allan 2004). Conversely, lower base flows that result from wetland drainage and reduced infiltration to the subsurface water that discharges to navigable waters also have a direct effect on the habitability of the latter for many taxa.

Numerous studies of amphibians have documented that the loss and degradation of "other waters" can affect population size, distribution, and movement as a result of the cumulative impact of the loss of "other waters" (e.g., Rittenhouse and Semlitsch 2007; Schalk and Luhring 2010; Scott et al. 2013; McIntyre et al. 2014). Where these populations and effects occur in conjunction with navigable waters, the biological integrity of the navigable waters would therefore be impacted by the impacts to the "other waters."

In addition to the redhead and scaup example on the Texas Gulf Coast and other previously cited examples, other avian species spend significant time daily on saltwater (navigable) habitats and are similarly dependent upon the presence of regional freshwater wetlands for purposes of osmoregulation (Woodin 1994). We emphasize that these examples all apply to within-season, local/regional habitat use, and do not include the period of migration. Some examples of such species include: American black ducks (Anas rubripes) in the northeast and mid-Atlantic coast and Chesapeake Bay that also depend upon inland freshwater wetlands (see Morton et al. 1989); California gulls (Larus californicus) using hypersaline Mono Lake and freshwater wetlands in southern California (Mahoney and Jehl 1985); and white ibises (Eudocimus albus) using estuarine rookeries and requiring freshwater wetland-derived prey for osmoregulation (Bildstein et al. 1990).

Tens of thousands of waterfowl winter on and near the Great Salt Lake (Vest and Conover 2011), and some, such as northern shovelers (Anas clypeata) and green-winged teal (Anas crecca), feed on invertebrates (brine shrimp and brine flies) in the lake. However, both species are dependent upon the availability of freshwater wetlands for osmoregulatory purposes in order to use the food resources and habitats of the Great Salt Lake (Aldrich and Paul 2002). Thus, a diminishment or degradation of the freshwater wetlands in the vicinity of the lake would translate to a diminishment of the biological integrity of the navigable lake. Unfortunately, the research has not yet been conducted that would clearly show how distant those two species would fly daily to make use of freshwater wetlands.

We believe that, as shown clearly by the examples of the redheads and lesser scaup on the Gulf Coast, the dependence upon both navigable waters and "other waters" constitutes a significant nexus. In these cases, without the wetlands, the species would not occupy the region and the biological integrity of the navigable waters would therefore be impacted. Within-season use of both categories of waters as seen in the examples of other migratory (not migrating) birds demonstrates similar dependency and a similar nexus. This interdependence on both navigable and "other waters" should be given the same consideration for establishing a significant nexus as would the dependence upon adjacent wetlands and riverine habitats by an amphibian species, for example. Although the scale is different, they are scientifically and biologically analogous, and there is nothing in the SWANCC or Rapanos decisions that would justify disallowing the use of this kind of situation (e.g., redheads) as a basis for the biological nexus that Justice Kennedy described. (p. 67-69)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-**

cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule.

Southern Environmental Law Center et al. (Doc. #13610)

5.397 Agency Comment Request: However, the agencies also seek additional information that would enhance the predictability and accuracy of its jurisdictional determinations. The agencies request the type of information on the evolving scientific literature on connectivity of waters that could allow the agencies to rely less on case-specific significant nexus evaluations.[159]

Comment: Before examining other ways to increase the consistency of the significant nexus test, the agencies must be completely consistent in how they express the test itself. Some commenters have interpreted the significant nexus test to require chemical, physical, and biological connections between any "other water" and a jurisdictional water. There are places in the proposed rule where it could be interpreted that the agencies are saying the same thing. Such an interpretation of the test would make it impossible to establish connectivity in many cases. In drafting the proposed rule, the agencies do not go far enough to explain why Justice Kennedy uses the phrase "chemical, physical, and biological" instead of chemical, physical or biological in setting forth the test. To avoid a legal challenge on this point, the agencies will have to develop a strong counter argument and set it forth in the preamble to the final rule.

So far the agencies have said the following on this issue:

> To protect the integrity of the waters subject to the CWA, the significant nexus standard must be implemented in a manner that restores and maintains any of these three attributes of traditional navigable waters, interstate waters, or the territorial seas. Waters adjacent to tributaries also provide ecological functions that, in conjunction with the functions provided by the tributaries they are adjacent to, have a significant influence on the chemical, physical, and biological integrity of downstream traditional navigable waters, interstate waters, and the territorial seas.[160]

In the "Summary of Significant Nexus Conclusions" section following that quote, the Rule, it states:

> As the agencies developed this proposed definition of "waters of the United States," the agencies carefully considered available scientific literature and propose a rule consistent with their conclusions that a particular category of waters either alone or in combination with similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas.[161]

Finally, closer to the end of the Rule in the "Other Waters" section, the text states:

[159] 79 Fed. Reg. at 22192.
[160] Id. at 22194.
[161] Id. at 22197.

> The proposed rule includes a definition of significant nexus that is consistent with Justice Kennedy's significant nexus standard. In characterizing 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' . . . ."[162] It clear that Congress intended the CWA to "restore and maintain" all three forms of "integrity," 33 U.S.C. 1251(a), so if any one form is compromised then that is contrary to the statute's stated objective. It would subvert the intent if the CWA only protected waters upon a showing that they had effects on every attribute of a traditional navigable water, interstate water, or territorial sea. Therefore, a showing of a significant chemical, physical, or biological affect should satisfy the significant nexus standard. [163]
>
> Although these statements are helpful on this and-versus-or question, the agencies will have to go further to explain why only one connection is sufficient to establish a significant nexus. And the agencies will have to be very careful to use "and" where they mean "and" and "or" where they mean "or" whenever they state the significant nexus test in the final rule.[164] (p. 49-51)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 6 and 8. See also the preamble to the final rule at Section III.C. and the Technical Support Document at Sections I.C., II.D., and IX.C.**

5.398 Agency Comment Request: EPA and the Corps are very interested in identifying other emerging technologies or approaches that would save time and money and improve efficiency for regulators and the regulated community in determining which waters are subject to CWA jurisdiction. The agencies specifically invite comment on this topic.[165]

> Comment: The Savannah District of the Army Corps of Engineers has been using LIDAR with great success to identify wetlands and the surface connections that they may have to jurisdictional waters.
>
> It is critical that the Corps and EPA extend CWA jurisdiction as far as they can under current law. During the Bush administration, the Agencies fell far short of the mark. And although the draft Guidance is a vast improvement, we encourage the Agencies to go still further. The scientific literature is now clear that most non-proximate wetlands are connected either biologically, chemically, or hydrologically to jurisdictional waters. The proposed rule should reflect this reality. (p. 51-52)

Agency Response: **The preamble to the final rule includes an extensive discussion of technical tools, including LIDAR, at Section IV.F. See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final**

[162] Rapanos, 547 U.S. at 779.
[163] 79 Fed. Reg. at 22261.
[164] Rapanos, 547 U.S. at 780. Justice Kennedy would agree because in his opinion he stated that the nexus "must be assessed in terms of the [CWA's] goals and purposes.
[165] 79 Fed. Reg. at 22195.

Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

National Council for Air and Stream Improvement, Inc. (Doc. #13627)

5.399 The Proposed Rule fails to explicitly define the notion of significance, other than to state that "*for an effect to be significant, it must be more than speculative ore insubstantial."* The Proposed Rule would be more robust if the definition of "significant nexus" provided scientifically defensible metrics and methodologies to assess what is not a speculative or insubstantial connection.

> The Proposed Rule suggests that any physical, chemical or biological connection between tributaries, open waters and wetlands and a traditional navigable river constitute a "significant nexus." "Significant nexus" is not itself a scientific term but rather a legal construct of the Supreme Court that requires a policy determination. However, the concept of statistical significance is commonly used in the physical, chemical, and biological sciences. Research documenting a significant influence or effect on the physical, chemical or biological components of traditional navigable waters requires a high level of statistical significance (i.e., often alpha ≤ 0.05) to establish a connection's significant influence or effect and to meet standards for publication of research results in peer-reviewed journals. It is also critically important to acknowledge that even statistically significant connections constitute a relatively low threshold that may not result in any meaningful influence on the physical, chemical or biological integrity of traditional navigable waters. That is, a statistically significant "connection" may be still quantitatively too small to have meaningful influence on a larger waterbody. Thus, to meet modern scientific standards, one would need to demonstrate that an individual waterbody, potentially well upstream, has a statistically significant and meaningful chemical, physical or biological influence on downstream traditional navigable waters. However, missing from the Proposed Rule are: (1) any substantive discussion of methods that could be used to define, identify and delineate waters, traditional navigable waters, and adjacent wetlands; (2) methods that could be developed to quantify physical, chemical and biological connections among waters wetlands, and traditional navigable waters; and (3) criteria that policy makers might select for distinguishing significant connections from other *de minimis* connections. Absent such elements, regulators cannot intelligently and consistently evaluate whether "other waters" meet the "significant nexus" test. (p. 5-6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science.

The Wildlife Society (Doc. #14899)

5.400 Presence of a "significant nexus" is difficult to consistently and objectively apply in jurisdictional determinations. Scientific evidence suggests that a nexus occurs where

connectivity is established with the potential for an effect on the chemical, biological, or physical integrity of jurisdictional water. But, whether an effect is significant for a given quantity of toxin, nitrates, phosphorus, sediment, etc., on the integrity of downstream waters will inevitably vary from each other and from one wetland to another. Therefore, we submit that the word "significant" should be de-emphasized in this rule, or that more clearly defined criteria be outlined for determining the "significance" of a connection. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response Introduction and summary response to comments 7 and 8, Preamble to the Final Rule at Sections III and IV.H, and the Technical Support Document at Section I, II and IX. See also Sections 5.3 and 5.4 Agency Summary Responses and Response to Comments Compendium Topic 9 – Science.

5.401 … [T]he importance of ephemeral, intermittent, and perennial streams is discussed at length in the proposed rule's preamble and the SAB report; however, the temporal component of connectivity is not recognized in the proposed rule itself. Because hydrologic connectivity can vary within and between years while retaining its importance as a significant nexus, we recommend language reflecting this for not only streams, but also for tributaries, wetlands, and all other water bodies. (p. 4)

Agency Response: The rule's definition of "tributary" requires both the contribution of flow to downstream waters and the physical characteristics of a bed, banks, and another indicator of ordinary high water mark in order to establish a water that is jurisdictional by rule under that category. See the Preamble to the Final Rule at Section IV.F. and the Technical Support Document at Section VII. For waters that are not jurisdictional by rule, the case-specific significant nexus evaluation will consider "contribution of flow." *See* the preamble to the proposed rule at Section III.C. and the Technical Support Document at Sections II and IX. See also Section 5.0 and 5.4, Agency Summary Responses.

National Wildlife Federation (Doc. #15020)

5.402 As is evident from the Connectivity Report and the SAB Connectivity Peer Review Report, the scientific literature clearly documents that many other wetlands and wetland subcategories falling within the proposed rule's "other waters" classification have similar types of significant nexuses with downstream navigable waters. This section highlights some of the science regarding the existence, geographic extent, and general pervasiveness of those avenues of significant nexus. One objective of this summary is to help convey a sense of the cumulative effect of many small, scattered, seemingly isolated impacts to "other waters" ultimately has an impact on downstream navigable waters that can only be considered significant, as evidenced by the current state of the Nation's waters being a reflection of the past cumulative degradation and loss of "other waters."[166] (p. 93)

[166] Excerpted from Ducks Unlimited 2014 Rule Comments at Section IV. [*The Ducks Unlimited comments are found within Doc. #11014, p. 60-69, and are included elsewhere within this compendium. The comments excerpted and presented by National Wildlife Federation (Doc. #15020, p. 93-100) are nearly verbatim to those comments from Ducks Unlimited and are not repeated here.*]

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science.**

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

5.403 While the conservation groups partially agree with your fundamental observations that "[t]here is a gradient in the relation of waters to each other," and that "[t]he relationship that waters can have to each other and connections downstream that affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas is not an all or nothing situation," 79 Fed. Reg. 22193, there are implications that could be derived from these statements with which we do not agree. One clear implication of these observations regarding connectivity, and based upon elementary principles of hydrology and ecosystemic connectivity, is that a water body may affect another in multifaceted and sometimes subtle ways that constitute a significant nexus to traditionally jurisdictional water. This is certainly true and in this context, it is important to recall that the Supreme Court's decision in *Rapanos* did not invalidate any of the then extant regulations defining "waters of the United States." *Rapanos v. United States*, 547 U.S. 715, 126 S. Ct. 2208 (2006). Indeed, that is a point that you make in at least one part of your proposed rule. *See* 79 Fed. Reg. 22252. (p. 1)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science.**

5.404 The conservation groups agree, as well, that "a hydrologic connection is not necessary to establish a significant nexus," 79 Fed. Reg. 22213, consistent with Justice Kennedy's observation in Rapanos that "it may be [also] the absence of an interchange of waters . . . that makes protection [of the wetlands in that case] critical to the statutory scheme," 547 U.S. at 775, and that functions of "other waters" establishing a significant nexus may include sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat. 79 Fed. Reg. 22213. Of course, under generally accepted scientific principles, some hydrologic connection will exist. However, it can be difficult and costly to prove the physical connection. Proof of physical connection should not be required. (p. 8-9)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science.**

In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the

territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. See Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Section IV.

Natural Resources Defense Council et al. (Doc. #15437)

5.405 (…) [W]e strongly support the agencies' attention, in explaining how "significant nexus" assessments will be made, to a wide variety of physical, chemical, and biological impacts, and especially the agencies' attention to the fact that hydrologic separation can create the requisite nexus.[167] (p. 55)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science. In many cases, the presence of a

[167] See generally 79 Fed. Reg. at 22,213-14.

hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. See Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Section IV.

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

5.406 To the extent the "significant nexus" test is the appropriate test, the proposed definition generally meets that standard. The proposed rule and the scientific literature supporting it recognize that tributaries (whether permanent, intermittent, or ephemeral), wetlands and open waters in riparian areas and floodplains, and many other categories of waters are connected physically, chemically, and biologically to downstream navigable and/or interstate waters through many different processes. See EPA, Office of Research and Development, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," External Review Draft, September 2013 (hereinafter "EPA Connectivity Report") at 1-3 – 1-4. Wetlands and open-waters outside of riparian areas and floodplains also affect downstream waters where there is a surface

or groundwater connection to a river network. Id. at 1-3 – 1-4. These waters provide many services, including "storage of floodwater; retention and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow," all of which affect downstream water quality and integrity. Id.

> (…) [M]aintaining these connections and protecting the health of all of these waters are critical for many wildlife species and their habitats. In reviewing EPA's draft Connectivity Report, the SAB emphasized that EPA must "recognize that all aquatic habitats have some degree of connection, although they may vary widely through space and time in terms of effects on the integrity of downstream waters." "SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," October 17, 2014, at 56 (hereinafter, "SAB Review"). Even "relatively low levels of connectivity can be meaningful in terms of impacts on the chemical, physical, and biological integrity of downstream waters." Id.
>
> Moreover, the goal set by the Clean Water Act in 1972 to "restore and protect our Nation's waters" is far from achieved. Development, agriculture discharges, and other activities continue to pollute our waterways and destroy wetlands and other riparian areas. Restoring and protecting the health of our nation's waterways – and the ecosystems they support – depends on restoring and maintaining the health of their tributaries, wetlands, impoundments, groundwater, pools, and other connected waters. Only by protecting these waters, and the habitats they support, will EPA and the Corps effectuate the explicit language, purpose and intent of the Clean Water Act, 33 U.S.C. § 1251 et seq. (p. 2-3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 4 – Other Waters and 9 – Science.**

5.407 Defenders generally supports the inclusion of "other waters" in the definition of waters of the U.S. on a case-specific basis, with the caveats and additions described in Earthjustice's comments. In addition, Defenders notes that the "significant nexus" test in this proposed definition should include a consideration of groundwater connectivity, to the extent it does not do so already. (…) [I]gnoring the connections between groundwater and surface water is inconsistent with sound science. See Member Comments, Dr. Kenneth Kolm, at 43, 52. (p. 10)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science. The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have**

important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwater, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.

Albemarle Area QUWF Chapter, et al. (Doc. #4292)

5.408 Intermittent and ephemeral streams may only flow during parts of the year, but they are incredibly important for our state's watersheds. They provide important spawning and juvenile rearing habitat, and whether or not they contain fish, they are the foundations that support water quality in larger downstream rivers. There is sufficient scientific evidence that these waters as defined by the agencies have important biological, hydrological, and chemical connections to these downstream waters. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters, Topic 8 Tributaries and Topic 9 – Science.

Caloosahatchee River Citizen's Association (Doc. #4711)

5.409 …Because the entire tributary system of the traditional navigable waters or the territorial seas is interconnected, pollutants that are dumped into any part of the tributary system eventually are washed downstream to traditional navigable waters, interstate waters, or the territorial seas where those pollutants endanger public health and the environment. The significant nexus relating to pollution transport (or prevention of such transport) from all tributaries of traditional navigable waters and the territorial seas to their downstream waters in and of itself justifies the assertion of CWA jurisdiction including all tributaries by rule. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, Sections 5.1, 5.2, 5.3, 5.4, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections II and VII.

Protect Americans (PAN), Board of Directors (Doc. #12726)

5.410 In the event that the Proposed Rule remains as currently drafted, then the agencies should at least consider an "opt-out" provision, which provides that those waters shown to have an insubstantial nexus could be withdrawn from categorical jurisdiction. The relevant agency must already make a substantial investigation, thus the least it could do is document the actual nexus. See Rapanos, 547 U.S. at 786 (explaining that court's reviewing significant nexus determinations "must identify substantial evidence supporting the Corps' claims.") (Kennedy, J. concurring). (p. 15)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, and VIII.

Idaho Conservation League (Doc. #15053)

5.411 ICL generally supports much of the Environmental Protection Agency's ("EPA") proposed definition, particularly the strong scientific grounding in parts of the rule that identify categories of ICL waters that are, by definition, waters of the U.S. or that have a "significant nexus" to waters of the U.S. ICL urges EPA to strengthen those definitions in accordance with comments from members of the EPA Science Advisory Board ("SAB") (…) (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Sierra Club Kansas Chapter (Doc. #15240)

5.412 What happens upstream matters. There is good science which demonstrates that removal of pollutants in the headwaters areas and seasonal streams contributes to cleaner water all the way to the Gulf of Mexico. Broad protections are essential to achieving the Clean Water Act's goal of restoring and maintaining the physical, chemical, and biological integrity of all the Nation's waters. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Delaware Riverkeeper Network (Doc. #15383)

5.413 Commerce Clause Factors and Significant Nexus Test. Generally, the rule should not remove commerce clause factors (such as recreational, fishing, and other tourism uses) as a basis for jurisdiction, and as such the significant nexus test should not be the only jurisdictional basis for all waters besides traditional navigable in fact waters, interstate waters, and territorial seas. (p. 2)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section I.**

Charles River Conservancy et al. (Doc. #16453)

5.414 The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

We urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. (p. 2)

Agency Response: **The agencies' final rule responds to requests to clarify the scope of the CWA.**

Western Resource Advocates (Doc. #16460)

5.415 Natural and artificial ephemeral streams, even if they carry only storm water, effluent from point source discharges or sediment from non-point source activities like road building and logging, eventually flow into intermittent or perennial tributaries or traditionally navigable or interstate waters. Thus, the pollutants in the storm water or effluent also find their way downstream and can have significant effects (positive or negative) downstream. For example, in an effort to keep its drinking water source watershed as clean as possible, the Pagosa Area Water and Sanitation District has published a page on its website cautioning loggers to "avoid poor logging practices" that cause excessive sediment contributions to the larger system.[168]

> If there are numerous, similarly situated ephemeral streams in a single entry watershed, then their combined impact in terms of pollutant load on the tributary, navigable water or interstate water can be significant. From an efficiency standpoint, it will almost always be more efficient to control these pollutants at their source rather than wait to control them downstream, especially because the pollutants are likely to have adverse effects on the aquatic life or recreational opportunities along the way. As the Pagosa example demonstrates above, many public water suppliers divert in a headwaters system that receives flows and pollutants from upstream ephemeral and intermittent reaches. In the southwest, water users also divert directly from intermittent and even ephemeral streams during the times of the year when they flow.[169] Thus, pollutant discharges to these small, seasonal waters must be controlled at their sources to protect the integrity of the region's municipal and agricultural water supplies. (p. 13)

[168] Watersheds, http://www.pawsd.org/watershed-protection.html (last visited Oct. 3, 2014). (Doc. #16460, p. 13)
[169] Wendy Bowden Crowther, Clyde Snow & Sessions, P.C., UTAH WATER LAW 101 (2009), available at http://slco.org/watershed/symposium/pdf2009/Symp09Crowther.pdf. (Doc. #16460, p. 13)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7, and 8, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and VII. See also Response to Comments Compendium Topic 8 – Tributaries and Topic 9 – Science.**

5.416 *Tributaries connected "through another water"* As Tenth Circuit courts have recognized, while groundwater itself is not jurisdictional under the Clean Water Act, entities that discharge to groundwater which reaches surface waterbodies still need permits to regulate those discharges. In *U.S. v. Earth Sciences, Inc.*, one of the violations the appellate court upheld as proper under the Clean Water Act involved a mine where cyanide reached the surface water system via groundwater seeps.[170] A district court reiterated this principle a decade later, finding that, **"**Clean Water Act's preclusion of discharge of any pollutant into "navigable waters" includes such discharge which reaches "navigable waters" through groundwater").[171] WRA is comfortable that the proposed rule maintains the distinction that allows permitting agencies to regulate point source discharges which reach jurisdictional waters through other waters, i.e., groundwater, without the groundwater itself being jurisdictional. (p. 15)

Agency Response: **The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.**

5.417 Because the arid and semi-arid west have less water than the rest of the country, the relative importance of the region's water and wetlands including in riparian zones and flood plains, cannot be overstated. As explained on the State of Arizona's centennial website, on a page entitled, "Riparian Areas: Rivers and Wetlands":

[170] U.S. v. Earth Sciences, Inc., 599 F.2d 368, 371 (10th Cir. 1979).
[171] Sierra Club v. Colorado Refining Co., 838 F.Supp. 1428 (D. Colo. 1993).

> Riparian areas, particularly river systems, are called "ribbons of life" . . . Riparian areas are the most productive habitats in North America. In fact, seventy percent of Arizona's threatened and endangered vertebrates depend on them. . . . Riparian areas make up only about 2% of the land in the Western U.S. and only 0.4% of arid Arizona. The natural water cycle in riparian areas improves the quality and sustainability of the land. Riparian soils have higher moisture content, . . . and are eroded and moved around by floods [which] rejuvenates floodplains. Rivers capture water from monsoon storms and store it for later use. A healthy riparian system channels and distributes floodwater, stabilizes stream banks, and recharges surface aquifers through the slow absorption of water back into the ground. These water systems also refine sediments and transfer nutrients . . . This natural refinement system can even decrease pollutant levels. . . . [A] whopping 90% of Arizona's streams are ephemeral, products of seasonal rains. These sources blossom with life in the wet season and vanish after the rains end. Though brief, their presence gives the opportunity for abundant growth where otherwise there would be very little. Others are perennially fed from snowmelt, yet go dry during the year due to a sinking water table.[172]
>
> As the proposed rule notes, the interconnections of small tributaries and adjacent wetlands not only affect the quantity of water in other jurisdictional waters, but will also affect the chemical integrity of such waters. In Utah, for example, much of the activity associated with tar sands & oil and gas development happen upstream of long-term agricultural and other diversions. Pollutants that enter small tributaries and adjacent waters at the upper extent of a watershed flow downstream into larger tributaries, (a)(1) and (a)(2) waters, either through surface or groundwater connections. Such pollutants can then be diverted from those waters and can require additional treatment to make them appropriate for the diverters' beneficial uses. (p. 20-21)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4 and Technical Support Document Sections I, II, VII, and VIII. See also Response to Comments Compendium Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 – Science.**

Wyoming Outdoor Council (Doc. #16528.1)

5.418 While it is probably implicit in much of what we have already said, we think it is important to point out that a significant effect on any chemical, physical, or biological feature may be sufficient to provide a significant nexus to downstream waters. It is not necessary that there be effects to all three categories of ecological attributes, impacts to any one of the categories is sufficient. The agencies recognize this, and we encourage them to maintain that view. *See* 79 Fed. Reg. at 22261 (stating "It is clear that Congress intended the CWA to 'restore and maintain' all three forms of 'integrity,' . . . so if any one form is compromised then that is contrary to the statute's stated objective."). (p. 11)

[172] ArizonaExperience.org, Riparian Areas: Rivers & Wetlands (citing Arizona Cooperative Extension, College of Life Sciences, University of Arizona), http://arizonaexperience.org/land/riparian-areas (last visited on Oct. 7, 2014).

Agency Response: **See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and summary response to comments 6 and 8 and Technical Support Document Sections I and II.**

Audubon Society of Greater Denver (Doc. #16934)

5.419 Movement of inorganic materials from ephemeral and intermittent streams to downstream waters should be one of the criteria to determine a "significant nexus" and thus jurisdiction under the Clean Water Act. For example, in Colorado unreclaimed mines leak heavy metals into headwater drainages, many of which are ephemeral or intermittent. These substances eventually move down-gradient into perennial streams where they can impact the quality of water used for municipal and industrial supply. To protect that water quality, this movement of inorganics should be considered in the nexus determination decision. (p. 2)

Agency Response: **The agencies have provided more detail in the definition of significant nexus as to the functions to be considered for the purposes of determining significant nexus: sediment trapping, nutrient recycling, pollutant trapping transformation, filtering and transport, retention and attenuation of floodwaters, runoff storage, contribution of flow, export of organic matter, export of food resources, or provision of life-cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas. Movement of inorganic materials would qualify as a "filtering and transport" function. The factors and functions relevant to a significant nexus analysis are discussed in Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Topic 4 – Other Waters and Topic 9 – Science.**

Society for Freshwater Science (Doc. #11783)

5.420 The Clean Water Act (CWA), as it is presently being interpreted, cannot adequately provide the means to restore and maintain the chemical, physical, and biological integrity of all of the Nation's waters unless it includes headwaters and adjacent waters as "waters of the U.S." Specifically, our research shows that headwaters:

- affect chemical integrity by their capacity to uptake, retain, transform and transport nutrients and contaminants;
- affect the physical integrity of waterways by controlling rates of runoff, water flow, and sediment delivery;
- affect the biological integrity of waterways by providing food resources, thermal refuges, spawning sites, nursery areas, and essential habitat for unique plants and animals, including numerous threatened and endangered species;
- are often profoundly altered by human activities, to the detriment of downstream water bodies and the public interest; and
- are likely to be among the first freshwater ecosystems to be affected by climate change.

Based on this science, it would be impossible to adequately restore and maintain the chemical, physical, and biological integrity of the Nation's waters without explicitly including headwater and adjacent waters as part of "waters of the U.S." Further, we note that since inception of the CWA there have been significant improvements to water quality and the health of aquatic ecosystems of the Nation, in part due to the historically broad scope of protection. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4 and Technical Support Document Sections II, VII, and VIII.

Society of Wetland Scientists (Doc. #12846)

5.421 The quality of downstream waters depends on materials that are (or are not) discharged upstream in the watershed and carried by streams to wetlands that can remove materials and clean the water.

- *Isolated wetlands* can improve water elsewhere in a landscape by trapping and retaining surface or groundwater discharges that would otherwise carry pollutants downstream.
- Non-isolated streams and wetlands are often *connected as a system*, either via surface water or groundwater. Wetlands that are connected improve water quality by performing *complementarily* along the water's flow path, with sequential contributions to the removal of solid and dissolved materials depending on the quality (e.g., particle size and weight) of the materials and the condition of the wetland (frozen or thawed, nutrient starved or eutrophic, deep or shallow, etc.). *The arrangement of wetlands on the landscape (size, density, position, etc.) influences water quality variables and flooding. The system is complex* and modelers now see the need to consider wetlands in aggregate (Zhang et al. 2012).

  Quoting Zhang et al (2012) further:

  > "Understanding the implications of wetlands on downstream lake phosphorus concentration requires detailed landscape and hydrological information about the catchments of individual wetland units (Tompkins et al. 1997)."
  >
  > "When inflow phosphorus concentration of a wetland is very high, it is likely that the wetland's effect on phosphorus retention exceeds its effect on consuming water and thus makes the phosphorus concentration lower at the outlet of wetland."

- Larger areas of wetland in a watershed remove larger amounts of materials. Johnston et al. (1990) found a threshold effect – reduced water quality where watershed area dropped below10%. This non-linear relationship indicates a synergism, not a simple addition.
- Water quality services are not just a linear/additive function of wetland area. High-quality water requires large wetland complexes and small wetlands dispersed across watersheds. Landscape heterogeneity and wide scattering of wetlands across the landscape are positive predictors of water quality (Moreno-

Mateos et al. 2008). 'Scattered and numerous wetlands are better than few and aggregated ones, because within the whole catchment they will increase landscape complexity (patch density and heterogeneity) and accordingly reduce the amount of TDS in water" (Ibid.; TDS = total dissolved solids).

– Detenbeck et al. (1993) showed that, for 33 watersheds near Minneapolis, downstream lakes had higher water quality where there were upstream wetlands in close proximity to the downstream lake. Similarly, Newbold (2005) found that "Targeted site selection in four small watersheds in the Central Valley resulted in predicted levels of nitrogen attenuation two to eight times greater than that from maximizing wetland area without consideration of the location of the restoration sites." This modeling study indicated high sensitivity to wetland distribution, not just wetland area. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response and Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Section II. See also Response to Comments Compendium Topic 9 – Science.

Consortium of Aquatic Scientific Societies (Doc. #14802)

5.422 Finally, we are disappointed that the proposed rule fails to recognize the strong and ecologically vital connections between ground waters and surface waters. Ground water, shallow aquifers, and hyporheic waters (those immediately below streams, lakes and wetlands) are connected to those surface waters and determine their flows during dry periods. Essentially, such ground waters are underground tributaries of lakes, streams, rivers, and wetlands. Groundwater upwelling is crucial for successful spawning of trout and salmon in lakes, and creates cool-water refuges in summer for juvenile and adult salmonids as well as warm-water refuges in winter when streams and lakes are ice covered. Ground water inputs are critical to most wetlands, lakes and streams, as well as spatially intermittent streams, and thereby affect the quality and quantity of those waters and the biota and fisheries that surface waters support. Inadequately regulated mining, fossil fuel extraction, agriculture, and industrialization have all contributed to groundwater depletion and contamination. Therefore exempting ground waters from "Waters of the United States" makes no sense from a scientific perspective. (p. 3)

Agency Response: The rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to

deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Section 5.0 and Section 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document Sections I and II. Response to Comment Compendium Topic 7 – Features and Waters Not Jurisdictional and Topic 9 - Science.

Society of American Foresters (Doc. #15075)

5.423 [W]e often expect headwater forest streams to have the lowest dissolved nitrogen concentrations, but the presence of nitrogen fixing plants or even geologic sources can alter this expectation (Holloway et al. 1998, Johnson 2001). Therefore, there is an emerging recognition that rigid application of water quality criteria standards is not productive. For example, some states are recognizing that streams that experience small, brief, and infrequent departures from state water quality criteria, and do not express negative impacts to beneficial uses, should not be listed as impaired (Ice et al. 2007). Unfortunately, the WOTUS definition fails to recognize the continuum of potential connectivity between waterbodies and application of the River Continuum Concept to forest management needs to be tempered with our understanding that all pollutants are partially non-conservative (Gravelle et al. 2007). Furthermore, "remote" connections may have diminishing impacts on downstream reaches and hydrologic "distance" is often defined best by temporal rather that spatial measurements. Research in small, forested headwater streams has found that there can be little water quality "connection" between relatively nearby reaches when time of passage downstream is prolonged (Johnson 2004, Dr. Arne Skaugset, Oregon State University, personal communication).

> Significant nexus is defined in some cases based on a cumulative connection of waterbodies. However, forests are managed in a rotation or cycle so that effects in one sub-basin or reach can be offset by recovery (e.g., reforestation) in another. Additionally, disturbance is recognized as important to maintain stream conditions favorable for fish habitat, yet disturbance events may temporarily exceed a water quality criteria developed for integrated mainstem reaches. Again, the potential expansion of WOTUS to remote headwater reaches fails to consider the practical application of other CWA elements. Therefore, when defining WOTUS, there needs to be careful consideration of how State water quality standards (WQS) are applied to headwaters and mainstem reaches as well as the different types and degrees of connectivity that occur in and among water and wetland features within a given watershed.

The factors and functions relevant to a significant nexus analysis are discussed in Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Topic 4 – Other Waters and Topic 9 – Science.

Clearly the US Supreme Court did not intend WOTUS to include all the Nation's waters and wetlands. Furthermore, the Proposal's broad interpretation of tributary – extending

to virtually any ditch, drain, or stream no matter how ephemeral or how remote – is insufficient to justify the presumption of CWA jurisdiction since the Court has concluded that "merely speculative or insubstantial" hydrologic connections to traditionally navigable waters are not WOTUS. (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7 and 8 and Technical Support Document Sections II and VII. Additionally, see Preamble to Final Rule at Section IV.I for a discussion on the exclusion of certain ditches from Clean Water Act jurisdiction.

5.424 The downstream significance of connections between small, ephemeral streams and wetlands and traditional navigable waters remains unclear. Accurately assessing the strength of connections among waters and wetlands and downstream waters becomes difficult and resource-intensive given that no metrics or methodologies are provided in the proposed rule. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5 and 7 and Technical Support Document Sections II, VII, VIII and IX.

Water Environment Federation Member Association Governmental Affairs Committees Representing EPA Region 7 (Doc. #15185)

5.425 Design Storm Issue for "Nexus" Determinations. Will EPA consider implementation of a universal "design storm" approach in its "Nexus" determinations; particularly for "Other Waters," ephemeral surface runoff areas, and so-called "fill and spill" areas? There have been on-going discussions about the need for a universal "design storm" concept for many years for stormwater management and enforcement of water quality standards. Only in limited cases within State MS4 permits have design storms been part of formal regulatory requirement It is well known that most stormwater management BMPs become ineffective beyond 2-year, 24-hour duration storms due to hydraulic capacity limitation issues.

It is implied then, that if stormwater "connectivity" of water flow through certain portions of a watershed pathway can only significantly occur with storms beyond standard BMP hydraulic capabilities, then there will be little value in classifying those pathway elements as "Waters of the U.S." In other words, regulatory requirements must be amenable to practical control measures or no defensible purpose is served. It is suggested that EPA include appropriate rationale for design storm considerations in recognition of practical "Nexus" determinations commensurate with typical BMP control measures, rather than leaving causative stormwater connectivity factors open-ended.

Issue Example: From our past annual 4-State GA meeting discussions, it was estimated by EPA Region 7 staff that at least 80% of the annual nutrient loading from the Mississippi River Watershed to the Gulf of Mexico Hypoxia Zone originates from a few very large storms. Again, these types of storms greatly exceed control measures typically available through stormwater management BMPs. Within EPA Region 7 over 90% of nutrient loadings are from non-point sources. Therefore, the implied reality is that over 90% of 80% = 72% of nutrient

loadings will be very difficult, if not impractical to control. Such large storms would largely overwhelm existing NRCS rural standard land management practices and would create exceptionally high flows even in ephemeral watershed areas.

Bottom line: Such large storm nexus issues may similarly apply to many pollutants of concern, and "nexus" determinations should not include physical, chemical, and biological evidence of water quality impacts that are associated with large storm events that are beyond practical BMP control. (p. 2)

Agency Response: The statutory and regulatory factors relevant for determining BMPs are distinct from the considerations relevant for determining the scope of "waters of the United States. The factors and functions relevant to a significant nexus analysis are discussed in Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Topic 4 – Other Waters and Topic 9 – Science.

Water Environment Federation (Doc #16584)

5.426 (…) Under the proposed rule, a significant nexus appears to be assumed, as it states "…even in cases where a hydrologic connection may not exist, there are other important considerations…that result in a significant nexus between the adjacent wetlands or waters and the nearby "waters of the United States" and (a)(1) through (a)(3) waters." (79 FR 22244) As one seeming justification for this expanded interpretation, the proposed rule states that "many major species that prefer habitats at the interface of wetland and stream ecosystems remain able to utilize both habitats despite the presence of such a berm." (Id. at 22245) This use of species preference and behavior to justify incorporation of a water with no proven hydrologic connection as a water of the U.S. closely resembles the previously invalidated migratory bird rule. As such, terrestrial species preference is not an acceptable basis for the assertion of jurisdiction. (p. 4)

Agency Response: See Sections 5.0 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Topic 3 - Adjacent Waters, 4 – Other Waters, and Topic 9 – Science. Regarding the *SWANCC* case which invalidated the assertion of CWA jurisdiction solely on the basis of use of a non-navigable intrastate pond by migratory birds, see Technical Support Document Section I. The agencies considered biological functions only to the extent that the functions had a significant effect on the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. In a case-specific significant nexus analysis for a particular water, non-aquatic species or species such as non-resident migratory birds do not demonstrate a life-cycle dependent on the identified aquatic resources and are not evidence of biological connectivity for purposes of this rule. Section 5.0 Agency Summary Response, Introduction and summary response to comment 3 and Technical Support Document Sections I and II.

In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. *See* Preamble to the Final Rule Section IV.

5.427 As a related matter, such "connectivity" link to water quality standards will be very important in extending the Proposed Rule to the existing TMDL Program where downstream water quality shows impairment. In addition, the Proposed Rule mentions that certain means of stormwater conveyance may potentially be considered to be "point sources"; whereas such point sources may have been previously considered to represent non-point sources. This would imply that certain previous TMDL determinations, involving both point source waste load allocations and non-point source load allocations, may have to be re-examined and re-issued as a result of the Proposed Rule. Therefore, it is suggested that "connectivity" factors need to separately distinguish short-term wet weather impacts from long-term impacts (e.g., bio-accumulative impacts) and must describe how established water quality standards are to be addressed in a meaningful, defensible manner at the pollutant source. (p. 7)

Agency Response: **The rule, which defines "waters of the United States," does not affect the scope of the statutory definition of "point source." See Section 5.0 Agency Summary Response, Introduction and summary response to comment 7 and Technical Support Document Section II.**

5.428 Finally, on a related "connectivity" issue – WEF would like to note that, as written, and in conjunction with the Connectivity Report, EPA and the USCOE appear to advocate deep consideration be given to biological/chemical/physical (BCP) connections. WEF members have experienced occasions where the focus seem to be only on the hydrologic connectivity. For instance, during wet weather, gullies, ditches, and ephemeral streams will deposit large woody debris (LWD) and food sources for the downstream aquatic populations life cycles. This may make those waters jurisdictional through the unmentioned BCP connections. WEF's concern is that a disproportional focus may be given by regulators to BCP with a resulting disproportionate finding of jurisdiction. WEF asks that EPA clarifies when and how these BDPs will be applied. (p. 7)

Agency Response: **See Sections 5.0 Agency Summary Responses, Introduction and summary response to comments 6, 7, and 8, and Section 5.4 Agency Summary Response. Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II and IX.**

National Association of Flood & Stormwater Management Agencies (Doc. #19599)

5.429 Justice Kennedy, in his concurring opinion in the Rapanos Supreme Court case established the significant nexus standard that determines CWA jurisdiction. The significant nexus standard tested whether an area in question significantly affected the chemical, physical and biological integrity of downstream waters. However, throughout the proposed rule's preamble and definition, EPA deviates from Justice Kennedy's key criteria and relies on conclusion from effects to "chemical, physical or biological integrity." The simple deviation from Supreme Court language greatly lowers the threshold for significant nexus and will expand the CWA jurisdiction. We request EPA remain consistent with Justice Kennedy's significant nexus standard and rely on effects to "chemical, physical and biological integrity" for conclusions of navigable waters. (p. 2)

Agency Response: **See Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, and Section 5.0 Agency Summary Response, Introduction and summary response to comments 3 and 6, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.**

John Barrow et al., Congress of the United States (Doc. #4905)

5.430 The scientific report conducted by the agencies to justify the proposed rule states that all waters require federal protection, regardless of size or significance in connectivity. That conclusion seems to disregard the "significant nexus" test described by Justice Kennedy's concurrence in the Rapanos decision. In Rapanos, and the SWANCC decision that preceded it, the Supreme Court made clear that there is a limit to federal jurisdiction under the CWA, specifically rejecting the notion that any hydrological connection is a sufficient basis to trump state jurisdiction. Therefore, this rule should rely upon new data

to quantify "significant nexus" in order to ensure that it does not extend jurisdiction to waters that have a "de minimis" connection to jurisdictional waters. (p. 1-2)

Agency Response: See Section 5.0, 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Introduction and summary response to comments 3, 4, 5, 7 and 8, Preamble to the Final Rule Sections III and IV, and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

Senator David Vitter et al., United States Senate, Committee on Environment and Public Works (Doc. #4907)

5.431 The proposed rule would also have EPA and the Corps making case-by-case jurisdictional determinations based on the "significant nexus" test, even as they ominously assert that a "hydrologic connection is not necessary to establish a significant nexus."[173] (p. 1)

Agency Response: See Sections 5.0, 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV Technical Support Document Sections I, II and IX. See also Response to Comments Topic 4 – Other Waters and Topic 9 – Science. In many cases, the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. See Science Report and Technical Support Document.

Even when they lack a surface hydrologic connection to downstream traditional navigable waters, interstate waters, or the territorial seas, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage

[173] See U.S.E.P.A. and Amy Corps of Engineers, Proposed Rule Regarding Definition of "Waters of the U.S." Under the Clean Water Act at 100 (March 25, 2014, http://www2.epa.gov/sites/productior1/files/2104-03/documents/wus_proposed_rule_20140325_prepublication.pdf.

capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream traditional navigable waters, interstate waters, or the territorial seas. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to the Final Rule Section IV.

Wetland Science Applications, Inc. (Doc. #4958.2)

5.432 Attached at Appendix A [p. 15-19; includes text and photographs] is an excerpt from a 2008 study I did for a regulatory enforcement action in Arizona where I followed flow in a helicopter from Tucson to the dissipation of all surface flow. Despite ~25 million gallons/day of treated effluent being discharged into the Santa Cruz River in Tucson on the day of the flight, all of the water had been lost during transmission miles before it had reached the confluence with the Gila River which was still ~200 miles from the confluence with the Colorado River (a Section 10 river). How can this constitute a significant nexus? To categorically conclude that all connected channels have a significant nexus cannot be justified by science and data. (p. 4)

Agency Response: See Sections 5.0, 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final rule at Sections III and IV and the Technical Support Document at Sections I, II, VII, and IX. See also Response to Comments Compendium Topic 4 - Other Waters, Topic 8 Tributaries, and Topic 9 –Science.

5.433 Without doubt, discharges of dredged or fill material in nonwetlands landward of the OHWM (landscapes where Section 404 does not apply) on the banks of Section 10 waterbodies will have a far more significant nexus to the waterbody than discharges hundreds of miles upstream of the Section 10 waterbody on an ephemeral channel that may flow infrequently for a few hours duration and be lost during transmission. It is indefensible to claim all connected channels have a significant nexus (p. 7)

Agency Response: The significant nexus standard applies to the relationship of non-navigable intrastate waters on traditional navigable waters, interstate waters, or the territorial seas in determining which waters are "waters of the United States" and subject to the jurisdiction of the CWA, *not* to the effects of fill placed in such waters which is regulated under other provisions of the CWA and its implementing regulations. It is also important to clarify that Section 10 waters are only a subset of traditional navigable waters. The rule does not state that all connected channels have a significant nexus. See Sections 5.0, 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, III, VII, VIII and IX. See also Response to Comments Compendium Topic 8 – Tributaries.

***See* response 4 in 5.0 Agency Summary Response, as well as the Technical Support Document at Section VII.B.vi.**

5.5. SUPPLEMENTAL COMMENTS ON SIGNIFICANT NEXUS

M. Young (Doc. #1430)

5.434 The agency's attempt to redefine the "waters of the United States" defies the logic of the majority of the Court and instead has relied on a single judge, Justice Kennedy's comments in a concurring opinion in Rapanos v. United States that the agency must only establish a "significant nexus" to navigable waters. Justice Kennedy made the case that the agency is clearly trying to make that ***if*** there was such a "*significant nexus*" in chemical, physical, and biological then the requisite nexus is created. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment, Preamble to the Final Rule Sections III and IV and Technical Support Document at Section I.

Rex McKim Peterson (Doc. #10552)

5.435 These are just some of the problems with the proposed rule. "Hydrologically connected" or "significant nexus" are not yet adequately defined and also have significant meanings in other applications. Using these terms may even become the means to challenge pollution control efforts. Please find a wiser definition. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

New York State Attorney General (Doc. #10940)

5.436 First, the proposed rule is grounded in peer-reviewed scientific studies that confirm fundamental hydrologic principles. Water flows downhill, and connected waters, singly and in the aggregate, transport physical, chemical and biological pollution that affects the function and condition of downstream waters, as demonstrated by the many studies on which EPA and the Corps rely. The health and integrity of watersheds, with their networks of tributaries and wetlands that feed downstream waters, depend upon protecting the quality of upstream headwaters and adjacent wetlands. Comprehensive coverage under the CWA of these ecologically connected waters is essential to achieve the water quality protection purpose of the act. (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Massachusetts Association of Conservation Commissions (Doc. #10116)

5.437 We also believe the proposed rule should go further and include by definition all intermittent and most (if not all) ephemeral streams and their adjacent wetlands. The SAB report provides ample evidence and support for including those waters. It is clear that even temporarily connected streams and wetlands can have a disproportionately large influence on the integrity of downstream waters.

The importance of ephemeral, intermittent, and perennial streams is discussed at length in the proposed rule's preamble as well as the SAB report, but the seasonality and annual variability of hydrologic connectivity are not explicitly recognized in the proposed rule itself. Though hydrologic connectivity can vary within and between years, its significance in establishing a connection to downstream waters is not diminished by this natural variability. We recommend language that recognizes this variability, not only for streams but for all waters.

Additionally, we strongly support the use of wetland-dependent wildlife as indicators of biological connectivity for determining the jurisdictional status of other waters. Wetland-dependent species often depend on multiple wetland and other aquatic habitats and the presence or absence of these organisms can be used to indicate ecological connectivity and functional relationships between "other waters" and jurisdictional waters. (p. 1 – 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4 and 6 and Technical Support Document at Sections II, VII, VIII and IX. Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV. See also Response to Comments Compendium 9 – Science.

Anonymous (Doc. #11304)

5.438 Firstly, I appreciate the attempt to describe complex ecological systems through the language of law, for example, the term "significant nexus." I think that the EPA should consider creating a thorough definition that includes very specific statistical data to determine whether or not a water entity has significant nexus to "waters of the United States." On page 22193 of the Proposed Rules, a "gradient" in the relation of waters to each other is mentioned as documented in the scientific report associated with the proposal. I suggest that this idea be further fleshed out, because it is compelling to have further significant scientific analysis influence this rule. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Uintah County, Utah (Doc. #12720)

5.439 5. The definition of "significant nexus" appears to be a construct borrowed from NEPA which would allow the Agencies to intrude into processes more appropriately handled by other regulatory agencies.

The concept of significant nexus in the context of environmental analysis is not new nor is the concept incorrect. In the case of the proposed rules at issue here, significant nexus is being used in conjunction with the definition of tributary to create a situation where the Agencies can involve themselves in virtually any project, anywhere.

Typically, the concept of significant nexus has been used to capture the expected impacts of a proposed non-federal action which is connected to some federal action. In common parlance this is also known as the "but for" situation. The non-federal action is not the target of the analysis being performed by the Agency. The significant nexus issue is only analyzed in an idealized way so that the impacts of the nonfederal action can be characterized and used to supplement the analysis of the federal projects. The primary use of these impacts in the analysis is to ascertain cumulative impacts or possibly residual impacts.

Furthermore, there is already a process in place for State and Federal government to identify and address impacts to aquatic resources. The agency or agencies responsible for authorizing the action that the EPA and COE believe would have a significant nexus would be able to address any concerns which might arise. The EPA and COE can effectively support the lead Agency within their current authorities and without introducing an additional layer of burdensome regulations and another bureaucracy with which to contend.

The discussion on page 22198 proposes a case-specific analysis in establishing the "significant nexus" relationship. Unfortunately, the method of doing this generally refers to using "current science, the CWA and the case law...". There is no mention of this process in the rule itself. These are non-specific criteria which would be subject to change without advance notice. This seems to be a cavalier, catch-all feature designed to benefit the Agencies in the performance of their duties at the expense of public service.

The proposed rule does not explain the process for establishing "significant nexus." There is not a discussion of who performs the analysis or where the analysis will fit into the overall project. There is no mention of the responsibility of the Agencies to provide timely feedback. (p. 4-5)

Agency Response: The final rule complies with NEPA. See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 , Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

M. Seelinger (Doc. #12879)

5.440 Much of the proposed rule is based upon a misinterpretation of Supreme Court Justice Kennedy's lone opinion in the 2006 John A. Rapanos, et ux., et al., Petitioners v. United States; June Carabell, et al., Petitioners v. United States Army Corps of Engineers, et al. case. The concept of significant nexus is central to his opinion. However the proposed rule offers no further insight into what constitutes "significant." (p. 2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3 and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical

Support Document Sections I, II, VII, VIII and IX. See also Response to Comments Compendium 9 – Science.

Nebraska Cattlemen (Doc. #13018)

5.441 v. Similarly Situated

Even when waters are not jurisdictional by rule, or by itself has any significant nexus to a traditionally navigable water it can still be a jurisdictional water if, based on the entire discretion of the regulator when "aggregated" together with "similarly situated" waters in the region a significant nexus does exist. (Proposed rule at 22211). "Waters are similarly situated where they perform similar functions and are sufficiently close together or when they are sufficiently close to a jurisdictional water. How these 'other waters' are aggregated for a case-specific significant nexus analysis depends on the functions they perform and their spatial arrangement within the 'region' or watershed." Id.

Again, this definition is so overly broad it provides no clarity and guidance, but rather appears to allow EPA the limitless ability to aggregate all waters within a watershed, claiming they are similarly situated and thus jurisdictional under the CWA. (p. 3 – 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, and 5, Sections 5.1, 5.2, 5.3, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Bay Foundation (Doc. #13835)

5.442 We believe that the final rule should address, with greater clarity, the formula for making a determination of a "significant nexus" between a jurisdictional water body or wetland and a questionable water body. It may be beneficial to further define the phrase "significantly affects" to increase the likelihood that the goal of reducing documentation on a jurisdictional determination can be met. This will increase the functional value of the proposed rule. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II.

Interstate Mining Compact Commission (Doc. #14114)

5.443 The significant nexus approach to determining jurisdiction in the proposed rule is impractical. The proposed procedures provided in the preamble for documenting whether there is a significant nexus attributed to individual wetlands such that they would be treated as "Waters of the United States" are extremely complex and will be inordinately time consuming. While the procedures may be scientifically valid, they will largely be impractical for routine regulatory determinations, and will place significant impacts on available resources to implement CWA program requirements The proposed rule also adds new terms that are not defined, such as "shallow subsurface connection" while expanding the definition of "tributary" and applying "adjacency" to all waters. If the issues related to these various definitions are not adequately addressed and resolved, the

uncertainty attending what water bodies must be assessed, applicable water quality standards, and determinations of impairment will significantly increase.

A significant nexus determination in the proposed rule is descriptive of a connection, but not predictive of impact. There is no evidence as to whether the characteristics of a traditional navigable water would change in a meaningful way if that connection did not exist. However, in *Rapanos v. United States*, 547 U.S. 716 (2006), Justice Kennedy wrote that a "significant nexus" exists only where the wetlands, "alone or in combination with similarly situated lands in the region," "significantly affect the chemical, physical, and biological integrity of other covered waters understood as navigable in the traditional sense." Id. At 780 (emphasis added A scientifically defensible definition of "significant" based on water quality assessment, health standards, etc. is therefore necessary.

The proposed definition of "significant nexus" will also expand jurisdiction over stormwater related systems, which is particularly inappropriate considering EPA has chosen not to proceed with a national stormwater rulemaking process. Expansion of federal-regulatory oversight through a definitional change is not appropriate and will not be effective. Using this new definition in the existing permitting programs under Section 402 and 404 of the CWA will cause both of these programs to become more cumbersome and confusing, rather than providing clarifications. (p. 2 – 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, and 7, Preamble to Final Rule Sections III and IV, and Technical Support Document at Sections I, II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

Freeport-McMoRan Inc. (Doc. #14135.1)

5.444 In sum, the Draft Connectivity Report has drawn general conclusions about arid systems from a combination (or conflation) of science about perennial, humid systems and a very few arid watersheds, notably the San Pedro Watershed. Basic hydrology, biogeochemistry, and ecology suggest that the disparity of frequencies and magnitudes of flows in arid systems makes perennial systems poor surrogates for understanding and thus regulating arid systems. As importantly, our hydrologic analyses shows that the San Pedro River should not necessarily be considered a representative arid watershed, and in fact, cannot be considered even a representative southern Arizona watershed. Because of this, it is imperative that regulatory and jurisdictional decisions require reliance on multiple factors to understand the significant nexus of a particular feature with downstream waters, and more importantly, that in lieu of applicable analogous sites or surrogates, that empirical data be the basis for jurisdictional assertions. (p. 14)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 7 and 8, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII, and IX. See also Response to Comments Compendium Topic 9 – Science.

Sugar Cane Growers Cooperative of Florida (Doc. #14283)

5.445 The proposed rule, however, wrongly assumes that Justice Kennedy's "significant nexus" test for wetlands alone controls. It then misconstrues and misapplies even that test.

First, Justice Kennedy's opinion alone cannot control. "When a fragmented Court decides a case and no single rationale explaining the result enjoys the assent of five Justices, the holding of the Court may be viewed as that position taken by those Members who concurred in this judgment on the narrowest grounds." *Marks v. United States*, 430 U.S. 188,193 (1977) (emphasis added and citations omitted). In *Rapanos*, five Justices concurred in a judgment limiting Clean Water Act jurisdiction. But, for wetlands, the tests set forth in the plurality and concurring opinions do not form concentric circles; one test does not neatly subsume the other; neither is always over-inclusive or under-inclusive when judged against the other; neither is always the 2 narrowest. So, "the holding" in *Rapanos* - "the narrowest" grounds for the Court's decision - would require wetlands to pass both tests before becoming jurisdictional. Yet the proposed rule would require that wetlands (and various other waters) pass only Justice Kennedy's "significant nexus" test. This cannot be. See *Marks*, 430 U.S. at 193.

Second, even if Justice Kennedy's opinion alone controls, then its "significant nexus" test should apply only to wetlands. As noted above, the plurality and Justice Kennedy agreed on everything but the precise test used to show a connection between wetlands and jurisdictional waters. The proposed rule would ignore much of Justice Kennedy's own opinion by applying his "significant nexus" test to all "tributaries," "adjacent waters" and "other waters." 79 Fed. Reg. at 22,204-05,22,209-10,22,212. This approach has already been rejected by at least one court. See *San Francisco Baykeeper v. Cargill Salt Div*., 481 F.3d 700, 707 (9th Cir. 2007) (rejecting an argument that the Clean Water Act protects all waters that have a "significant nexus" to jurisdictional waters).

Third, Justice Kennedy's "significant nexus" test does not lend itself to a broadly applicable rule. Justice Kennedy's opinion calls for a site-specific and flexible inquiry - into the "nexus" between specific wetlands and navigable (and thus clearly jurisdictional) waters:]See id. at 779-80. The Fourth Circuit recognized as much in *Precon Dev. Corp. v. U.S. Army Corps of Eng'rs*, 633 F.3d 278, 295 (4th Cir. 2011) when it held that "documentation in the record must show "the functions . . . [particular] wetlands perform are 'significant' for the [jurisdictional water]." Nevertheless, the proposed rule would categorically deem jurisdictional all wetlands, "tributaries" and waters "adjacent" to navigable waters. See 79 Fed. Reg. at 22,204-05, 22,209-10. This categorical determination simply cannot comport with the site-specific, ecological inquiry that Justice Kennedy contemplated for wetlands. *Rapanos*, 547 U.S. at 779-80. (p. 5 – 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4 and 6, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Westlands Water District (Doc. #14414)

5.446 As noted in the Proposed Rule, however, the EPA has not yet completed its survey. When the survey is completed, the EPA intends to issue a final rule based on a scientific determination that the waters defined as "adjacent" in the Proposed Rule have a

significant impact on the physical, chemical or biological integrity of traditional navigable waters or tributaries to traditional navigable waters. It is doubtful whether the EPA and the Army Corps of Engineers have the capability of making such a finding, Regardless of how much the subject is studied, no amount of study can say with certainty whether every adjacent water in the United States has a significant impact on the physical, chemical or biological integrity of traditional navigable waters or tributaries thereto, until every such adjacent water has been studied. There is no indication that the EPA and the Army Corps of Engineers plan to conduct, or have the capacity to conduct, a study of such magnitude. Unless and until the EPA and the Army Corps of Engineers conduct such a broad survey, they will necessarily lack the substantial evidence necessary to adopt the Proposed Rule. (p. 29)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, Sections 5.1, 5.2, 5.3 and 5.4 and Technical Support Document at Sections II and VIII. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 – Science.

Walker River Irrigation District (Doc. #14562)

5.447 III. All Tributaries to Interstate Waters Should Not Be Jurisdictional.

The proposed rule defines "tributary" as a "water physically characterized by the presence of a bed and banks and ordinary high water mark ... which contributes flow either directly or indirectly through another water to a[interstate water] ...." A tributary can be manmade and include ditches. By finding that the aggregation of all tributaries in a watershed may be considered in combination, and as a result, will have a significant nexus to interstate waters, the Agencies have concluded that the flow in a tributary may be ephemeral.

This determination is not supported by *Rapanos*, goes far beyond the purposes of the Clean Water Act to clean up the waters of the United States, and ignores the Act's purposes of preserving primary state responsibility for ordinary land use decisions. As the plurality opinion in *Rapanos* stated, Congress did not grant the Agency's jurisdiction over all dry land that might "significantly affect the chemical, physical and biological integrity of "waters of the United States." 547 U.S. at 756. The plurality, in effect, required that an adjacent "water (there, a wetland) have a continuous surface connection with a water of the United States, "making it difficult to determine where one ended and the other begins." 547 U.S. at 742.

The Kennedy concurrence in *Rapanos* also does not support the Agencies' conclusion to include tributaries, as it has defined them, as waters of the United States. Justice Kennedy acknowledged that a mere hydrological connection between a wetland and a traditional navigable water was not sufficient to establish jurisdiction over the wetland. 547 U.S. at 784. Assuming, for the sake of argument, that the "significant nexus" analysis he articulated in *Rapanos* applies at all to tributaries, it is clear that a mere hydrologic connection between a tributary and, here, an interstate water is not sufficient to establish jurisdiction over the tributary.

Moreover, it is not at all clear that Justice Kennedy ever intended the significant nexus analysis which he articulated with respect to wetlands, should be applied to tributaries to interstate waters which did not meet the traditional navigable water test. The Kennedy concurrence requires there be a "significant" nexus. The water in question must "significantly affect the chemical, physical and biological integrity of other covered waters." The proposed rule stands that requirement on its head by providing that everything that is "not speculative or insubstantial" is "significant." (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 6, and 8, Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VI, VII and VIII. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 – Science.

Tennessee Mining Association (Doc. #14582)

5.448 Apparently the concept that the Agencies and SAB embrace is not whether a particular tributary has a significant nexus to tributaries of traditional navigable waters, interstate waters, and the territorial seas, as well as all adjacent waters (including wetlands) ("Jurisdictional Waters"), but whether they do "as a group. We believe that concept is an over, expansive reading of the Clean- Water Act and the relevant court decisions. We understand that the significant nexus test includes waters either alone or "in combination with similarly situated lands," but all conveyances to covered waters cannot blanketly be included so as to usurp state or local land use laws. In other words "tributaries as a group" does not mean the same as "similarly situated."

The Agencies' scientific basis of the definition of tributaries is based almost entirely on the Connectivity Study. While we believe much additional third party review (not just the Science Advisory Board) is necessary to properly evaluate the proposal, it appears that the Connectivity Study is not what Justice Kennedy intended as a test of "significant nexus." The Proposed Rule does not provide any criteria as to when a specific tributary can be removed from a group or can be evaluated on its own for contribution to a significant nexus. On the one hand the Agencies state that "significant nexus is not itself a scientific term." (Proposed Rule at 22,193) and then turn around and state that terms such as "speculative' and "insubstantial," though part of the definition of significant nexus have a different scientific meaning than that attributed to Justice Kennedy. The Agencies have re-framed the legal definition and meaning of significant nexus by placing scientific meaning to terms such as "speculative' and "insubstantial." For example, the Agencies apply a scientific meaning to "potential" in distinguishing these terms. However, Justice Kennedy did not use the term "potential" in his opinion and the Agencies have ascribed broad meaning to such terms to expand those terms. The Agencies must clarify what constitutes "speculative' and "insubstantial."

The Agencies' Proposed Rule definition of "significant nexus," which attempts to adopt Justice Kennedy's "significant nexus" test, properly includes the exclusion from the significant nexus test where a water's contribution to covered waters is speculative or insubstantial. However, the Proposed Rule gives short shrift to the actual evaluation of waters that are speculative or insubstantial. While the Proposed Rule provides some

express exclusions from the Proposed Rule, some of which are statutory, the Agencies do not describe why such waters are excluded and, if so whether the reason was that they are speculative or insubstantial. If the list of exclusions was intended to be an complete list of what constitutes speculative or insubstantial, then the Agencies should so clarify. Under the Proposed Rule all tributaries no matter how insignificant are jurisdictional under the Proposed Rule, without any further evaluation, declared to have a non-speculative contribution or a substantial contribution to covered waters. We believe that the agencies should develop scientific criteria that more empirically evaluate when a water contribution to covered waters reaches the level of substantial and consequential.

While the Connectivity Report addresses the perceived value of upstream waters and wetlands, the Proposed Rule does not provide any scientific benchmark as to what constitutes speculative or insubstantial. The Proposed Rule declares that tributaries and adjacent waters always significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas. See, e.g., Proposed Rule at 22,205 and 22,210. Therefore, the Agencies determined that tributaries and adjacent waters as defined by the proposed rule have a significant nexus with traditional navigable waters, interstate waters, and territorial seas and, therefore, are jurisdictional waters. For example, a very small natural ephemeral ditch that may meet one of the criteria for a tributary, might not have the same impact downstream as an intermittent or perennial stream. While it might carry water as well as nutrients, the Proposed Rule omits no such water course on the basis of "speculative or insubstantial." Indeed, the Connectivity Report, if read literally, would include many of the tributary exclusions in the Proposed Rule, such as manmade upland ditches draining only upland areas.

Without getting into the details of the Connectivity Report, it is axiomatic that water naturally flows downhill and contributes whatever is located in channels including flow. Further, it is axiomatic that a wetland, wherever located, has certain value depending on the type and quality. This should not be a surprising scientific finding. However, the rules must consider the existing jurisdictional legal test set out in *Rapanos* and its progeny. (p. 9-10)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 3, 4, 6, 7and 8, Sections 5.1, 5.2, 5.3 and 5.4 and Technical Support Document at Sections I, II, VI, VII and VIII. See also Response to Comments Compendium Topic 3 – Adjacent Waters, Topic 4 – Other Waters, Topic 8 – Tributaries, and Topic 9 – Science.

Florida Stormwater Association (Doc. #14613)

5.449 Significant nexus – We recommend that the term "significant nexus" be revised to include only waterbodies that significantly affect the physical, chemical, and biological integrity of a water as identified in the re-proposed regulations. And we recommend that that the term "significant nexus" apply only when considering whether wetlands are jurisdictional. (p. 8)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 6, and 8, Sections 5.1, 5.2, 5.3 and 5.4 and

Technical Support Document at Sections I, II, VII, VIII and IX. See also Response to Comments Compendium Topic 9 – Science.

Coalition of Renewable Energy Landowner Associations (Doc. #14626)

5.450 It is conceivable that "significant nexus" might exist at one point in time and may not at another based upon long range weather patterns and other related factors. To establish a permanent and meaningful "significant nexus" would require measurement and monitoring by hydrological experts over a period of time to quantify whether or not wetlands and playa lake/prairie potholes in their natural state with rainfall and other regular environmental influences do indeed affect water quality and navigability of a "Water of the United States" from many miles away.

An appropriate monitoring period could take from 50 to 100 years (or another time standard as determined by hydrological experts) to accurately measure water quality and ecological affects. Nonetheless, it is an established set of protocols under ground rules agreed to by both sides of the scientific argument that are important in making determinations as to what constitutes jurisdiction under "Waters of the United States" under the precedent of "significant nexus". (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 6, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4 and Technical Support Document at Sections I, II, VI, VII, VIII and IX.

Continental Resources, Inc. (Doc. #14655)

5.451 The preamble vaguely alludes to the agencies' fundamental departure from the agencies' case-by-case application of the test and establishes instead jurisdiction "by rule." 79 Fed. Reg. at 22,192. This change is one of the most drastic departures from the agencies' prior interpretation of Rapanos. Here, there is no question the agencies' ulterior motive is not to provide clarity to the regulatory community or even to streamline their jurisdictional workload but to affect a wholesale expansion of their CWA jurisdiction. The agencies abandon the case-by-case, factually-based significant nexus jurisdictional determinations that have characterized their interpretation of Rapanos for the past eight years. In its place, they simply assume per se jurisdiction over a sizeable number of waters which previously required individual consideration and jurisdictional determinations under the existing 2008 Guidance. The impacts of this change are pervasive and unprecedented, abandoning decades of the Corps of Engineers' implementation of individualized jurisdictional determinations. (p. 12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7 and 8, Sections 5.1, 5.2, 5.3 and 5.4, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

5.452 The agencies assume that any nexus between a tributary or adjacent water and a downstream water would always meet Justice Kennedy's threshold of significance, without either defining the applicable threshold or explaining the agencies' rationale for presuming any nexus is per se significant. This approach is also inconsistent with Rapanos. In the preamble and definition of "significant nexus" the agencies provide no

guidance on when the presence of chemical, physical [or] biological integrity factors rises to the level of significance. The new definition of "significant nexus" simply parrots Justice Kennedy's language that the nexus "must be more than speculative or insubstantial," implying that any measureable or anticipated presence of anyone of these factors is sufficient to satisfy the significant nexus standard. See 76 Fed. Reg. at 22,263 (40 C.F.R. § 328.3(c)(7)). Just as the agencies casually and, arguably, deceptively took the liberty of changing an "and" to an "or" (see Section II.D.l), so, too, have they diluted Justice Kennedy's threshold requirement of "significance" to portray it as seemingly insignificant. In so doing, the agencies have dismissed Justice Kennedy's lower bound that would always result in a finding that the nexus is not significant. Rapanos, 547 U.S. at 780. There is no legal or scientific basis to assert that anything more than "speculative or insubstantial" is significant. The mere existence of a nexus is not sufficient. Both Justice Kennedy's concurrence and Justice Scalia's plurality required more. The absence of any threshold is problematic for regulators and the regulated community when the significant nexus is not presumed but actually required to establish jurisdiction over "other waters" (Section II.E). The Proposed Rule's definition of significant nexus must be amended to better define "significance" and to include better guidelines as to how the agencies will measure and quantify significance. (p. 12)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 6, 7 and 8, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Nucor. Corp. (Doc. #14963)

5.453 The proposed rule identifies factors that may be indicative of "significance" but does not actually elucidate upon how they rise to the level of being significant. The rule provides that hydrologic connectivity, nutrient recycling, flood water or sediment retention or runoff storage could all indicate a nexus, but does not establish how ii is determined when their mere presence rises to the level of "significant". See 79 Fed. Reg. 22214. The preamble sets forth a number of examples (i.e., chemical, physical or biological connectivity) but gives no specific information regarding what level of connectivity rises to "significant'.. id. Furthermore, although the determination is typically, for "other waters", made on a case-specific basis, the preamble provides that justification for jurisdiction need not be specific to the water whose jurisdictional status is being evaluated while at the same time claiming that any determination is a resource intensive analysis. Id. These two inconsistent statements within the preamble (indeed, within adjacent paragraphs) demonstrate just how little clarity is provided by the proposed rule.[174] (p. 6)

[174] The Agencies' assertion that the administrative record will include "information supporting the determination" (79 Fed, Reg. 222 14) is of little value to the regulated community. As the Agencies are fully aware, a number of Courts have held that a jurisdictional determination is not "final agency action" subject to review under the Administrative Procedures Act. See, Belle Company L.L.C 1,. United States Army Corps of Engineers, 13-30262 slip op., (5th Cir. July 30, 2014). Hence, the regulated community must be afforded clarity in the rule itself, rather than having to obtain a Section 404 permit and then appealing a faulty determination

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, and Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

San Joaquin County Board of Supervisors (Doc. #15017.1)

5.454 We believe that use of the term "similarly situated" could allow the agencies to consider multiple waters together in making a "significant nexus" determination. The proposed rule states that the agencies should look at whether these waters "can reasonably be expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether these waters are "sufficiently close" to each other or the jurisdictional water.

This analysis is fraught with uncertainty and subjective decision-making. The agencies should assess each of the individual functions that the group of waters must perform in order to be considered "similarly situated", including listing such functions as examples in the proposed rule. Also, the agencies should require a confined, verifiable surface connection to each other (and not "fill and spill" as put forth in the proposed rule) in order for waters to be considered "similarly situated", and limit the distance allowable between ""similarly situated" waters. Waters not meeting these tests should not be considered "similarly situated" and thus would be non-jurisdictional under the CWA. Considering CWA jurisdiction of "other waters" in a watershed on a landscape scale would create burdens on both the regulated community and the regulating agencies without much benefit to water quality and should not be considered as an alternative in the rule. (p. 5)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, and Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

Arctic Slope Regional Corporation (Doc. #15038)

5.455 The risks are only somewhat less if the definition of "riparian area" is narrowed so that it does not categorically include 43% of the State of Alaska. Any of the 174.7 million acres that might be excluded by a refinement of the "riparian area" definition would then be exposed to categorization as "other waters," requiring a case-by-case determination of whether they are within the WOTUS definition. They are within this "other waters" classification if they are "waters [that] alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to [jurisdictional waters]."[175] "Significant nexus" exists, according to the Proposed Rule, if a water, including wetlands, either alone or in combination with other similarly situated waters in the region . . . significantly affects the chemical, physical, or biological integrity

[175] 79 Fed. Reg. at 22,271.

of a [jurisdictional water]. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a ''water of the United States'' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of [jurisdictional water].[176]

The vagueness in this definition is noteworthy. Waters are included if they "significantly affect" the chemical, physical, or biological "integrity" in a way that is not "speculative or insubstantial" and if they perform "similar functions" and are located "sufficiently close together" as part of a single "landscape unit." Regulators and regulated parties who would have to apply these tests will understandably have difficulty finding certainty and predictability in this definition. (p. 4-6)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, and Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.

Chickaloon Village Traditional Council (Doc. #15137)

5.456 (…) Lastly we ask to increase the 'significant nexus' definition to include adjacent waters and streams, headwaters, and tributaries of navigable waters and waters of the U.S. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, Agency Summary Responses, and Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII and IX.

Lea Soil and Conservation District Board of Supervisors (Doc. #15144.1)

5.457 Significant Nexus. The term "significant nexus" means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e. the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II.

[176] 79 Fed. Reg. at 22,271.

Council of Industrial Boiler Owners (Doc. #15401)

5.458 "Significant Nexus." The definition of "significant nexus" is not itself a scientific term. The relationship that waters can have to each other and connections to downstream waters that affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas is not an "all or nothing" situation. The existence of a connection, or to use the words of Justice Kennedy, a nexus, does not by itself establish that it is a "significant" nexus. The rule's proposed definition of "significant nexus" provides no concrete basis on which a person could assess whether indeed there is a "nexus" or whether it is "significant." By expanding the definition of waters of the United States the Agencies have expanded the definition of navigable waters, thereby expanding the jurisdiction of federal agencies and creating complications with state programs that regulate classes of waters. Following the Rapanos decision, waters analysis has been governed by agency guidance setting forth the significant nexus test as requiring an [a]ssess[ment of] the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they [alone or in combination with other similarly situated wetlands adjacent to the tributary] significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters. Under the proposed rule, all tributaries of navigable waters and all waters adjacent to those tributaries are presumed to have a significant nexus and are per se jurisdictional. The proposed rule goes on to provide that waters not per se jurisdictional may still be jurisdictional if "on a case-specific basis…alone, or in combination with other similarly situated waters…located in the same region, [they] have a significant nexus" (79 Fed. Reg. 22189) to a traditionally navigable or interstate water or the territorial seas. Under the case-by-case definition, with its aggregate impact language, any water (however isolated) could conceivably be defined as having a significant nexus with a federal water, and thereby be jurisdictional. This uncertainty puts CIBO member facilities at risk of violating their Clean Water Act permits because facilities would not have prior knowledge of what water is regulated and what is not. (p. 3-4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and summary responses to comments 3, 4, 5, 7 and 8, and Technical Support Document Sections I, II, VII, VIII, and IX.

A. Kvien (Doc. #15441)

5.459 In his concurring opinion in the 2006 Rapanos decision,[177] Justice Kennedy laid out the significant nexus test, explaining that in order for a wetland or other water feature to be under the purview of the CWA it must:

> [E]ither 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,

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

> wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters.'[178]

It his explanation of the term significant nexus, Justice Kennedy never lays down a requirement that two water bodies be hydrologically connected, only that a water feature have a substantial impact or effect on the jurisdictional water. EPA briefly discusses that the lack of hydrologic connection does not mean the lack of impact in the proposed rule's Appendix A, but the proposed rule's definition of significant nexus does not address this issue. Many readers may interpret the rule to mean that there must be a hydrologic connection is necessary but not sufficient for establishing a significant nexus. EPA should directly address and clarify in its definition of significant nexus the very real possibility that a water feature can have a "significant nexus" to a water of the United States without a hydrologic connection because that water feature significantly affects the water of the United States.[179]

I recommend adding language to the proposed definition of "significant nexus" to further clarify what is and is not required for a water feature to have a significant nexus to a water of the United States. I believe it is of critical importance to make it explicit in the definition of "significant nexus" that a hydrological connection to a jurisdictional water is not required for a water feature to have a significant nexus with a jurisdictional water or "water of the United States." Evidence of a hydrological connection, therefore, can bolster the factual claim that a significant nexus exists, but it is neither required nor sufficient for a finding that a significant nexus exists.

I believe this further clarification will help ensure consistency in making factual determinations about whether a significant nexus is present. An illustration of why it is important to make this distinction lies in the example of water features like prairie potholes, which are often far from navigable waters. In the case of prairie potholes, it is certain that many of them significantly affect "waters of the United States,"[180] but it is less certain that the same prairie potholes have a direct hydrological connection, either through surface water or groundwater to "waters of the United States." Without further guidance on this issue, some courts may decide that in this scenario, there is no significant nexus by interpreting the definition of significant nexus to carry a requirement of a hydrologic connection while other courts may not. (p. 2-3)

Agency Response: **See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections II. In many cases, the presence of a hydrologic connection**

[178] *Id*. at 780.

[179] EPA recognized in its proposed rule's Appendix A that, "[b]iological connections between adjacent waters and river systems do not always increase with hydrologic connections. In some cases, the lack of connection improves the biological contribution provided by riparian waters towards neighboring streams, rivers, and lakes." Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22,240. EPA also recognized, "[l]ack of connection does not necessarily translate to lack of impact; even when lacking connectivity, waters can still impact chemical, physical, and biological conditions downstream." Id. at 22,248.

[180] In fact, sometimes it is a prairie pothole's lack of connectivity to waters of the United States that may, "improve water quality and may efficiently retain nutrients that might otherwise cause water quality problems downstream." Id. at 22,249.

increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas. However, a hydrologic connection is not necessary to establish a significant nexus, because, as Justice Kennedy stated, 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, interstate water, or the territorial seas. These functional relationships include retention of floodwaters or pollutants that would otherwise flow downstream to the traditional navigable water, interstate water, or the territorial seas. *See* 547 U.S. at 775 (citations omitted) (J. Kennedy) ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme"). The Science Report concludes, "[s]ome effects of non-floodplain wetlands on downstream waters are due to their isolation, rather than their connectivity. Wetland 'sink' functions that trap materials and prevent their export to downstream waters (*e.g.*, sediment and entrained pollutant removal, water storage) result because of the wetland's ability to isolate material fluxes." Science Report at ES-4. For example, a report that reviewed the results of multiple scientific studies concluded that depressional wetlands lacking a surface outlet functioned together to significantly reduce or attenuate flooding. *See* Science Report and Technical Support Document. Even when they lack a surface hydrologic connection to downstream (a)(1) through (a)(3) waters, Prairie potholes, for instance, cumulatively can store large volumes of water, impacting streamflow and reducing flooding downstream, and several studies have quantified the large storage capacity of Prairie pothole complexes. This water storage function is estimated to hold tens of millions of cubic meters of water, including for example Prairie potholes located in the watersheds of Devils Lake and the Red River of the North, which have both had a long history of flooding. Where Prairie potholes lack a surface hydrologic connection, this water storage capacity is particularly effective in reducing downstream flooding and can have a significant effect on downstream (a)(1) through (a)(3) waters. Thus, even when lacking a surface hydrologic connection, a water can still have a significant effect on the chemical or the biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas. See Preamble to Final Rule Section IV.

5.460 IV. COVERAGE OF GROUNDWATER

In its proposed rule, EPA lists groundwater as non-jurisdictional. This listing means that in order to find CWA jurisdiction over any discharges to groundwaters, a case-specific determination will have to be made to show that the groundwater has a significant nexus with the waters of the United States. In effect, after making the determination that the groundwater had a significant nexus to a water of the United States, the groundwater would be treated as a point source of pollution. I support EPA's position on groundwater in this regard. I caution, however, that EPA should be thoughtful in characterizing the types of groundwater connections that can be covered under the CWA. I am most concerned about EPA's use of language indicating that there might be strict flow and depth requirements for finding jurisdiction over groundwater under the CWA. The rule does not consider or offer protection for groundwater that is relatively stagnant or that has an intermediate depth.

In its proposed rule, EPA states, "the magnitude and transit time of groundwater flow from an 'other water' to downstream waters depend on several factors, including the intervening distance and the properties of the rock or unconsolidated sediments between the water bodies (i.e., the hydraulic conductivity of the material)."[181] While I agree that these factors are important to determining groundwater connectivity, I disagree with the implicit requirement[182] that the groundwater be flowing from one point to a water of the United States in order to be covered. I strongly believe that EPA should add language to ensure consistent protection for groundwater that contributes to the base flow of rivers, is relatively stagnant, or at an intermediate depth, but is still substantially affecting waters of the United States.

By seemingly inserting flow requirements for finding jurisdiction over groundwater, EPA does not contemplate groundwater that does not flow, or at least does not flow quickly, but that still certainly has a "significant nexus" to and substantially impacts "waters of the United States." Groundwater can contribute to a stream's base flow, thereby substantially affecting a water of the United States, and should be covered on a case-specific basis. Pollution can still impact "waters of the United States" when flow is limited, particularly when the source of pollution to the groundwater is especially close to the "waters of the United States." Directional flow to "waters of the United States" is not required for pollution to have an impact. Any implicit or explicit flow requirement that EPA inserts in the rule, besides having the potential to create a jurisdictional loophole, also has the potential to place enormous burdens on the agency. EPA could be burdened by its own requirement by then having battles of hydrology in the courts, trying to prove the existence and strength of a directional groundwater flow. (p. 5 – 7)

Agency Response: **The final rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable**

[181] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22,248 (emphasis added).

[182] EPA also defines a shallow subsurface hydrologic connection as a "lateral water flow through a shallow subsurface layer, such as can be found in steeply sloping areas with shallow soils and soils with a restrictive horizon that prevents vertical water flow, or in karst systems." Id. at 22,242.

for purposes of rule implementation. See Preamble to the Final Rule Sections III and IV.

G. Robinson (Doc. #15748)

5.461 What I think the EPA needs to be clearer on, moving forward, is their definition of a significant nexus, or the connection between navigable and non-navigable waters. In the Supreme Court case, *Rapanos v. United States*, the high court ended up ruling with a decision that left people more confused than before. Kennedys swing vote, writing there needs to be a significant nexus with navigable waters, (Hurley, 2011) was unclear and made future cases relating to the Clean Water Act much more difficult for the lower courts. If the EPA wants to garner more support and have a more transparent regulation in place then the idea of a significant nexus needs to be better defined. Under the New Rule, the EPA defines significant nexus as a water, including wetlands, either alone or in combination with other similarly situated waters in the region that significantly affects the physical, chemical or biological integrity of a water identified as such: all waters which are/were used in interstate or foreign commerce, all interstate waters and the territorial seas. They also state that for an effect to be significant, it must be more than speculative or insubstantial. (EPA, 2014) (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV, Technical Support Document Sections II.

Anonymous (Doc. #16234)

5.462 The new provisions assert that EPA and the COE can make arbitrary 'case by case' decisions whether an isolated water body has a "significant nexus" to mean whatever they choose it to mean, after the fact. The agencies are again asserting that they can make arbitrary and capricious rulings that threaten the life, liberty and property of American citizens, without any objective standard that warns us of the conduct expected of us. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

B. Blouse (Doc. #16240)

5.463 The EPA attempts to define what a significant nexus means, but they fail to even remove the specific language from the New Rule itself. Section (4)(7) under the Clean Water Acts proposed definitions of waters of the United States specifies that certain bodies of water can, on a case-by-case basis, be considered waters of the United States if they have a significant nexus to other protected water bodies. In essence, the EPA is sidestepping the problem of clearly defining which waters they have control over. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency

Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

5.464 It is arguable that establishing numeric guidelines for the Clean Water Act would be difficult to practically implement. Determining the volume of pollution that escapes from a ditch into a tributary within a year would be costly and scientifically challenging. Similarly, different pollutants would require different standards for what maximum concentrations are permissible. Because of this, the Clean Water Acts definitions must also be expanded to include more of the bodies of water that are considered to be ecologically and hydrologically significant. In doing so, the EPA decreases the number of cases that could fall under the significant nexus category and the amount of research that would have to be done on those cases. In combination with a broader range of included categories, the quantified significant nexus clause would allow for a clear-cut definition of what constitutes a water of the United States. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

Indiana Department of Environmental Management (Doc. #16440)

5.465 IDEM and ISDA have concerns with the use of the term "significant nexus" in the Proposed Rule. First, the courts are split as to whether significant nexus is the proper test under Rapanos, and, therefore, we question its inclusion in the Proposed Rule. Such a term should not be used to justify federal jurisdiction over broad categories of water such as ephemeral water, or to bring "other waters" under federal control. Alternatively, if the significant nexus test is to be implemented, it must be as clear as possible. We urge a simplification of the language that accurately reflects the Supreme Court's decision in Rapanos. In his description of significant nexus, Justice Kennedy identified waters that "affect, the chemical, physical, and biological integrity" which is critically different from saying "affect the chemical, physical, or biological integrity." This definition should be coupled with the plurality's "relatively permanent water" test (p. 5)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

Brady Township Supervisors, Clearfield County, Pennsylvania (Doc. #16480)

5.466 We believe that use of the term "similarly situated" would allow the agencies to consider multiple waters together in making a "significant nexus" determination, The proposed rule states that the agencies should look at whether these waters "can reasonably be expected to function together in their effect on the c:hemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether these waters are "sufficiently close" to each other or the jurisdictional water. This analysis is fraught with uncertainty ad subjective decision-making. The agencies should assess each of the individual functions that the group of waters must perform in order to be considered "similarly situated," including listing such function; as

examples in the proposed rule. Also, the agencies should require a confined, verifiable surface connection to each other (and not 'fill and spill" as put forth in the proposed rule) In order for waters to be considered "similarly situated", and limit the distance allowable between "similarly situated" waters. Waters that fail to meet these tests should be considered "similarly situated" and be considered non-jurisdictional under the CWA. Considering CWA jurisdiction of "other waters" in a watershed on a landscape scale would burden both the regulated community and the regulating agencies without much benefit to water quality and should not be considered as an alternative in the rule. ((p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX.

Pershing County Water Conservation District (Doc. #16519)

5.467 "Significant Nexus" is not defined with particularity. Depending on how far the EPA wants to interpret the "significant nexus" application of the proposed rule, interconnectivity with underground water to surface streams might be included, so even water that is not returned to a navigable waterway, in many ways may still be subject to federal jurisdiction. This is a slippery slope and appears to be a catch-all category to over-reach the EPA's jurisdiction. (p. 2 – 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 3, 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII, and IX. The final rule expressly indicates in paragraph (b) that groundwater, including groundwater drained through subsurface drainage systems is excluded from the definition of "waters of the United States." While groundwater is excluded from jurisdiction, the agencies recognize that the science demonstrates that waters with a shallow subsurface connection to jurisdictional waters can have important effects on downstream waters. When assessing whether a water evaluated in (a)(7) or (a)(8) performs any of the functions identified in the rule's definition of significant nexus, the significant nexus determination can consider whether shallow subsurface connections contribute to the type and strength of functions provided by a water or similarly situated waters. However, neither shallow subsurface connections nor any type of groundwater are themselves "waters of the United States." The agencies understand that there is a continuum of water beneath the ground surface, from wet soils to shallow subsurface lenses to shallow aquifers to deep groundwaters, all of which can have impacts to surface waters, but for significant nexus purposes under this rule, the agencies have chosen to focus on shallow subsurface connections because those are likely to both have significant and near-term impacts on downstream surface waters and are reasonably identifiable for purposes of rule implementation. See Preamble to the Final Rule Sections III and IV.

Lake County Stormwater Management Commission (Doc. #16893)

5.468 §328(c)(7) – Significant nexus: This term can be broadly interpreted such that all wetlands are connected to the nearest water identified in §328(a)(1)-(3). Accordingly, we believe this definition should be removed from the proposed rule, along with §328(a)(7) as explained in General Comment #1 above. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I and II.

Arkansas Attorney General (Doc. #16899)

5.469 The definition of "significant nexus" in the proposed rule now requires the agencies to make multiple factual determinations before deciding if a body of water—either alone or in combination with "similarly situated" waters – significantly affects a navigable waterway. This shift will vastly increase the amount of time necessary to make jurisdictional determinations, which will delay the permitting process and likely lead to increased litigation. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Arizona Rock Products Association (Doc. #17055)

5.470 The Rule Should Establish Objective Criteria to Identify a Significant Nexus.

EPA contends the purpose of the proposed rule is to conserve the time and resources currently expended on site-specific reviews of jurisdictional determinations. Before breaking ground, ARPA companies always evaluate whether they are affecting jurisdictional water, which requires consultation with the Corps and often hiring outside consultants. Yet EPA doesn't provide any set criteria on what a "significant nexus" is, so the inclusion of "other waters" will require additional time for determinations to be made. The definition of "significant nexus" should be revised to include criteria for establishing whether there is a nexus between particular waters and interstate or traditionally navigable waters and whether such nexus is "significant." The criteria should include support by a revised scientific connectively report that has been appropriately peer-reviewed and subject to public comment. Without this, the delay caused by multiple consultations, surveys, reports, and the processing of individual watershed permits will add significant new costs during the permitting process, and could lead to the abandonment of projects once considered viable. (p. 6)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Iowa Soybean Association (Doc. #17175)

5.471 The rule treats the significant nexus language as if it is the law of the land rather than the opinion of one Supreme Court Justice. The rule contains no definition of significant nexus but does define a tributary as a landscape feature where water channels leave a mark on the land and eventually reach a navigable water. This would often include water running off a field in a rainfall event, even though that runoff is considered sheet flow. Congress did not intend for sheet flow to be regulated. Yet through the new tributary definition and the significant nexus language, farm fields with wet areas can be pulled into jurisdiction. We're also concerned that the agencies intend to aggregate the flow from several fields (owned by several farmers) to create significant nexus. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 1, 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Atlantic Legal Foundation (Doc. #17361)

5.472 Finally, this proposal will dispense with the current framework for determining "other waters"[183] and replace it with an imprecise "significant nexus" analysis. This test will be satisfied when "a water, including wetlands, either alone or in combination with other *similarly situated*[184] waters in the region . . . significantly affects the chemical, physical, or biological integrity of a [jurisdictional] water" (emphasis added).[185] The sole limitation articulated is that the significant effect must be "more than speculative or insubstantial,"[186] providing immense regulatory discretion and decreased predictability for the regulated community. Potential difficulties of this type are repeatedly referenced in the comments made by law makers in opposition to the proposed rule.[187] (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 4, 5, 7, and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency

[183] The prevailing test for identifying "other waters" is where "the use, degradation, or destruction of which could affect interstate or foreign commerce." 33 C.F.R. 328.3 § (a)(3) (1993).

[184] The agencies propose that similarly situated "other waters" are to be examined as to (a) their proximity, (b) how the combined group of waters affects the chemical, physical, and biological aspects of a region, and (c) how functions such as habitat, water storage, sediment retention, and pollution sequestration are impacted. See Definition, supra note 1, at 22213. Again, this broad term accords the agency substantial discretion, while providing little certainty for individuals and businesses.

[185] *Id* at 22263.

[186] *Id*.

[187] For example, a Representative from Ohio's eleventh district disagreed with the proposed rule stating "the agency's
proposed interpretation of 'significant nexus' is vague enough to allow EPA to assert its jurisdiction over waters not previously regulated rather than to limit its jurisdiction as the agency suggests." Letter from Marcia L. Fudge, Member of Congress for Gina McCarthy (April 23, 2014) (On file with Regulations.gov). Likewise, a State Senator from Alaska also objected to the proposals vague wording due to its capacity to create jurisdiction over much of Alaska: "The proposed rule will treat permafrost as 'water' not as a soil element as it is currently defined. Permafrost is thickest in Arctic Alaska .. . but it is found to some extent beneath nearly 85% of Alaska[n] soils (according to the Alaska Public Lands Information Center). To put 85% of Alaska's land under the jurisdiction of EPA, through use of the CWA would be Eva stating to the people of Alaska and unwarranted." Letter from Cathy Giessel, Alaska State Senator for Donna Downing and Stacey Jensen (June 9,2014) (On file with Regulations.gov).

Summary Responses, Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections I, II, VII, VIII and IX.

Natural Resources Defense Council and Southern Environmental Law Center (Doc. #17477.14)

5.473 Under §404, the CWA established a federal interest in regulating broadly defined waters based on interstate or foreign commerce. The SWANCC decision ruled against the reliance on the Migratory Bird Rule for asserting jurisdiction over isolated waters. This decision did not redefine the scope of the CWA by negating the commerce clause factors; but, rather invalidated a "test" by which we determine isolated waters.

Given the narrow holding of the Court, the focus of any guidance and regulations should be on establishing whether there is a legitimate nexus between navigable waters and isolated waters. As the nation gains a greater understanding of watersheds, establishing a nexus may prove essential. All types of waters are components of a system that act collectively with other portions of a watershed/ecosystem. The loss of isolated water functions, such as habitat value, flood storage and water quality protection will impact downstream water quality, fisheries, and recreational uses within a watershed. This fact has been recognized by federal and state governments as they have begun to require a watershed approach to the management of discharges. (p. 1-2)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

J. Dillard (Doc. #18907)

5.474 You state:

"Significant nexus" is not itself a scientific term. The science of connections and effects on the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas informs an analysis of the facts and circumstances of the waters being considered under a "significant nexus" analysis.

Comments:

Because the term is not scientific, the decision maker must have the background to exercise proper judgment. In other words, political decisions are not scientific decisions and there must be a process to challenge the decision, other than a court of law. (p. 3-4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and II.

5.475 You state:

Connectivity for purposes of interpreting the scope of "waters of the United States" under the CWA serves to demonstrate the "nexus" between upstream water bodies and the downstream traditional navigable water, interstate water, or the territorial sea.

Comments:

Connectivity occurs, but accessibility may not. If a concreted river, such as the LA River, with controlled low flow, connects downstream, but on a predictable basis. Rains,

however, turn the LA River into a raging torrent of water, with no control. Connectivity always occurs, but only the wet weather flow is natural. (p. 4)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comment 4, Section 5.4 Agency Summary Response, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections II and VII.

Kevin and Nicole Keegan (Doc. #19128)

5.476 (…) The Meaning and implications of Significant Nexus should not be an element of the proposed rule until the term has been sufficiently defined by the Congress and the Courts. (…) (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction, Preamble to the Final Rule Sections III and IV and Technical Support Document Sections I and II.

Alcona Conservation District (Doc. #19345)

5.477 The most problematic concerns are the significant expansion of areas defined as "waters of the U.S." by effectively removing the word "navigable" from the definition of the CWA, and inserting/defining the word "significant nexus." This would place features such as ditches, ephemeral drainages, flood plains, seeps, occasionally or seasonally wet areas, and State of Michigan regulation of point sources, just to mention a few, under federal regulations and control. (p. 1)

Agency Response: See Section 5.0 Agency Summary Response, summary response to comments 3, 4, 5, 7, 8, Preamble to the Final Rule and Technical Decision Document Sections I, II, VII, VIII and IX. The rule, which defines "waters of the United States," does not affect the scope of the statutory definition of "point source."

Western States Water Council (Doc. #19349)

5.478 E. Significant Nexus

The Council understands that the draft rule may recognize that Justice Kennedy's significant nexus test requires a connection between waters that is "more than speculative or insubstantial" to establish jurisdiction. The Council supports the intent of such recognition. However, the rule should also quantify "significance" to ensure that it does not extend jurisdiction to waters that have a de minimis connection to jurisdictional waters. (p. 3)

Agency Response: See Section 5.0 Agency Summary Response, Introduction and summary response to comments 7 and 8, Preamble to the Final Rule and Technical Decision Document Sections I and II.

Butte County Administration, County of Butte, California (Doc. #19593)

5.479 We believe that use of the term "similarly situated" would allow the agencies to consider multiple waters together in making a "significant nexus" determination. The proposed

rule states that the agencies should look at whether these waters "can reasonably be expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether these waters are "sufficiently close" to each other or the jurisdictional water. This analysis is fraught with uncertainty and subjective decision-making. The agencies should assess each of the individual functions that the group of waters must perform in order to be considered "similarly situated", including listing such functions as examples in the proposed rule. Also, the agencies should require a confined, verifiable surface connection to each other (and not "fill and spill" as put forth in the proposed rule) in order for waters to be considered "similarly situated", and limit the distance allowable between "similarly situated" waters. Waters not meeting these tests should not be considered "similarly situated" and thus would be non-jurisdictional under the CWA. Considering CWA jurisdiction of "other waters" in a watershed on a landscape scale would create burdens on both the regulated community and the regulating agencies without much benefit to water quality and should not be considered as an alternative in the rule. (p. 6-7)

Agency Response: **See Section 5.0 Agency Summary Response, summary response to comments 7 and 8, Sections 5.1, 5.2, 5.3, and 5.4 Agency Summary Responses, and Preamble to the Final Rule Sections III and IV and Technical Support Document at Sections II, VII, VIII and IX. See also Response to Comments Compendium Topic 4 – Other Waters and Topic 9 – Science.**

ATTACHMENTS AND REFERENCES

Comments included above in this document discuss the Proposed Rule, and some include citations to various attachments and references, which are listed below. The agencies do not respond to the attachments or references themselves, rather the agencies have responded to the substantive comments themselves above, as well as in other locations in the administrative record for this rule (e.g., the preamble to the final rule, the TSD, the Legal Compendium). In doing so, the agencies have responded to the commenters' reference or citation to the report or document listed below as it was used to support the commenters' comment. Relevant comment attachments include the following:

Exhibit A: Generalized Depth to Groundwater [Nebraska] (Doc. #11855)

Exhibit C: Wetlands Identified by EPA Region 7 (Doc. #11855)

Gracz, M., M. Moffett, D. Siegel, and P. Glaser. *End-member mixing analysis [in a homogeneous watershed] to identify the contribution of peatlands to stream flow*. University of Minnesota. Draft paper. (Doc. #18006.1)

Resolution of the Western States Water Council Regarding Clean Water Act Jurisdiction, Helena, Montana, July 18, 2014 (Doc. #9842, p. 1)

In addition, commenters submitted the following relevant references. These are copied into this document as they were submitted by commenters. The agencies have not verified the references, or the validity of hyperlinks.

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