Clean Water Rule Comment Compendium
Topic 4 : Other Waters

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 Other Waters 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 4. OTHER WATERS (PROPOSED (A)(7) WATERS)

Agency Summary Response

Essay 1

The proposed rule included a broad provision that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. Many commenters expressed concern that such a broad opportunity for case-specific "waters of the United States" determinations would lead to too much uncertainty about the jurisdictional status of waters in broad areas throughout the country.

After considering the comments, the best available science, the goals, objectives and policies of the statute, and the caselaw, and applying their technical expertise and experience, the agencies have greatly reduced the extent of waters subject to case-specific significant nexus analysis.

The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

The science available today does not establish that waters beyond those that fall within one of the (a)(1) through (a)(6) categories should be jurisdictional by rule under the CWA. In the evaluation of "other waters" the SAB found that "scientific literature has established that 'other waters' can influence downstream waters, particularly when considered in aggregate." The SAB thus found it "appropriate to define 'other waters' as waters of the United States on a case-specific basis, either alone or in combination with similarly situated waters in the same region." Based in part on these findings, the agencies believe the case specific determinations as defined in (a)(7) and (a)(8) of the final rule are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings.

The agencies note that the "other waters" concept arises directly from Justice Kennedy's opinion in *Rapanos* (547 U.S. at 780):

> "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 [wet]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."

Since Justice Kennedy did not define many of the key terms, it is the agencies' responsibility to apply 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" as Justice Kennedy defined that term.

The agencies do not agree with the commenters who stated that the proposal would have expanded 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. However, to address the concern that commenters raised that the "other waters" category would allow the agencies to regulate virtually any water not specifically excluded, the final rule places limits on the waters that are subject to a case-specific significant nexus analysis.

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, the final rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California,, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a case-specific significant nexus determination. Waters in these subcategories are not jurisdictional as a class under the final rule. However, because the agencies determined that these subcategories of waters are "similarly situated," the waters within the specified subcategories that are not otherwise jurisdictional under (a)(6) of the rule must be assessed in combination with all waters of the same subcategory in the single point of entry watershed. The agencies' rationale for this determination is set forth in the Preamble and in the Technical Support Document.

Second, at paragraph (a)(8), the final 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 an (a)(1) through (a)(3) water or within 4,000 feet of the high tide line or ordinary high water mark of an (a)(1) through (a)(5) water. 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). 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. The agencies' rationale for this determination is set forth in the Preamble and in the Technical Support Document.

As stated in the final rule, the significant nexus analysis for waters assessed under (a)(7) and (a)(8) is a three-step process. First, the region for the significant nexus analysis must be identified; under the rule, it is the watershed which drains to the nearest traditional navigable

water, interstate water or territorial sea. Second, any similarly situated waters must be identified; under the rule, that is waters that function alike and are sufficiently close to function together in affecting downstream waters. And third, the waters are evaluated 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 the territorial seas.

The final rule also includes revised and more detailed definitions of "significant nexus," "in the region," and "similarly situated" waters that provide the greater clarity. Providing for case-specific significant nexus analysis for waters that are not adjacent but within the 4,000 foot distance limit, as well as those within the 100-year floodplain of a traditional navigable water, interstate water, or the territorial seas, is consistent with science and agency experience, will ensure protection of the important waters whose protection will advance the goals of the Clean Water Act, and will greatly enhance regulatory clarity for agency staff, regulated parties and the public. The final rule reflects the agencies 'recognition that the connectivity of waters to downstream waters occurs along a gradient and the agencies' understanding that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional.

Essay 2

A number of commenters expressed concern that application of the significant nexus standard on a case-specific basis will be costly and lengthy, resulting in substantial delays in obtaining an approved jurisdictional determination.

Currently, the agencies identify jurisdictional waters based on the CWA itself, alongside three key Supreme Court precedents as interpreted variously by the Courts of Appeals, which is confusing to the regulated public. The intention of the new definition of Waters of the U.S. was to increase clarity and predictability.

The agencies have retained only in two narrowly specified and readily identifiable circumstances the current practice of case specific significant nexus determinations. Accordingly, the agencies believe that the rule will result in a reduction of case-specific determinations for two reasons. The agencies anticipate that the number of case-specific determinations will be reduced because the final rule identifies as jurisdictional by rule and based on the best available science, all tributaries as defined and all adjacent waters as defined. Second, the final rule limits to two categories the waters that will receive a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

The EPA's Office of Research and Development incorporated data and studies from across the Nation in the Science Report that informed this rule and the agencies can consider additional studies including those from states in the review of case specific significant nexus analysis.

Essay 3

Commenters expressed concern that the "other waters" category could lead to assertion of CWA jurisdiction over ephemeral features that the commenters believe were not previously considered covered by the CWA.

The agencies disagree that the final rule will cause the agencies to assert jurisdiction over ephemeral features that were not previously considered jurisdictional. It is important to note that many ephemeral waters are jurisdictional under current regulations. The agencies have historically taken regulatory action in connection with ephemeral waters under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime.

The final rule defines "tributary" as requiring that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." See Tributary Compendium.

The final rule expressly excludes erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of tributary. It also expressly excludes ephemeral ditches that are not a relocated tributary or excavated in a tributary.

When a water is excluded by rule, it is not a "water of the United States" even where it otherwise meets the definitions in paragraphs (a)(1) through (a)(6) or (a)(8).

Essay 4

A number of commenters expressed concern that, under the "other waters" provision, the agencies would assert CWA jurisdiction over isolated waters with no connection to downstream traditional navigable waters, interstate waters, or territorial seas.

The agencies disagree that the approach to other waters will have the effect of extending coverage to isolated waters with no connection to downstream traditional navigable waters, interstate waters, or territorial seas. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). By definition, a water that has a significant nexus is not truly "isolated" and has a physical, chemical or biological connection to a downstream traditional navigable water, interstate water, or territorial sea.

Essay 5

Several commenters expressed concern that the "other waters" provision is so broad that it leaves a landowner with no notice as to whether his or her property is likely to contain a jurisdictional water.

The agencies agree that it is important to provide as much clarity and certainty as possible so that landowners are on notice that there are potential jurisdictional waters on their property. The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The agencies believe that the final rule provides clarity that will allow a landowner to assess whether a particular local water is likely covered. The agencies believe the final rule accomplishes this goal by identifying six clearly defined categories of waters as jurisdictional by rule. The other waters categories also are clearly defined in a manner to provide landowners with notice.

With respect to the "other waters" category, the broad provision of the proposal has been replaced in the final rule by two narrowly specified and readily recognizable categories of waters that will be subject to case-specific significant nexus analysis. Section (a)(7) of the final rule identifies five specific water types. Section (a)(8) identifies waters based upon presence in the 100 year flood plain of an (a)(1) through (a)(3) water or within a specific distance (4000 feet) of the high tide line or ordinary high water mark of an (a)(1) through (a)(5) water.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to more readily identify potentially covered waters on their property than has been the case under current practice under the existing regulations. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

Essay 6

Many commenters expressed concern that the final rule does not provide a threshold, metric or quantitative measure of "significance" to be used in connection with significant nexus determinations. Commenters complain that the absence of a defined threshold of significance renders the case-specific significant nexus analysis overbroad, ambiguous, and unpredictable.

The agencies' determination of what constitutes a "significant nexus" is grounded in Justice Kennedy's opinion, which recognizes that not all waters have this requisite connection to traditional navigable waters, interstate waters, or the territorial seas. At the core of the "significant nexus" analysis, the protection of upstream waters must be critical to maintaining the integrity of the downstream waters. These upstream waters function as integral parts of the aquatic environment, and if these waters, alone or together with similarly situated waters in the region, are polluted or destroyed there is a significant effect downstream. The agencies assess the significance of the nexus in terms of the CWA's objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." When the effects are speculative or insubstantial, the "significant nexus" would not be present. In a case-specific analysis of significant nexus, the agencies determine whether the water they are evaluating, in combination with other similarly situated waters in the region, has a significant effect on the chemical,

physical, or biological integrity of the nearest traditional navigable water, interstate water, or the territorial seas.

The final rule does not establish quantifiable metrics for waters subject to a case-specific significant nexus analysis. The agencies believe that a determination of the relationship of these waters to traditional navigable water, interstate waters, and the territorial seas, and consequently their significance to these waters, requires sufficient flexibility to account for the variability of conditions across the country and the varied functions that different waters provide. The case-specific analysis called for by paragraphs (a)(7) and (a)(8) recognizes geographic and hydrologic variability in determining whether one of these waters, or a group of these waters, possess a significant nexus with traditional navigable waters, interstate waters, or the territorial seas.

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 believe that creating a definitive list of functions to be evaluated provides individual regulators who conduct the analysis clear and consistent parameters that they will consider during their review in making jurisdictional determinations and provides transparency to the regulated public over which factors will be considered. The final rule also clarifies that a water may have a significant nexus based on a single function alone so long as that function contributes significantly to the chemical, physical, or biological integrity of the nearest traditional navigable water, interstate water, or the territorial seas.

The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. 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 and more than speculative and insubstantial. See Technical Support Document and Significant Nexus Compendium for a further discussion of the agencies' interpretation of the significant nexus standard and when a nexus is neither speculative nor insubstantial.

Essay 7

Commenters assert that the final rule will allow the agencies to assert CWA jurisdiction over an (a)(7) or (a)(8) water based on "any" hydrologic connection. The agencies disagree. As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect on downstream traditional navigable waters, interstate waters, or territorial seas. In addition, that effect must be more than speculative or insubstantial. The rule reflects the agencies' recognition that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. 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 and more than speculative and insubstantial.

Since Justice Kennedy did not define the "region," the agencies in the proposal identified the single point of entry watershed as a reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard. The final rule continues to use the single point of entry watershed as the 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. Given that the significant nexus standard is premised on the significant effect on a traditional navigable water, interstate water or territorial sea, it follows from science, as well as well as the goals, objectives and policies of the statute and the caselaw, that "the region" should be defined in terms of the nearest traditional navigable water, interstate eater or territorial sea. Using the single point of entry watershed is the logical spatial framework to ensure that analysis of significant nexus is appropriately connected to these touchstone waters

The single point of entry watershed includes all streams, wetlands, lakes, and open waters within its boundaries. 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 single point of entry 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 single point of entry watershed is the most reasonable region within which to assess significant nexus from a water quality management perspective, because the traditional navigable water, interstate water, or territorial seas is the downstream affected water whose quality is dependent on the condition of the contributing upstream waters, including streams, lakes, and wetlands. To restore or maintain the health of the downstream affected water, it is standard practice 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 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 territorial sea.

The agencies note a number of comments expressing concern that the single point of entry watershed may be very large. With the exception of the Arid West, the agencies do not anticipate that to be the case. The final rule defines "in the region" as "the watershed that drains to the *nearest* water identified in paragraphs (a)(1) through (3) of this section." (emphasis added) The comments reflect some confusion because the term "watershed" in general usage loosely refers to the drainage area of a particular waterbody, regardless of the size of that waterbody. For example, one can speak of both the Chesapeake Bay "watershed" or the "watershed" of a small local creek or stream. The final rule clarifies that the term "watershed" as used in the final rule refers solely to the single point of entry watershed, *i.e.*, the watershed in which the water in question is located and is defined by the point at which flow enters the *nearest* water identified in (a)(1) to (a)(3). With the exception of the Arid West, the agencies would expect as a general matter the watershed draining to the nearest (a)(1) through (a)(3) water would not be as large as the commenters express.

In the Preamble, the agencies gave the example that in the arid West, 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 smaller 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 code (HUC-10) 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 situations. The basis for such an approach in very large single point of entry watersheds, such as in the arid West, should be documented in the jurisdictional determination.

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 FR 22246, Science Report, and Technical Support Document.

The agencies believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. The agencies also believe that the view that certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings.

Essay 8

Many commenters objected aggregation of all waters within a single point of entry watershed for purposes of conducting a case-specific significant nexus analysis. Commenters asserted that an individual water should not come within the CWA solely because it is one of a group of similarly situated waters that in combination have a significant nexus to a downstream traditional navigable water, interstate water, or territorial sea. Commenters assert that aggregating all waters in a watershed will inevitably lead to a determination of significant nexus.

The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional and limits the types of waters that may be considered "in combination" in the single point of entry watershed for purposes of a case-specific significant nexus analysis.

Justice Kennedy stated that waters are covered by the CWA if "either alone or in combination with similarly situated [wet]lands in the region," they "significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" Accordingly, the concept of evaluating the effect of waters "in combination with" similarly situated waters in the region arises directly from Justice Kennedy's opinion in Rapanos. 547 U.S. at 780. The concept of evaluating effect of waters "in combination with" similarly situated waters in the region also finds strong support in the science. It is well established that the incremental effects of individual waters are cumulative across entire watersheds and therefore should be evaluated in context. See Conclusion 5 of the Science Report and the Technical Support Document.

To address the concern that commenters raised that the "other waters" category would allow the agencies to regulate virtually any water or to aggregate all waters within a watershed of any size, the agencies have retained only in specified circumstances the current practice of case specific

significant nexus determinations. 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, the final rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). This is a change from the proposal which would have allowed for a significant nexus determination for any water, anywhere in the landscape.

Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. See Technical Support Document XI. 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. In performing a case-specific significant nexus analysis 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 waters from a different subcategory (for example, Carolina bays) under (a)(7), even where they occur in the same point of entry watershed. Waters identified as jurisdictional by rule in paragraph (a)(6) may not be combined in a case-specific significant nexus determination under (a)(7), even if they are of the same type.

Unlike waters evaluated under (a)(7), the waters specified at (a)(8) require a determination whether there are similarly situated waters. Under this step, the agencies apply factors in the determination of when waters evaluated under (a)(8) should be considered either individually or in combination for purposes of a significant nexus analysis. A determination of "similarly situated" requires an evaluation of whether a group of waters in the region that meet the thresholds set out under (a)(8) 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.

Considerations for identifying whether waters are similarly situated for purposes of a case-specific analysis under (a)(8) include whether they are within a contiguous area of land with relatively homogeneous soils, vegetation, and landform (e.g., plain, 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. While

proximity and the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, adjacency or 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 these (a)(1) through (a)(3) waters. 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

In determining whether groups of waters under (a)(8) perform "similar functions" the agencies will consider functions identified in (c)(5), including 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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. The agencies will consider the hydrologic, geomorphic, and ecological characteristics and circumstances of the waters under consideration. 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.

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), and waters evaluated under (a)(8) cannot be combined with waters identified in (a)(6) or (a)(7).
Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, or 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, functionns for downstream waters such that it is reasonable to consider their effect together.

Essay 9

Commenters questioned how a case-specific significant nexus analysis of a water "in combination with" other similarly situated waters in the single point of entry watershed would affect the jurisdictional status of similarly situated waters in the single point of entry watershed. Commenters also expressed concern that a landowner on whose property similarly situated waters may occur could be unaware of a case-specific significant determination that analyzed waters on this property and could be without recourse in the event of a significant nexus determination.

When a significant nexus exists between a water(s) and (a)(1) through (a)(3) water, that nexus exists even in absence of a positive jurisdictional determination on the site. When a site specific jurisdictional determination has been done it serves to identify the boundaries of the "waters of the United States." Within a single point of entry watershed, over a period of time there will likely be multiple jurisdictional determinations. The effect on the jurisdictional status of similarly situated waters in the single point of entry watershed depends upon whether the jurisdictional determination was positive (i.e., the water is jurisdictional) or negative (i.e., the

water is not jurisdictional) and, if negative, whether all similarly situated waters were considered as part of the analysis.

For (a)(7) waters, if a positive case-specific significant nexus determination has been made in the point of entry watershed, all waters in the subcategory in the single point of entry watershed are jurisdictional.

For (a)(8) waters, the case-specific significant nexus 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 the 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, as noted above, 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.

The agencies believe that the final rule provides sufficient clarity to give a landowner notice that there may be potentially jurisdictional waters on his or her property. The agencies do not agree that the owner of a similarly situated water analyzed in connection with a case-specific significant nexus analysis would lack recourse. With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water together with similarly situated waters in the region, the agencies note that approved jurisdictional determinations is of limited duration and would expire after five years. See RGL 08-02. While the Corps does not intend to reopen completed jurisdictional determinations without a request, an approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information provided to the Corps as part of a request. 33 C.F.R. § 331.5(b)(7).

Essay 10

A number of commenters expressed a concern that a case-specific significant nexus determination can result in a finding of CWA jurisdiction where the only connection to an (a)(1) through (a)(3) water is the migration of wildlife. Many of these commenters asserted that such a result would be contrary to the Supreme Court's holding in *SWANCC* that the presence of migratory birds could not serve as the sole basis for asserting CWA jurisdiction.

The final rule does not resurrect the Migratory Bird Rule. As the Preamble makes explicit, presence of non aquatic-dependent migratory species alone does not establish a significant nexus. The final 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.

As discussed in the Significant Nexus compendium and the Preamble at Section III, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "provision of life cycle dependent aquatic habitat (including, but not limited to, as foraging, feeding, nesting, breeding, spawning, or use as a nursery area) for species located in a water identified in paragraphs (a)(1) through (3)." This function encompasses far more than mere migration of non-aquatic species. Evidence of effect on biological integrity 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. Case-specific waters can be biologically connected to each other and to downstream waters through the movement of seeds, macroinvertebrates, amphibians, reptiles, birds, and mammals. Science Report at 4-30 to 4-35. Factors influencing an effect on biological integrity 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.

This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and *biological* integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus. The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

Essay 11

Several commenters requested that the agencies retain the provision in the existing regulations making jurisdictional "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce" either in addition to or in lieu of the significant standard.

Under the final rule, an interstate commerce connection absent a significant nexus (as defined) to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the

chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Determining which waters have a "significant nexus" – requires the integration of this science with policy judgment and legal interpretation. 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. The agencies interpret specific aspects of the significant nexus standard in light of the science, the law, and the agencies' technical expertise.

Essay 12

Commenters have taken a position that assertion of waters beyond "adjacent" waters or to waters that lack a surface hydrologic connection to (a)(1) through (a)(5) waters is outside the scope of the CWA and the Supreme Court decisions.

EPA disagrees that waters that are not within categories (1) through (6) as defined by the final rule should not be covered by the Clean Water Act. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

The science available today does not establish that waters beyond those that fall within one of the (a)(1) through (a)(6) categories should be jurisdictional by rule under the CWA. However, the agencies' experience and expertise indicate that there are waters other than those identified in (a)(1) through (a)(6) that the science demonstrates often have a significant effect on downstream waters. The agencies believe the case specific determinations as defined in (a)(7) and (a)(8) of the final rule are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings.

While proximity and the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, the agencies' experience and expertise indicate that there are waters located within the 100 year flood plain 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) where the science demonstrates that they often have a significant effect on downstream waters. Moreover,

adjacency or a hydrologic connection are not always 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 these (a)(1) through (a)(3) waters. 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.

Essay 13

Several commenters 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.

Based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos*, Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. While Justice Kennedy's discussion of the application of the significant nexus standard 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." *Id*. at 767 (emphases added). Fundamentally, Justice Kennedy's significant nexus analysis is about the fact, long-acknowledged by Supreme Court caselaw, that protection of waters from pollution can only be achieved by controlling pollution of upstream waters. It would be inconsistent with Justice Kennedy's opinion as a whole, science, and common sense to apply Justice Kennedy's significant nexus standard to wetlands adjacent to tributaries and not to the tributaries themselves.
See the Technical Support Document, section I.

Essay 14

Some commenters questioned the agencies' reference to use of geographic information system information, remote sensing, or other generally accepted data in connection with a case-specific significant nexus determination under either (a)(7) or (a)(8). Several commenters asserted that use of such information detracted from the case-specific nature of the analysis.

To the extent the commenters infer that it is inappropriate to use of geographic information system, remote sensing or other data from generally recognized sources or scientific literature as part of a case-specific significant nexus analysis, the agencies disagree. The agencies long have utilized many tools and many sources of information, including U.S. Geological Survey (USGS) and state and local topographic maps, aerial photography, soil surveys, watershed studies, scientific literature and references, and field work. These tools provide information about both specific sites and larger systems. For example, USGS and state and local stream maps and datasets, aerial photography, gage data, watershed assessments, monitoring data, and field observations are often used to help assess the contributions of flow of tributary streams, including intermittent and ephemeral streams, to downstream traditional navigable waters, interstate waters or the territorial seas. Similarly, floodplain and topographic maps of federal, state and local agencies, modeling tools, and field observations can be used to assess how wetlands are trapping floodwaters that might otherwise affect downstream waters.

The agencies note that use of this type of information improves clarity and predictability of decisionmaking.

Essay 15

Several commenters assert that the agency should not look to Justice Kennedy's concurring opinion in *Rapanos* as a legal basis for establishing the scope of waters of the United States. Other commenters assert that the final rule is inconsistent with Justice Scalia's opinion in *Rapanos.*

The agencies believe the rule is appropriately premised on the significant nexus standard as articulated by Justice Kennedy. 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." As set forth in greater detail in the Technical Support Document, all U.S. Courts of Appeal and virtually all U.S. District Courts that have applied *Rapanos* have held that Justice Kennedy's standard may be applied to identify jurisdictional waters.

Essay 16

Many commenters stated that any assertion of CWA jurisdiction must be based upon a finding of surface hydrologic connectivity or confined surface hydrologic connection. In addition, several commenters objected to the agencies' consideration of "fill and spill" connection to downstream waters. The "fill and spill" concept involves the situation where wetlands or open waters "fill" to capacity during intense precipitation events or high cumulative precipitation over time and then "spill" to downstream waters.

The agencies did not limit waters that can be subject to a case-specific significant nexus determination to those with a specific type of hydrological connection because, as discussed in the preamble and TSD, the types of waters and connectivity is greatly variable across the Nation, and waters can have a significant nexus even where such a connection is not

present. The Science Report and the SAB review confirmed that waters that do not fall within the category of tributaries as defined or adjacent waters as defined nevertheless provide many functions that benefit downstream water quality and ecological integrity, but their effects on downstream waters are more difficult to assess based solely on the available science. Accordingly, the final rule establishes two exclusive, clearly defined 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."

While proximity and the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas and should be considered as part of a case-specific significant nexus determination, the agencies' experience and expertise and the available science indicate that there are waters other than those defined as tributaries or adjacent waters where the science demonstrates that they often have a significant effect on downstream waters. Moreover, adjacency or a hydrologic connection are not always 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 these (a)(1) through (a)(3) waters. 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. 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.

To the extent the commenter refers to those portions of the proposed rule that identify neighboring waters, the proposal defined "neighboring" to include, among other things, waters with a surface connection to jurisdictional waters, which included "fill-and-spill connections," and some commenters recommended eliminating surface hydrologic connectivity as a basis for adjacency. The definition of neighboring in the final rule does not include a provision defining "neighboring" based on a surface hydrologic connection, but instead provides specific distance thresholds. Similarly the only waters subject to case-specific significant nexus determinations are those that fall within the types identified in (a)(7) or the threshold in (a)(8).

Essay 17

Several 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.

The agencies disagree. Justice Kennedy framed the significant nexus test in terms of Congressional goals and purposes. 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 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 a traditional navigable water, interstate water, or the territorial sea. Case-specific determinations of significant nexus require (a)(7) or (a)(8) waters to be evaluated either alone, or in combination with other similarly situated waters in the region. The agencies' definition of significant nexus is based upon the language in *SWANCC* and *Rapanos*. The definition is also consistent with current practice, where field staff evaluate the functions of the waters in question and the effects of these functions on downstream waters. In order to add clarity to the definition of significant nexus, the agencies have listed in the definition the functions that will be considered in a significant nexus analysis. 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) in order to have a significant nexus. The final rule makes clear that 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 identified in paragraphs (a)(1) through (3).

Specific Comments

Committee on Space, Science and Technology (Doc. #16386)

4.1 The definition "other waters" makes it sound as if the EPA is concerned there might be something they missed. This definition appears to be a "capture everything else" definition.

a. Please explain why you need a category called "other waters" and how the Agency plans to provide certainty to the regulated community that the Agency will not take the overly broad view that some fear?

b. Can you site another Clean Air Act rulemaking-not a guidance-where the Agency left open an undefined catch all like the "other waters" term here?

c. Over the past few months when faced with questions about the vagueness of definitions, the Agency has often claimed that broad definitions are beyond the EPA intended. What legally binding assurances can the EPA provide? Will legal certainty provide protections from third-party law suits? (p. 18)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional.

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. However, to address the concern that commenters raised that the "other waters" category would allow the agencies to regulate virtually any water, the final rule places limits on the waters that are subject to a case-specific significant nexus analysis.

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. Therefore, agencies disagree that the rule is overly broad. While the proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded, in consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the final rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination; second, at paragraph (a)(8), the final rule identifies 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).

The agencies have provided revised and more detailed definitions of significant nexus, "in the region," and similarly situated waters within the rule and the preamble that they believe provide the desired clarity.

<u>New Mexico Department of Agriculture (Doc. #13024)</u>

4.2 NMDA suggests the removal of the catch-all category – other waters. If the Agencies retain the other waters category, we request clarification on the points described below.

- NMDA recommends using the existing ecoregions as a more robust and descriptive starting point in better categorizing the other waters definition.
- In a second draft of this rulemaking, EPA should specify areas where changes may occur in order to assist the regulated community in identifying ways this proposed rule may change in the future.
- In addition to the duration of the process, stakeholders are unclear of the steps involved in the jurisdictional determination and still have many questions. Will the Corps be the sole agency responsible for making determinations or will they consult with external experts? Will the process take into consideration economic activity that

could be disrupted? How will stakeholders be notified if their operations occur on or near a jurisdictional water? Will stakeholders have the right to request an appeal?

- NMDA requests written guidance for agricultural producers that would clarify how to proactively determine if they may have jurisdictional waters on or near their owned or leased property.
- "New tools and resources that have the potential to improve precision of desk based jurisdictional determinations" should be provided to the regulated community to assist in independently assessing if water bodies on their land will be jurisdictional and to begin taking appropriate act ion to maintain compliance with Agency standards. (p. 25)

Agency Response: **The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. 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. 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* proposal Appendix A, Scientific Analysis, 79 FR 22246, Science Report, and Technical Support Document See response 4.83 (Doc. #15544).**

The jurisdictional categories reflect the current state of the best available science, and are based upon the law and Supreme Court decisions. The agencies will continue a transparent review of the science, and gain 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.

This rule only affects the definition of "waters of the United States." There are no changes in the implementing regulations to the process to conduct jurisdictional determinations and/or seek appeals remained in 33 CFR Parts 320-332 and as such are outside the scope of the rule.

The agencies have jointly developed Regional Delineation Manuals to identify waters and the ordinary high water mark respectively are located at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/reg_supp.aspx **and** http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx**. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices** http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm**.**

To assist in identification of potentially jurisdictional resources, the preamble cites a variety of publicly available resources which can be used to when making jurisdictional determinations.

State of Oklahoma (Doc. #14625)

4.3 In sharp contrast to other efforts within the rule to define significant water features and those that might be exempt, the proposed "other waters" category essentially opens the door for any collection of water to be considered WOTUS. Inclusion of this category, at least as proposed, breeds significant regulatory uncertainty and undoubtedly will slow down projects due to the need for increased case-by-case determinations. When coupled with decreasing agency resources and increasing demands for other services, the prospect of getting timely jurisdictional determinations is dubious at best. A wholesale revision to this category that builds upon State knowledge and data on similar classes of waterbodies could help immensely. Furthermore, the burden that this current proposal places on landowners and potential developers must be shifted to the Agencies in order to make timely jurisdictional determinations (e.g., in l80-days or less). (p. 4)

Agency Response: See Agency Summary Response Essays 1 and 5. The proposed rule proposed a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas. See response 4.1 (Doc. #16386). The agencies believe the final rule is not overly broad and it is not the case that any water would be considered a "waters of the United States." Best available science supports the significant effect that waters outside of the narrower limits of adjacency can have on

downstream waters, and therefore should be evaluated for jurisdiction, where not otherwise excluded. The agencies believe the additional clarity provided by the final rule provides sufficient information for landowners to identify that there may be potentially jurisdictional waters on their property. See response 4.13 (Doc. #14602)

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations in only two specified circumstances (see response 4.1 (Doc. #16386)). Accordingly, the agencies believe that the rule will result in a reduction of case-specific determinations by identifying tributaries and adjacent waters jurisdictional by rule based upon the best available science. The agencies anticipate that the number of case-specific determinations will further be reduced due to the final rule's limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

The EPA's Office of Research and Development incorporated data and studies from across the Nation in the Science Report that informed this rule and the agencies can consider additional studies including those from states in the review of case specific significant nexus analysis. Nothing in the rule prevents states from further protecting waters of their state.

Great Lakes Indian Fish and Wildlife Commission (Doc. #15048)

4.4 Staff also understand that certain waters are not "waters of the US." However, if some of these features are abandoned, they may over time acquire the characteristics of a water of the US. While clarity in regulation is desirable, it may be important to leave some flexibility in the rule so that certain of these features could become a water of the US under appropriate circumstances. For example, rice paddies that have been long abandoned should be considered waters of the US if they meet the criteria identified in the proposed rule. (p. 2)

Agency Response: The agencies agree and did provide a specific provision excluding water-filled depressions created as a result of certain activities. This exclusion would not alter the agencies' existing practice that these features could be found to be jurisdictional once the construction or mining activity is completed or abandoned and the water feature remains. .This provision is consistent with the long-standing agency practice as reflected in the agencies' 1986 and 1988 preambles. The agencies have not changed their existing approach to Prior Converted Cropland and it is outside the scope of this rule.

Ohio Department of Natural Resources, et al., State of Ohio (Doc. #15421)

4.5 The preamble states, "The agencies note that under the proposed rule any waters not fitting within (a)(1) through (a)(6) categories would instead be treated as 'other waters.'" However according to the rule, these "other waters" must "have a significant nexus to a water identified in paragraphs (a)(1) through (3)". Since different categories are used [(a)(1) to (a)(6) versus (a)(1) to (a)(3)], additional explanation/clarification should be provided. (p. 17)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional per se in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

New Mexico Environment Department (Doc. #16552)

4.6 The "other waters" category in the proposed rule does not help clarify the extent of "waters of the United States," and the Department recommends its removal from the rulemaking action. As proposed, this term will cause more confusion than current definitions because it allows all "waters" not clearly included in the proposed jurisdictional definitions to be included based on a case-specific determination. 79 Fed. Reg. 22,180, 22,211-13. However even there, the Agencies have proposed to include by rule certain "other waters" based on location, "similarity," and/or 'geographic region. Id. This appears to be a catch-all provision to establish jurisdiction where none may exist under current or proposed rule provisions. For example, it makes it such that a water that does not meet the categorical exemptions (e.g. and isolated wetland) but is not also clearly a jurisdictional water falls in a limbo of being treated as a jurisdictional water until shown not to be; the burden of proof should be reversed. Specifics of this provision are so vague that implementation would be difficult, if not impossible. The Department therefore requests that the Agencies remove this provision and consult with the State and Department to more accurately establish jurisdictional authority in these waters. (p. 17)

Agency Response: **As stated previously, the agencies did not intend to cause confusion. In the final rule, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, the final rule identifies 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). These changes coupled with additional exclusions, reflect the agencies' intent to cover waters with significant effect on an (a)(1) through (a)(3) water.**

Waters that meet paragraphs (a)(7) and (a)(8) of the final rule are subject to a case-specific significant nexus determination, and they are not considered jurisdictional until such a finding is made. The commenter is incorrect in stating that waters in these categories are jurisdictional until shown not to be. The federal government

must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The final rule, promulgated under authority of Sectio 501 of the CWA, establishes a binding definition of "waters of the United States" and is consistent with the statue, the caselaw, and the Constitution. See Technical Support Document.

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

4.7 On page 22193, the agencies establish by rule that WOUS encompasses all tributaries of the traditional navigable waters, interstate waters and territorial seas, as well as all adjacent waters. The definition expands exponentially in that every time that a body of water, however connected, is determined to be a tributary, then, by extension, all sources of water entering that tributary likewise become tributaries. As a result of this expansion, the "other waters" formulation becomes meaningless in that so long as any body of water can be connected in anyway, it becomes a tributary. (p. 2)

Agency Response: The Agencies disagree with the commenter's description of tributary. Tributary is defined in the final rule; for purposes of the final rule, a tributary has a bed and banks and another indicator of ordinary high water mark. The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary."

In addition, the final rule treats wetlands, lakes and ponds that contribute flow as adjacent waters, not tributaries. It incorrect that all sources of water entering a tributary are likewise tributaries. See the Tributary and Adjacency Compendium for discussion.

New Mexico Department of Agriculture (Doc. #13024)

4.8 The inclusion of language pertaining to other waters has added an additional layer of complexity to this proposed rule which goes against EPA's stated goal of increasing clarity by the publication of this proposed rule.

The case-specific basis on which EPA will assert jurisdiction over other waters leaves the public unsure of the jurisdiction of waters on their land. Therefore, NMDA suggests the removal of the catch-all category – other waters. (p. 6)

Agency Response: As stated previously, the agencies did not intend to cause confusion. In addition to waters that are per se covered ((a)(1)-(a)(6)), in the final rule the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). The agencies believe the clarity provided in the final rule allows landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

Tri-County Economic Development Corporation, Northern Kentucky Tri-ED (Doc. #8536)

4.9 The use of "Significant nexus" in the proposed rule to classify waters of the United States represents an unclear, and potentially imprudent expansion of the scope of USEPA and USACE's regulatory jurisdiction with respect to enforcing the CWA. Under the proposed rule, there is concern that ephemeral waterways, isolated waters and wetlands, along with associated landscape, and otherwise exempted water bodies that drain to navigable water can be ruled jurisdictional under the new rule. (p. 1)

Agency Response: The agencies disagree that the analysis of "significant nexus" to classify waters is imprudent expansion. The Technical Support Document outlines the agencies legal and scientific rationale supporting the use of "significant nexus." In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. 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."

It is important to note that many ephemeral waters are jurisdictional under current regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. The agencies have historically taken regulatory action in connection with ephemeral waters under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime. The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." See Tributary

Compendium. To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

The final rule recognizes that not all waters have a significant nexus to a traditional navigable waters, an interstate water, or a territorial sea. In order to improve clarity, the final rule expands the discussion of excluded waters and other features not regulated. When a water is excluded by rule, it is not a "water of the United States" even where it meets the definition of a paragraph in (a)(1) through (a)(6).

Federal StormWater Association (Doc. #15161)

4.10 Under the proposed rule, a significant nexus can be based on the movement of biota, so any water could be considered jurisdictional if used by a bird, insect, amphibian, or mammal. And, if any single water is jurisdictional then all waters in the same category (pond, wetland, swale, etc.) also are jurisdictional. Thus, any water located anywhere could be considered jurisdictional, and the landowner has to worry not just about water on his or her own property, but must also be concerned with the status of water anywhere in the watershed that could be considered "similarly situated." This is an expansion of federal jurisdiction that has caused enormous uncertainty. (p. 4-5)

Agency Response: See Agency Summary Essays 9 and 10. The movement of biota alone is not sufficient to determine if a water evaluated under (a)(8) is jurisdictional. The final rule states that an evaluation of the functions provided by the water must be conducted in order to demonstrate a significant nexus with waters identified in (a)(1) through (a)(3). The final rule lists nine functions relevant to the physical, chemical, and biological significant nexus, one of which is "provision of life cycle dependent aquatic habitat." See response 4.25 (Doc. #14569)

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble and for reasons stated in the previous paragraph believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters.

The commenter is partially correct. Similarly situated waters are jurisdictional when in combination they have a significant nexus to an (a)(1) through (a)(3) water. A case-specific significant nexus determination to be a "water of the United States" applies to all waters that were considered "similarly situated" in the single point of entry watershed. See response 4.17 (Doc. #5843.1). The agencies note that this aspect of the final rule does not depart from and is a product of the Supreme Court's decision: 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.

The agencies do not agree that the owner of a similarly situated water would lack recourse. With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water together with similarly situated waters in the region, the agencies note that approved

jurisdictional determinations is of limited duration and would expire after five years. See RGL 08-02. An approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information. 33 C.F.R. § 331.5(b)(7).

Atlantic Legal Foundation (Doc. #15253)

4.11 We dispute the agencies' claim that the proposed rule will "narrow" the scope of regulatory jurisdiction.[1] The most problematic of the proposed rule's flaws is the significant expansion of areas defined as "waters of the United States" by effectively removing the word "navigable" from the definition of those waters subject to the CWA. The proposed rule's definition is based on a legally and scientifically dubious interpretation of the "significant nexus" concept advanced by Justice Kennedy in *Rapanos*. Contrary to the agencies' claims, the rule would place features such as ditches, ephemeral drainages, natural or man-made ponds, seeps, flood plains, and other occasionally or seasonally wet areas under federal jurisdiction.[2] While this proposal is, in a sense, "narrower," because it facially decreases the water bodies subject to case-specific jurisdiction, it extends the agencies' *per se* jurisdiction well beyond current regulations by definitional changes and imprecise wording. (p. 3)

Agency Response: See the Technical Support Document for a discussion on legal and scientific basis for the rule and a discussion on the agencies' approach to "significant nexus." The agencies do not agree that the rule effectively removes the term "navigable" from the definition of those waters subject to the CWA. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

The agencies disagree that the final rule would place all ditches, ephemeral drainages, natural or man-made ponds, seeps, flood plains, and other occasionally or seasonally wet areas under federal jurisdiction. The final rule narrowly defines waters that are *per se* jurisdictional and specifically excludes a subset of these water types, including ephemeral features that do not satisfy the definition of tributaries. When waters are not excluded and otherwise are not jurisdictional by rule, they may be analyzed under (a)(7) (if applicable) or, if they fall within the threshold provided in (a)(8), they are subject a case specific analysis. Responses to these other concerns are located in Tributary, Ditch, Adjacent, and Non-Jurisdictional

[1] See Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22189 (proposed Apr. 21, 2014) [hereinafter Definition] (to be codified at 33 C.F.R. pt. 328).

[2] EPA's attempt to limit federal jurisdiction by excluding gullies, rills, and swales from the definition of "waters of the United States" is salutary, but more clarity is needed on what these exclusions actually encompass.

compendiums. For these reasons we disagree with the statement that this rule expands jurisdiction.

Water Advocacy Coalition (Doc. #17921.1)

4.12 If the agencies cannot assert jurisdiction under their broad "tributary" and "adjacent waters" categories, the proposed rule provides for jurisdiction over "other waters" that have a significant nexus with TNWs, interstate waters, or territorial seas. This proposed category of jurisdictional waters impermissibly allows for jurisdiction over isolated wetlands and nonwetland waters based on aggregation of all "other waters" in a watershed. As with the other proposed categories of jurisdiction, the "other waters" category is defined using ambiguous terms and concepts that will lead to unpredictable results. With the "other waters" category, the agencies provide no clarity – they simply provide a broad expansion in jurisdiction. The "other waters" category should be removed from the proposed rule. Waters and wetlands that do not fit within the agencies' broad (a)(1) through (a)(6) categories should not be regulated under the CWA. (p. 65)

Agency Response: The agencies disagree that the "other waters" category should be removed. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the the final rule identifies 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).

The agencies further disagree that the approach to other waters will have the effect of extending coverage to isolated waters with no connection to downstream traditional navigable waters, interstate waters, or territorial seas. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4)

through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Associated General Contractors of America (Doc. #14602)

4.13 Summary: By considering the jurisdiction of a particular water "in combination with" other waters located in a broad region, every small pond or other water feature that retains stormwater would be WOTUS if the cumulative effects are deemed not "speculative or insubstantial." This not only expands CWA jurisdiction well beyond anything Congress could have intended to include in the term "navigable waters," but it leaves land users with virtually no way to assess the status of their local water, short of undertaking a complex and costly watershed study.

The agencies' proposed "other waters" category is designed to capture any wet feature that cannot be found jurisdictional under the "tributary" or "adjacent water" categories. Under the proposed rule, the agencies will assert jurisdiction over "other waters, including wetlands," if they "alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus" to a (1) traditional navigable water, (2) interstate water, or (3) territorial sea.[3]

For the first time, the proposal would allow regulators to consider all isolated waters and wetlands together within a large landscape area to support a jurisdictional determination. New definitions including the new concept of "a single landscape unit" leave ambiguity about what portion of each watershed is beyond the reach of federal regulators under the CWA. The proposed rule provides that such waters are "similarly situated" when they "perform similar functions and are located sufficiently close together or sufficiently close to a WOTUS so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical and biological integrity" of a waters identified in category (1)-(3) above. Under this definition, agency reviewers will have great discretion in identifying and evaluating isolated water-filled depressions (see Section VIII below), vernal pools, prairie potholes, and the like, together within a large "landscape unit." For example, the agencies may opt to use regional studies of large watersheds, such as the Chesapeake Bay or the California Bay Delta, to support a decision to assert federal control over all "similarly situated" waters and their adjacent wetlands/other waters – no matter how remote from the main part of the Bay/Delta – on the theory that excluding any single "similarly situated" water would adversely affect the ecological integrity of that entire watershed. Similarly, under this proposal, field staff could "aggregate" isolated depressions that do not have any noticeable hydrologic connection to the closest navigable water by finding that they perform similar functions such as flood control during the wet season.

The agencies' proposal for "other waters" is overbroad, ambiguous and confusing. It is without question the provision is meant to assert jurisdiction over isolated waters that have little or no connection to traditional navigable waters. The science does not support the proposed assertion of jurisdiction over these "other waters," and the Supreme Court

[3] 79 Fed. Reg. at 22,263.

has determined such isolated waters are not within the agencies' authority to regulate under the CWA. (p. 16-17)

Agency Response: **The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters." See response 4.1 (Doc. #16386), 4.12 (Doc. #17921.1)**

The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The agencies believe that the final rule provides clarity that will allow a landowner to assess whether a particular local water is likely covered. The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

The agencies disagree that analysis of "similar situated" waters will result in overbroad regulation. The proposal did ask for several approaches on how to consider waters "in the region." The final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See Technical Support Document for a more detailed discussion of the

agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court.

The agencies also believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. We also believe that the view that certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings. See the Technical Support Documentation for a discussion on the science and legal underpinnings of the rule.

Vulcan Materials Company (Doc. #14642)

4.14 Remove the "other waters" provisions from the rulemaking as the provisions create confusion and opportunity for misapplication of jurisdictional status based by agency decision-making. (p. 4)

Agency Response: The agencies disagree that the "other waters" category should be removed. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

CEMEX (Doc. #19470)

4.15 The proposed case-by-case significant nexus test is unclear and unnecessary. (p. 3)

Agency Response: The agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal and by providing a

more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. See Technical Support Document for the agencies' interpretation of the holdings of the Supreme Court.

Barrick Gold of North America (Doc. #16914)

4.16 (…) [T]he agencies could address many of Barrick's concerns with the proposed rule by taking the following actions:

Delete the "other waters" category from the rule. (p. 29)

Agency Response: See Agency Summary Essays 1 and 4. The agencies disagree that the "other waters" category should be removed. See response 4.1(Doc. #16386), 4.12 (Doc. #17921.1), 4.15 (Doc. #19470)

The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

Montana Wool Growers Association (Doc. #5843.1)

4.17 Section (a)(7) is unclear and will create unpredictable and inconsistent results. It does not: (1) specify how the Agencies will determine when an (a)(1) through (a)(3) water has been significantly affected by waters in a region; (2) state whether a single event can trigger jurisdiction within a region; (3) state whether a region that has been found to have a significant nexus in one case will be jurisdictional for concurrent and subsequent cases; or (4) provide clear guidance to, or protect the interests of, innocent parties within a region where collective impacts from run-off have a significant effect on downstream waters. A party can never recoup costs and time invested in defending against allegations, even if the party is later excused from liability. (p. 6)

Agency Response: The final rule provides a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. When a significant nexus exists between a water(s) and (a)(1) through (a)(3) water, that nexus exists even in absence of a positive jurisdictional determination on the site. When a site specific jurisdictional determination has been done it serves to identify the boundaries of the "waters of the United States." 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 nexus 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 the 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, as

noted above, 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.

Nothing in this rule affects the enforcement of the CWA and is outside the scope of this rule.

United FCS (Doc. #12722)

4.18 The proposed rule 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: The agencies do not believe the final rule is too broad. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

Oklahoma Grain and Feed Association et al. (Doc. #16067)

4.19 The agencies proposal for other waters is designed to capture any wet feature that cannot be found jurisdictional under the tributary or adjacent water categories. This particular proposal is overbroad, ambiguous and confusing, and is clearly meant to assert

jurisdiction over isolated waters that have little or no connection to traditional navigable waters. (p. 2)

Agency Response: The agencies do not believe the final rule is too broad. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

Peltzer & Richardson, LC (Doc. #16360)

4.20 "Significant Nexus" Should Be More Specific Regarding Impact To Navigable Waters. "Other waters" not covered by Section (a)(1) through (6) currently fall into Section (a)(7) of the proposed rule. These waters, even though not traditionally navigable, tributary to traditionally navigable waters, or wetlands that are adjacent to traditionally navigable waters, could still be subject to federal jurisdiction if a case-specific analysis by the agencies determines that the water has a "significant nexus" to a jurisdictional water under (a)(1) through (3). It is not clear why such an "other waters" rule is appropriate or even necessary in light of the expansiveness of the tributary and adjacent waters definitions. If this portion of the rule persists, despite the limiting nature of the case law, it should be made more restrictive by requiring a more "significant" nexus than the proposed rule provides. (p. 4)

Agency Response: See Agency Summary Response Essay 6. The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.

The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

As stated above, 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." 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 v. United States*, 547 U.S. 715, 780 (2006). Several terms in this standard were not defined by the Supreme Court's opinion. 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. In the final rule, 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. As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. 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. With respect to a determination that a nexus is neither speculative nor insubstantial, see response 4.54 (Doc. #15538). With the limitation placed on adjacent waters and waters subject to a case specific analysis, the agencies do not believe the final rule is too broad. The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and supported by the Science Report and the SAB review of the report.

Wilkin County Farm Bureau (Doc. #19489)

4.21 (…) The proposed rule suggests that other waters could be connected even if they are located in different landforms, have different elevation levels, and have different soil and vegetarian characteristics as long as they "perform similar functions" and are located "sufficiently close" to a traditional "water of the United States." While this gives regulators a broad swath of jurisdiction, it would be impossible for a typical farmer to know if a wet spot or dry land feature on their land could be deemed to have a "significant nexus" to a navigable water. (p. 2)

Agency Response: **As stated above, 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." In order for waters to be considered "similarly situated," they function alike and are sufficiently close to function together in affecting downstream waters. In the final rule, the agencies in (a)(7) identified five specific types of waters-- prairie potholes, Carolina and Delmarva Bays, Pocosins, western vernal pools in California, and Texas coastal prairie wetlands -- the agencies determined are "similarly situated" by rule in a single point of entry watershed. For other types of waters, the agencies in (a)(8) identified a specific threshold -- waters located within the 100 year flood plain 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), whichever is broader -- for case-specific analysis of significant nexus. The agencies also provided more specific exclusions. The agencies believe that these bright lines provide sufficient clarity for landowners to determine whether waters on their property could be subject to a case-specific significant nexus determination. If a landowner needs assistance, they can contact the local Corps Regulatory office or EPA Regional Officers at http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm and http://www2.epa.gov/aboutepa#pane-4 respectively.**

Chicken & Egg Association of Minnesota (Doc. #19584)

4.22 There is substantial value to the regulated public and other stakeholders in increased certainty regarding CWA jurisdiction. Thus the agency should clearly spell out that all categories of waters put forward as "other waters" are no longer under consideration for jurisdiction. The agencies should focus solely on traditional navigable waters. (p. 2)

Agency Response: **See Agency Summary Essays 1, 5 and 8.**

Elmore County Highway Department, Wetumpka, Alabama (Doc. #14072)

4.23 Despite multiple requests from NACO and NACE members, there has been a clear lack of willingness to provide mapping that details the jurisdictional waters defined under this rule making. It is very troublesome to local government that we have had no input into delineating the scope of jurisdictional waters, yet it is even more alarming that there is no willingness to clearly depict what is to be regulated and what is not through mapping. Technology clearly exists in multiple other federal and state agencies that could facilitate this type of demarcation. Without clear and concise mapping, individual decisions by the regulators could further twist the unclear direction of this proposed rule. State and local governments should be partners in developing and delineating the limits of federal jurisdiction in this matter. (p. 6)

Agency Response: **In the final rule, the agencies have identified six categories of waters that are jurisdictional by rule and two categories ((a)(7) and (a)(8)) that may be subject to case-specific determinations. In the final rule, the agencies in (a)(7) identified five specific types of waters-- prairie potholes, Carolina and Delmarva Bays, Pocosins, western vernal pools in California, and Texas coastal prairie wetlands -- the agencies determined are "similarly situated" by rule in a single point**

of entry watershed. For other types of waters, the agencies in (a)(8) identified a specific threshold -- waters located within the 100 year flood plain 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), whichever is broader -- for case-specific analysis of significant nexus. The agencies also identified specific exclusions. The agencies believe that generation of maps is not necessary to implementation of the final rule. Given that the rule is intended to identify covered waters across the wide range of ecosystems, landforms, and water types that exist across the entire country, there does not exist a comprehensive set of nationwide or statewide maps that identify waters subject to the scope of "waters of the United States." Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168). The agencies support the use of remote sensing of information and mapping as tools to identify waters and in particular tributaries as discussed in the preamble. These tools are helpful when site visits are not possible or in enforcement cases when the resource has been disturbed or no longer exists.

Alan Hofmann, General Manager- Secretary, Fresno Metropolitan Flood Control District (Doc. #15484)

4.24 Moreover, the Proposed Rule states that functions of waters that might demonstrate a significant nexus include sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, export of organic matter, export of food resources, and provision of aquatic habitat. (79 Fed. Reg. 22,188, 22,213 (April21, 2014).) Many of these functions are identical to functions provided by stormwater treatment control BMPs. Thus, based on the Proposed Rule, many storm water facilities could be found jurisdictional under the "other waters" category. Yet again, however, such facilities were specifically created to serve these functions, and are implemented to ensure compliance with CWA NPDES MS4 permit requirements. (p. 8)

Agency Response: It was not the agencies' intent to change current practice to make stormwater control features constructed to convey, treat, or store stormwater, and cooling ponds that are created in dry land "waters of the United States. In the final rule, the agencies added an exclusion to reflect current agencies' practice, and (b)(6) of the final rule excludes "[s]tormwater control features constructed to convey, treat, or store stormwater that are created in dry land."

Colorado Water Congress Federal Affairs Committee (Doc. #14569)

4.25 Is it accurate to conclude that isolated waters, where the only connection to TNWs is the migration of amphibians, waterfowl or other wildlife, will now be jurisdictional (should clarify that this alone is not a legitimate basis) (p. 7)

Agency Response: 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. As discussed in the Significant Nexus compendium and the Preamble at Section III, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine

functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3)." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of effect on biological integrity 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 an effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and *biological* integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus. The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

4.26 Will "other waters" for which no scientific study has been undertaken, but which lie within a region or basin for which a study of a similarly situated water has been conducted, be considered jurisdictional if the "other water" is so determined to be (should clarify that some site specific information is necessary) (p. 7)

Agency Response: **Similarly situated waters are jurisdictional when in combination they have a significant nexus to an (a)(1) through (a)(3) water. 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 nexus 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 the 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 analysis that is limited to 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.

4.27 Does the proposal regulate only what are found to be jurisdictional "waters" in the common understanding of that term, or is jurisdiction being asserted over the entire aquatic ecosystem, including associated chemical, biological and physical features (should clarify that jurisdiction depends upon water quality connection) (p. 8)

Agency Response: **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. As discussed in the Significant Nexus compendium, and the Preamble Section III, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial on waters detailed in (a)(1) through (a)(3).**

South Metro Water Supply Authority, Colorado (Doc. #16481)

4.28 Additional clarity is required for the following concerns:

- Are all normally dry arroyos or washes that flow only in response to infrequent rainfall events and occasionally reach TNWs jurisdictional or is there a set return frequency interval for such flows before jurisdiction will be triggered;
- How will the agencies treat artificial lakes or ponds;
- How will the agencies treat water-filled depressions that are incidental to "other than" construction activity;
- Will man-made swales used to capture stormwater be jurisdictional;
- How will the agency treat construction detention ponds that ultimately drain to navigable waters;
- Is it accurate to conclude that isolated waters, where the only connection to TNWs is the migration of amphibians, waterfowl or other wildlife, will now be jurisdictional;
- Will "other waters" for which no scientific study has been undertaken, but which lie within a region or basin for which a study of a similarly situated water has been conducted, be considered jurisdictional if the "other water" is so determined to be;
- Does the proposal regulate only what are found to be jurisdictional "waters" in the common understanding of that term, or is jurisdiction being asserted over the entire aquatic ecosystem, including associated chemical, biological and physical features;

- Would all ponds or lagoons, including artificial ones that overflow during heavy precipitation events, resulting in overland flow that reaches TNWs, become jurisdictional. (p. 4-5)

Agency Response: 'See Agency Summary Essay 9. In response to comments received, the final rule has been modified to clarify these issues. Arroyos and washes are analyzed as tributaries under (a)(5). The rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

The final rule has expanded the section on waters that are not considered waters of the United States, including many of the features listed in the comment, such as artificial lakes and ponds,, constructed grassed waterways and non-wetland swales, and stormwater and wastewater detention basins constructed in dry land. Water-filled depressions created as a result of certain activities are excluded. This provision is consistent is reflected in the agencies' 1986 and 1988 preambles.

With regard to the comment regarding isolated waters connected by migration of species, see Response 4.25 (Doc #14569).

With regard to similarly situated waters within in a single point of entry watershed, see Response 4.17 (Doc #5843.1).

For purposes of the final rule, the term "jurisdictional" refers to waters identified as "waters of the United States" as identified in (a)(1) – (a)(8).

Tucson Electric Power Company, UNS Energy Corporation (Doc. #19561)

4.29 The term "significant nexus" is poorly defined in the proposed rule. As written, all surface water features that are not covered under a(1) through (6) would required a significant nexus evaluation to determine if the agencies can assert jurisdiction over "other waters" on a case-by case basis. In Arizona, where the landscape is covered with numerous small ephemeral drainages, some several hundred miles from a TNW, the application of the significant nexus test is scientifically unsound. Ephemeral drainages in Arizona are all very similar in nature and if a significant nexus finds that there is no connection between ephemeral drainages on a particular site located 150 miles upgradient from the nearest TNW, a significant nexus evaluation for an adjacent site with the same ephemeral drainages should not be required to establish CWA jurisdiction or non-jurisdiction in this case. However, the agencies current practice is to require a significant nexus evaluation even though it is unscientific to do with respect to this example.

Recommendations: We suggest the following with regards to the definition and use of the term "significant nexus" in the proposed rule.

- For clarity, the proposed rule should be revised to clearly define the type of surface water features that would be subject to a significant nexus evaluation to document WUS.
- The exact process and data requirements that are needed to document the biological, chemical, and physical connection between a surface water feature and the nearest TNW should be included in the rule, as well as a description of the scientific process and/or standard operating procedures to document a significant nexus.

- The agencies should develop and include in the proposed rule, a procedure to allow the regulated community to seek a non-jurisdictional determination without the need to map the OHWM and submit a significant nexus evaluation to the agencies. (p. 8)

Agency Response: **See Agency Summary Response Essay 3. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."**

As stated above, 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." In the final rule, the agencies in (a)(7) identified five specific types of waters-- prairie potholes, Carolina and Delmarva Bays, Pocosins, western vernal pools in California, and Texas coastal prairie wetlands -- the agencies determined are "similarly situated" by rule in a single point of entry watershed. For other types of waters, the agencies in (a)(8) identified a specific threshold – 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), whichever is broader -- for case-specific analysis of significant nexus. The final rule also provides a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. 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. Justice Kennedy also noted that lack of a hydrologic connection sometimes can be the basis of a significant nexus. The appellate courts have held that the significant nexus analysis is a flexible ecological inquiry. . If a landowner needs assistance, they can contact the local Corps Regulatory office or EPA Regional Officers at http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm and http://www2.epa.gov/aboutepa#pane-4 respectively.

Southern Environmental Law Center et al. (Doc. #13610)

4.30 In the Southeast we have seen jurisdictional wetlands excavated to make amenity ponds in housing developments. Because they were excavated "cleanly," the Corps has been unwilling to require permits for this activity since the Tulloch Rule purportedly allows for such work even when there is a clear connection to other jurisdictional waters. We think that the Corps should clarify that such waters remain waters of the United States after the excavation is completed. Furthermore, if a wetland is excavated in this manner to create an amenity pond and it is then connected to a jurisdictional water through a ditch, then this entire system should be considered a water of the United States. Otherwise unregulated discharges of pollutants such as storm water could be made into the amenity pond and affect downstream jurisdictional waters. (p. 28)

Agency Response: **This rule does not affect the Clean Water Act definition of discharge of dredged material, or "Tulloch Rule", which was revised by the agencies in 2008. (*See, e.g.,* 33 C.F.R. § 323.2(d)). The exclusion in this final rule for artificial ponds only applies to features created in dry land, otherwise such features would analyzed under (a)(6) or require a case-specific analysis under (a)(8).**

Washington Legal Foundation (Doc. #5503)

4.31 For any "other waters" that do not fall under the listed categories, the agencies propose a process under which those waters could be found to be "waters of the United States." The test would be whether the water has a "significant nexus" to jurisdictional waters under Justice Kennedy's concurrence in Rapanos. Under the proposal, on a case-by-case basis, the agencies could determine whether the aggregate effect of geographically isolated wetlands and other waters significantly affect the physical, biological, and chemical integrity of federally protected downstream waters. WLF fears that this process could greatly expand federal jurisdiction on a case-by-case basis in a way that injects great uncertainty into the process and makes it very hard to predict what "other" waters are regulated. (p. 3)

Agency Response: **The agencies disagree that (a)(7) and (a)(8) expand the types of waters covered by 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. See Agency Summary Response Essay 1 and Significant Nexus Compendium.**

Earthjustice (Doc. #14564)

4.32 Earthjustice is concerned about EPA's deletion of the existing provision covering certain waters where "the use, degradation or destruction of" such waters "could affect interstate or foreign commerce." 79 Fed. Reg. at 22192. EPA includes very little discussion or explanation of this proposal other than the conclusory assertion that this change is needed "[t]o comport with the SWANCC and Rapanos decisions." Id. at 22212. This change is not compelled by either decision. In fact, as the proposed rule notes, the Court in SWANCC only held that the use of "isolated" nonnavigable intrastate ponds by migratory birds was not by itself a sufficient basis for the exercise of Federal regulatory authority. It did not discuss, much less rule out, the other facts upon which EPA might find that "the use, degradation or destruction of" certain waters "could affect interstate or foreign commerce," and that those waters are thus properly considered waters of the U.S. This basis for jurisdiction therefore remains a reasonable and permissible interpretation of the scope of the Act. Earthjustice asks deletion of the existing provision covering certain waters where "the use, degradation or destruction of" such waters "could affect interstate or foreign commerce." (p. 9)

Agency Response: **Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the**

chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Determining which waters have a "significant nexus" – requires the integration of this science with policy judgment and legal interpretation. 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. The agencies interpret specific aspects of the significant nexus standard in light of the science, the law, and the agencies' technical expertise.

Conservancy of Southwest Florida (Doc. #14980)

4.33 As stated in the SAB's report, "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." The Conservancy therefore supports the inclusion of all types of waters defined in the Clean Water Rule as categorically jurisdictional. (p. 2)

Agency Response: In consideration of the variety of views of the commenters, the Science Report, the input from the SAB, and the developing state of the science, the agencies reasonably decided not to establish jurisdiction over all waters that do not meet the requirements of (a)(1) through (a)(6) by rule. Instead, the agencies established case-specific provisions for some specified waters at (a)(7) and waters identified in (a)(8). 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 rule, the waters specified in (a)(7) and waters that meet the threshold described in (a)(8) are the only waters for which a case-specific significant nexus determination may be made. With respect to (a)(8) waters, the agencies establish a provision in the rule for case-specific significant nexus determinations because the agencies concluded that waters located within the 100 year flood plain 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) can have significant chemical, physical, and biological connections to and effects on traditional navigable waters, interstate waters, or the territorial seas. The agencies establish a threshold on case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that the threshold described in (a)(8) reasonably identifies the

areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. This approach also supports the goal of providing greater clarity to the public. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends.

Columbia Riverkeeper (Doc. #15210)

4.34 To ensure the continued protection and restoration of "virtually all bodies of water,"[4] EPA and the Corps should define the term "waters of the United States" as broadly as possible, consistent with federal commerce clause authority. Columbia Riverkeeper supports and incorporates by reference the detailed and thoughtful comments from Earthjustice and the Waterkeeper Alliance. (p. 2)

Agency Response: **See Agency Summary Response Essay 11.**

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

4.35 The comment we often hear from the regulated public in our region suggests what is really needed is a simplification of the Clean Water Act (CWA) regulations, particularly within the 404 program. In our opinion, a key element to simplifying the program is avoidance of the "case-specific" decisions that have resulted in long delays for the development process and inconsistencies in decisions between the USACE districts. To that end, we believe §328(a)(7) should be excluded from the proposed definition change, as this category of "other waters" requires a case-specific basis for determination of jurisdiction. (p. 1)

Agency Response: **See Agency Summary Response Essay 1.**

Save the Illinois River, Inc. (Doc. #16462)

4.36 We believe that the proposed new paragraph (s)(7) is both broad and unclear. And, because paragraphs (s)(5) and (s)(6) already include tributaries and waters adjacent to waters of the United States, we believe this paragraph to be unnecessary. (s)(7) would make it much more difficult for our citizens to ascertain in advance what waters would be included in the permitting process. And, an additional case-by-case determination of applicability would be time-consuming, expensive and beyond the reach of many. This rule does embrace the average man more than do your technical engineering standards. (p. 1-2)

Agency Response: **See Agency Summary Response Essays 2 and 5.**

Ruby Valley Conservation District, Montana (Doc. #16477)

4.37 Our Board requests that "other waters" provisions be eliminated from the scope of this document. There are no concise definitions in this portion of the document, which leaves

[4] International Paper Co. v. Ouellette, 479 U.S. 481, 492 (1987).

much to interpretation when these situations are evaluated on a case by case basis. The ambiguity in these sections makes it very difficult to determine if you are subject to the provisions. (p. 1)

Agency Response: **See Agency Summary Response Essay 1.**

Center for Water Advocacy et al. (Doc. #15225)

4.38 In addition, the following waters should be protected under the CWA if a fact-specific analysis determines they have a "significant nexus" to a traditional navigable water or interstate water:

- Tributaries to traditional navigable waters or interstate waters;
- Wetlands adjacent to jurisdictional tributaries to traditional navigable waters or interstate waters;
- Waters that fall under the "other waters" category of the regulations. These waters should be divided into two categories, those that are physically proximate to other jurisdictional waters and those that are not, and discusses how each category should be evaluated. This category should include groundwater. (p. 8)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

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. The agencies interpret specific aspects of the significant nexus standard in light of the science, the law, and the agencies' technical expertise.The final rule defines "waters of the United States" to include eight categories of jurisdictional waters. Six categories ((a)(1) – (a)(6)) are found to have significant nexus to traditional navigable waters, interstate waters, or the territorial seas and are covered per se. These per se jurisdictional waters include tributaries to traditional navigable waters or interstate waters ((a)(5)) and wetlands adjacent to jurisdictional tributaries ((a)(6)). In the final rule, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands)

that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). The rule excludes certain waters and features over which the agencies have generally not asserted CWA jurisdiction, as well as groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. Codifying these longstanding practices supports the agencies' goals of providing greater clarity, certainty, and predictability for the regulated public and regulators, and makes rule implementation clear and practical.

Congress of the United States, Senate Committee on Environment and Public Works et al. (Doc. #16564)

4.39 The scope of land and water features covered under the "other waters" provision is breathtaking. The use of a "region" or watershed as a basis for jurisdiction will provide EPA and the Corps with limitless authority, since the entire United States lies within some drainage basin.[5] EPA and the Corps purport to constrain the "significant nexus" standard as well as the "significant effect requirement" by indicating that for "an effect to be significant, it must be more than speculative or insubstantial." However, this caveat is meaningless because insubstantial waters may be "combin[ed] with other similarly situated waters in the region" in order to demonstrate a "significant effect."

The proposed rule's authorization for waters to be combined or evaluated in the aggregate "is clever, but has no stopping point."[6] Moreover. the proposed rule removes the requirement in the current "waters of the United States" definition that "other waters" be directly connected to interstate commerce in order to be jurisdictional,[7] further raising the specter that future jurisdictional determinations will often fail to be "in pursuance of Congress' power to regulate interstate commerce."[8] (p. 6)

Agency Response: The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or

[5] See Rapanos, 547 U.S. at 722 ("[T]he entire land area of the United States lies in some drainage basin, and an endless network of visible channels furrows the entire surface, containing water ephemerally wherever the rain falls.")
[6] United States v, Lopez, 5 14 U.S. 549, 600 (Thomas, J., concurring).
[7] See 40 C.F.R. § 230.3 (authorizing Clean Water Act jurisdiction for "other waters" " the use, degradation or destruction of which could affect interstate or foreign commerce").
[8] Morrison, 529 U.S. at 613.

territorial sea is not sufficient to meet the definition of "waters of the United States." All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document. All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document.

The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

With respect to (a)(8) waters, the agencies establish a provision in the rule for case-specific significant nexus determinations because the agencies concluded that waters located within the 100 year flood plain 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) can have significant chemical, physical, and biological connections to and effects on traditional navigable waters, interstate waters, or the territorial seas. The agencies establish a threshold on case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that the threshold described in (a)(8) reasonably identifies the areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. This approach also supports

the goal of providing greater clarity to the public. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends.

See Agency Summary Essay 6.

Arthur V. Brown (Doc. #0050)

4.40 "Other waters" should include groundwaters that could be affected. Groundwaters, especially those in Karst terrain, provide habitat for endangered species. Intermittent or ephemeral streams are occasionally "losing streams", i.e., those with essentially direct connection to groundwater. (p. 1)

Agency Response: The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium

4.41 Very small streams are significant biological habitat for organisms that inhabit them exclusively, that is, that can survive only in very small headwater streams like the Arkansas darter for example, which is a species of special concern. Thus these very small streams have significant importance of their own and deserve protection not just because they are connected to larger streams & rivers downstream. (p. 1)

Agency Response: The agencies agree. As stated in the preamble, the scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the chemical, physical, and biological integrity of downstream waters and the final rule reflects this by covering all streams regardless of flow regime, provided they exhibit bed and bank and ordinary high water mark. See Tributaries Compendium.

4.1. DEFINITION

Region 10 Tribal Caucus (Doc. #14927)

4.42 EPA should include groundwater as a subcategory of "other waters," and leave its jurisdictional status to be determined on a case-by-case basis. Specifically, the Tribal Caucus recommends that the rule be revised to include groundwater as a WOTUS when it is hydrologically connected and retains a nexus to Waters of the U.S. Specifically, the rule should state: "On a case-specific basis, other waters, including wetlands **and groundwater**, 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." (p. 3)

Agency Response: The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the

CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium.

Texas Comptroller of Public Accounts (Doc. #10952)

4.43 … [T]he blanket term "other waters" could apply to any type of water that is not automatically regulated per the rule. These "other waters" could be deemed jurisdictional if they prove to have a "significant nexus." … This approach could make it even more difficult to determine which waters fall under CWA authority. Since "other waters" are treated on a case-by-case basis and the meaning of this term is unclear, unintended waters, such as puddles or isolated ditches on private property, could become regulated. Such an expansion of CWA regulatory authority, would impact state and private property rights, increase costs and the number of permits needed to conduct many types of business.[9] The Agencies must provide more concrete answers to address public concerns regarding the true impacts of this proposal, including the role of and definition of "significant nexus" and "other waters." (p. 2)

Agency Response: See Agency Summary Response Essay 1.

Texas Department of Transportation (Doc. #12757)

4.44 We request that the proposed rule not specifically indicate that all waters within the watershed that drains to the nearest traditional navigable water are "similarly situated," in order to allow consideration of other factors as discussed in the preamble. This could be done by replacing "i.e." with "e.g." in the quote in the first paragraph of this section. (p. 4)

Agency Response: See Agency Summary Response Essays 1, 5, and 8.

Virginia Department of Transportation (Doc. #12756)

4.45 Under paragraph (c)(7) on p. 22263, a water is considered to be similarly situated, and thus jurisdictional, 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." This is a very vague definition and provides agency staff considerable ambiguity in determining jurisdictional waters. Concepts such as "sufficiently close" are not clearly defined and will result in varying degrees of interpretation nationwide. Performing such determinations will also likely result in time consuming and often exhaustive studies by VDOT to collect the additional information required to adequately determine if a single feature is jurisdictional or not. Frequently, such studies might require information on surrounding terrain that is outside the limits of the project and VDOT owned right-of-way. As currently written, the concept of determining if a water is similarly situated and thus jurisdictional is too broad and should

[9] See e.g., Counties of Fort Bend, Gonzales, Kimble, La Salle, Matagorda, Pecos, Oldham and Wilson resolutions opposing proposed rule.

either be re-written to provide clear and practical guidance to make these determinations or the requirement should be eliminated altogether from the proposed rule. (p. 6-7)

Agency Response: **See Agency Summary Response Essays 1, 5 and 8.**

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

4.46 The proposed rule appears to regulate not only lands that are wet and, in many cases, without a bed and banks, but also associated lowlands and transitional zones between open waters and upland areas. New definitions – including the concept of "a single landscape unit" – present ambiguity regarding what portion of each watershed is beyond the reach of federal regulators under the CWA. (p. 1)

Agency Response: **See Agency Summary Response Essays 1 and 5.**

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

4.47 The rule should stress that the "other water" in question must itself maintain a connection with (a)(1) or (a)(3) water. It should not qualify simply because similarly situated waters provide a requisite nexus. (p. 17)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

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

4.48 **Water and waters**: *"The agencies use the term "water" and "waters" in the proposed rule in categorical reference to rivers, streams, ditches, wetlands, ponds, lakes, playas, and other types of natural or man-made aquatic systems. The agencies use the terms "waters" and "water bodies" interchangeably in this preamble.* ***The terms do not refer solely to the water contained in these aquatic systems, but to the system as a whole including associated chemical, physical, and biological features*****."** (Proposed Rule, footnote 3, emphasis added)

Comment: The last sentence in this footnote potentially creates an unintended expansion of jurisdictional waters. It is plain that the footnote is not referring to physical, chemical or biological integrity of *water*, but to the chemicals and biota themselves. Obviously, the chemicals and biota are *not* water. The Connectivity Report gives an explicit example of how the Agencies could end up interpreting this footnote:

> Many living organisms, however, can also actively move with or against water flow; others disperse actively or passively over land by walking, flying, drifting, or "hitchhiking". All of these organism-mediated connections form the basis of biological connectivity between headwater tributaries and downstream waters. (*Connectivity Report*, Page 4-29)

In other words, the Agencies may interpret the Proposed Rule to claim the movement of biota *outside the surface water column* is what connects waters of the United States together. The District believes using this definition of connectivity would result in jurisdictional over-reach by the Agencies. For example, such a broad interpretation of waters could be used by the Agencies to find all ditches jurisdictional. The Proposed Rule purports to exclude those ditches from waters of the United States jurisdiction:

> Ditches that do not contribute flow, either directly **or through water**, to a traditional navigable water, interstate water, the territorial seas or an impoundment of a jurisdictional water. (Emphasis added)

The District is concerned the footnote equating biota with water when taken together with the Connectivity Report's explicit embrace of biological connection to cover animals walking or flying between waters would allow the Agencies to link a tributary and a ditch together and determines the ditch to be "waters of the United States".

The Preamble to the final rule should make clear that the term "waters" is limited to actual water bodies, as intended by Congress. Chemical, physical and biological integrity may be factors, which, under appropriate circumstances, cause some waters to be jurisdictional. However, such features do not of themselves constitute a "water" for purpose of determining jurisdiction. The Supreme Court in SWANNC *v. Army Corps of Engineers* ruled that using the Migratory Bird Treaty to determine jurisdictional waters exceeded the Corps' authority granted under the CWA. Similarly, the District believes that any attempt by the Agencies to use other birds, flying insects or prowling animals to connect what are now isolated waters to waters of the United States would exceed their authority. (p. 3)

Agency Response: **See Agency Summary Response Essays 10.**

New York City Law Department (Doc. #15065)

4.49 The Proposed Rule provides much-needed clarity that non-navigable tributaries and their adjacent waters are "waters of the United States." However, the extent of jurisdiction over "other waters" – those not adjacent to tributaries, the territorial seas, traditionally navigable waters, or interstate waters – remains unclear. In addition, the term "other waters" as used in the Proposed Rule is unclear. The City recommends specifically defining "other waters" as "intrastate wetlands, ponds, and lakes that do not meet the criteria of any of the other categories of ' waters of the United States' and are not otherwise exempt from jurisdiction." (p. 2)

Agency Response: **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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

San Bernadino County, California (Doc. #16489)

4.50 The language defining "other waters" is confusing, In watersheds containing navigable waters, "other waters" will be treated as "adjacent waters." To eliminate confusion, the term "other waters" should be limited to describe isolated, wholly intrastate waters such as wetlands, dry-lakes, mudflats with no surface connection to territorial seas, or navigable or interstate waters. (p. 3)

Agency Response: See Agency Summary Response Essays 1, 5 and 8.

4.51 The DPW believes the proposed Rule goes far to simplify jurisdictional assessment and determination of "other waters" in the first classification (Type I: no connectivity to downstream TNW's, interstate or territorial sees). But the second classification (Type II) is confusing in that it seems to blend the concept of "other waters" with the proposed broader definitions of "Adjacency" and "neighboring". Similarly, the definition of a "floodplain" is subject to interpretation and may lead to inconsistent determinations. (See discussion on "Floodplain Determination", below). (p. 7)

Agency Response: 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

In response to comments and to provide greater clarity and consistency, in the rule the agencies establish a definition of neighboring which provides additional specificity requested by some commenters, including establishing a floodplain interval and providing specific distance limits from traditional navigable waters, interstate waters, the territorial seas, impoundments, and tributaries. As recommended by the public and based on science, the agencies will rely on published Federal Emergency Management Agency (FEMA) Flood Zone Maps to identify the location and extent of the 100-year floodplain. https://msc.fema.gov/portal. These maps are publicly available and provide a readily accessible and transparent tool for the public and agencies to use in locating the 100-year floodplain. It is important to recognize, however, that much of the United States has not been mapped by FEMA and, in some cases, a particular map may be out of date and may not accurately represent existing circumstances on the ground, such as streams or rivers moving out of their channels with associated changes in the location of the floodplain. In the absence of applicable FEMA maps, or in circumstances where an existing FEMA map is clearly out of date, the agencies

will rely on other available tools to identify the 100-year floodplain, including other Federal, State, or local floodplain maps, Natural Resources Conservation Service (NRCS) Soil Surveys (Flooding Frequency Classes), tidal gage data, and site-specific modeling (e.g., Hydrologic Engineering Centers River System Analysis System or HEC-RAS). http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm and HEC-RAS and http://www.hec.usace.army.mil/software/hec-ras/. Additional supporting information can include historical evidence, such as photographs, prior delineations, topographic maps, and existing site

4.52 To eliminate this confusion the DPW recommends the term "other waters" be changed to only include waters in "isolated" watersheds (Type l). As a corollary, all "other waters" would then be deemed non-jurisdictional by rule. Similarly, those "other waters" located within non-isolated watersheds (Type II) would simply be classified and analyzed as "adjacent waters". (p. 8)

Agency Response: **The final rule differentiates between adjacent waters (a)(6) and other waters ((a)(7) and (a)(8)). The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal and by providing a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. See Technical Support Document for the agencies' interpretation of the holdings of the Supreme Court. See response 4.55 (Doc. #19581)**

Kerr Environmental Services Corp. (Doc. #7937.1)

4.53 We recommend that the regulations retain the classification of "other waters" found at 33 CFR 328.3(a)(3) and that intrastate lakes, wetlands and natural ponds remain in this category. We also recommend that references to "could affect interstate commerce" be replaced with references to "possess significant nexus to interstate waters" to comply with the Rapanos ruling and current guidance on the subject. (p. 2)

Agency Response: **See Agency Summary Response Essays 11.**

Business Council of Alabama (Doc. #15538)

4.54 In the proposed rule the EPA/Corps states on pg. 22192 "the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under the existing regulations." This is simply untrue in that many "other waters" outside of the floodplain are very likely to come under Corps JD as well as "adjacent" or neighboring" (e.g.,

swales, rills, gullies, etc.) waters that are located within the floodplain or riparian area. Also, the proposed rule quote s Justice Kennedy's conclusion that the term "waters of the Unites States" ("WOTUS") encompasses wetlands that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made". Justice Kennedy's opinion notes that such a relationship with navigable waters must be more than "speculative or insubstantial." Under the proposed rule it certainly appears that the new definition of "other waters" is proposing to include in many categories several new jurisdictional waters that are in fact speculative and insubstantial. (p. 2)

Agency Response: **The agencies' determination of what constitutes a "significant nexus" is grounded in Justice Kennedy's opinion, which recognizes that not all waters have this requisite connection to traditional navigable waters, interstate waters, or the territorial seas. At the core of the "significant nexus" analysis, the protection of upstream waters must be critical to maintaining the integrity of the downstream waters. These upstream waters function as integral parts of the aquatic environment, and if these waters, alone or together with similarly situated waters in the region, are polluted or destroyed there is a significant effect downstream. The agencies assess the significance of the nexus in terms of the CWA's objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." When the effects are speculative or insubstantial, the "significant nexus" would not be present. In a case-specific analysis of significant nexus, the agencies determine whether the water they are evaluating, in combination with other similarly situated waters in the region, has a significant effect on the chemical, physical, or biological integrity of the nearest traditional navigable water, interstate water, or the territorial seas.**

The final rule does not establish quantifiable metrics for waters subject to a case-specific significant nexus analysis. The agencies believe that a determination of the relationship of these waters to traditional navigable water, interstate waters, and the territorial seas, and consequently their significance to these waters, requires sufficient flexibility to account for the variability of conditions across the country and the varied functions that different waters provide. The case-specific analysis called for by paragraphs (a)(7) and (a)(8) recognizes geographic and hydrologic variability in determining whether one of these waters, or a group of these waters, possess a significant nexus with traditional navigable waters, interstate waters, or the territorial seas.

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 believe that creating a definitive list of functions to be evaluated provides individual regulators who conduct the analysis clear and consistent parameters that they will consider during their review in making jurisdictional determinations and provides transparency to the regulated public over which factors will be considered. The final rule also clarifies that a water may have a significant nexus based on a single function alone so long as that function contributes significantly to the chemical, physical, or biological integrity of the nearest traditional navigable water, interstate water, or the territorial seas.

The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. 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 and more than speculative and insubstantial. See Technical Support Document for a further discussion of the agencies' interpretation of the significant nexus standard and when a nexus is neither speculative nor insubstantial.

Home Builders Association of Tennessee (Doc. #19581)

4.55 The Agencies Should Identify Specific Instances Where Waters Of The United States Not Otherwise Discussed In The Proposed Rules Would Constitute "Other Waters." Since the Proposed Rule defines nearly anything that is wet as jurisdictional, we are concerned that the Agencies have not identified criteria that would allow further jurisdiction for so-called "Other Waters." For example, the Proposed Rule states that under certain circumstances intrastate rivers, lakes and wetlands not otherwise jurisdictional under the Proposed Rule, could have a significant nexus. (Proposed Rule at 22,197). Before we can adequately comment on such "other waters," the Agencies need to identify specific types of "other waters: that Agencies believe it is authorized to assert jurisdiction that are not listed in the Proposed Rule other than the specific exclusions and more precisely the scientific basis it will use to make such a determination. (p. 10)

Agency Response: **See Agency Summary Response Essays 1 and 5.**

Kansas Independent Oil & Gas Association (Doc. #12249)

4.56 Even if the definition of Riparian Area is physically limited, the definition of "Other Waters" is so vague, that "case specific" analysis of ephemeral streams could consider the entire watershed to be "nexus" to a navigable river, or the entire upland around a wetland to be "nexus", and, therefore, require permits. (p. 5)

Agency Response: **See Agency Summary Response Essays 3.**

Newmont Mining Corporation (Doc. #13596)

4.57 If the Agency does not incorporate such an exclusion into the rule, it should at least amend the definitions of "tributary" and "similarly situated" in subsection (c) of the Proposal and the "other waters" provision in (a)(7) to make clear that the jurisdictional status of an ephemeral or intermittent drainage should be based on whether the particular drainage in question – without regard to any "similarly situated" drainage in the area – significantly affects the chemical, physical, and biological integrity of a downstream TNW, taking into account the types of factors listed in the 2008 Guidance. This can be accomplished as follows: … Amend the "other waters" provision in (a)(7) to read: "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~~, that have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section." (p. 40)

Agency Response: **See Agency Summary Response Essays 1, 3 and 5.**

Sinclair Oil Corporation (Doc. #15142)

4.58 Nothing in the definition of "other waters" prevents a determination that every water within a watershed could be considered a "water of the United States" based on an assessment that those waters, analyzed together, have a more than insubstantial impact on the physical, chemical, and biological integrity of a traditional navigable water, an interstate water, or the territorial seas. See e.g. 79 Fed. Reg. 22,213. As one of the members of the Science Advisory Board review panel noted, "[i]t would be hard to argue that including all the [waters] within such a large area in one grouping would not have an effect on the downstream water." Draft SAB Panel Comments at 25 (Aug. 6, 2014). It would be entirely plausible for the Agencies or a third party to decide that the evaporation ponds at Sinclair's refineries are "waters of the United States," when they are analyzed together with all of the other waters in the watershed of the North Platte River.

It is also possible under the proposed rule that the evaporation ponds would be considered "other waters" based on the fact that the proposed rule does not establish any objective criteria defining the level at which a water or group of waters must affect the physical, chemical, or biological integrity of the navigable water in the watershed to make the effect "substantial" and establish a "significant nexus." 79 Fed. Reg. 22,214. Instead, the proposed rule simply states that the effect must be more than "speculative or insubstantial."[10] Since the proposed rule does not demarcate a level of functional interaction beyond "insubstantial," the evaporation ponds and other components of the waste treatment system could be considered "other waters" based on nothing more than the existence of a functional connection - for example, their use by the same species for habitat.[11] This result clearly violates the limits on the definition of "waters of the United States" provided in *SWANCC* and *Rapanos*. Evidence of any connectivity is simply not the same as evidence of a sufficient connectivity to establish a significant nexus. Indeed, the definition of "other waters" in the proposed rule would include the very isolated waters which the Supreme Court has previously held were not "waters of the United States" in *SWANCC*. Such a result is not permissible. (p. 16-17)

Agency Response: **See Agency Summary Response Essays 1, 3, 5, 6 and 8. The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. The 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 to reflect the consideration for**

[10] The preamble provides a non-exhaustive list of "functions that might establish a significant nexus" which includes "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."

[11] Since the proposed rule does not provide that "other waters" should be treated as non-jurisdictional until such time as the Agencies make a case-specific determination that a significant nexus exists, Sinclair would have to presume that the presence of any function establishing connectivity is substantial until the Agencies make a jurisdictional determination. To do otherwise would risk penalties for conduct engaged in while awaiting the Agencies case specific determination. At a minimum, the Agencies should clarify that "other waters" are not "waters of the United States" until the case specific jurisdictional determination is made.

the body of science that exists. 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 and more than speculative and insubstantial.

The rule has expanded the section on waters that are not considered waters of the United States, including many of the features listed in the comment, such as artificial lakes and ponds created in dry land, water-filled depressions incidental to mining or construction, constructed grassed waterways and non-wetland swales, and stormwater detention basins constructed in dry land. The longstanding exclusion for waste treatment systems designed consistent with the requirements of the CWA has been moved to (b)(1) and remains substantively and operationally unchanged.

Barrick Gold of North America (Doc. #16914)

4.59 It is difficult to imagine what kind of important connection to traditionally navigable waters could exist that would not be either a tributary or adjacent water. The preamble contains no examples of "other waters" that might be jurisdictional but would not have the features of a tributary or adjacent water. Thus, the "other waters" category exacerbates the problem Barrick already identified with the proposed rule: it would leave many, if not most decisions about jurisdiction up to local officials, without giving them or the regulated community sufficient notice or guidance regarding appropriate boundaries of Clean Water Act jurisdiction. (p. 22)

Agency Response: **See Agency Summary Response Essay 1.**

Washington Cattlemen's Association (Doc. #3723)

4.60 The WCA opposes the EPA's attempt to regulate "non-adjacent" waters. All waters that are not navigable based upon the current language and interpretation of the CWA should not be jurisdictional by the EPA under the CWA. (p. 3)

Agency Response: **See Agency Summary Response Essay 1. EPA disagrees that waters considered "non-adjacent" should not be covered by the Clean Water Act. While proximity and the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, the agencies' experience and expertise indicate that there are waters located within the 100 year flood plain 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) where the science demonstrates that they often have a significant effect on downstream waters. Moreover, adjacency or a hydrologic connection are not always 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 these (a)(1) through (a)(3) waters. 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.**

Colorado Livestock Association (Doc. #7930)

4.61 For Other Waters to be declared jurisdictional, a Significant Nexus must demonstrate a physical connectivity with the evidence of science-based proof. The Proposed Rule must provide descriptive language to define how connectivity will be determined. (p. 2)

Agency Response: See Agency Summary Response Essays 1. In order to add clarity to the definition of significant nexus, the agencies have listed in the definition the functions that will be considered in a significant nexus analysis. These functions are consistent with the agencies' scientific understanding of the functioning of aquatic ecosystems. As stated in the final rule, the significant nexus analysis for waters assessed under (a)(7) and (a)(8) is a three-step process: first, the region for the significant nexus analysis must be identified – under the rule, it is the watershed which drains to the nearest traditional navigable water, interstate water or territorial sea; second, any similarly situated waters must be identified – under the rule, that is waters that function alike and are sufficiently close to function together in affecting downstream waters; and third, the waters are evaluated 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 the territorial seas.

Michigan Farm Bureau, Lansing, Michigan (Doc. #10196)

4.62 The proposed case-by-case "other waters" that can be made jurisdictional by the proposed rule lack definition to the regional limit or type of water, or means of establishing the actual connection of all of those features to jurisdictional waters. This extends the EPA and USACE's jurisdictional scope to nearly limitless proportions when staff can merely gauge across a landscape that a series of waters must be regulated because those waters (or some subset of them) might have some chemical, physical, or biological connection downstream. (p. 5)

Agency Response: See Agency Summary Response Essays 1, 5, 8 and 12.

Hancock County, Indiana (Doc. #11980)

4.63 The definition or lack thereof for the "other waters" category also raises much concern. It is difficult if not impossible to understand what is meant to fall within this category. However, a review of the trend to include more features within the regulations leads to the conclusion that "other waters" will be broadly interpreted. While this rule was supposed to provide clarity and certainty, it instead creates confusion and fear that the agencies are going to exert authority over things typically within state or local jurisdiction. (p. 2)

Agency Response: See Agency Summary Response Essays 1.

Western Growers Association (Doc. #14130)

4.64 Within the rules and discussion surrounding the definition of "other waters" the EPA and the Corps highlight that "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."[12] 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. 7)

Agency Response: See Agency Summary Response Essay 10.

Iowa Farm Bureau Federation (Doc. #15633.1)

4.65 As with tributaries and adjacent waters, the definitions of "other waters" has an unlimited scope over waters which on a case-by-case basis, either alone or in combination with other similarly situated waters, have a significant nexus to a traditional navigable water. This category of water provides no practical description of the waters it intends to include when making the significant nexus analysis. Neither the rule, nor the scientific advisory board report provides a scientific method for determining which hydrologic connections have a significant nexus to a traditional navigable water. (p. 11)

Agency Response: See Agency Summary Response Essays 1, 5, 8, and 12.

National Sustainable Agriculture Coalition (Doc. #16357.1)

4.66 The preamble description of what constitutes "other waters" consists of page after page of potential scientific indicators of physical, biological and chemical connections. See Id. at 22,212-14. The possibilities are so numerous and broad that regulators will have no difficulty finding a "significant nexus" for even the most minor wet spots when combined with all similar features in the watershed.[13] Farmers, on the other hand, can never know with any confidence that any wet spot on their land is beyond the scope of "other waters" jurisdiction. (p. 13)

Agency Response: See Agency Summary Response Essays 1, 5, 8 and 12. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters. The rule

[12] Proposed "Definition of 'Waters of the United States' Under the Clean Water Act" 40 CFR 230.3

[13] For example, "[f]unctions of waters that might demonstrate a significant nexus include sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, export of organic matter, export of food resources, and provision of aquatic habitat." 79 Fed. Reg. at 22,213.

recognizes that not all waters have the requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. While the proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded, in consideration of comments expressing concern over the proposed approach, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters." 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm

Greene County Farm Bureau (Doc. #17007)

4.67 The definition or lack thereof for the "other waters" category also raises much concern. It is difficult if not impossible to understand what is meant to fall within this category. However, a review of the trend to include more features within the regulation leads to the conclusion that "other waters" will be broadly interpreted. While this rule was supposed to provide clarity and certainty, it instead creates confusion and fear that the agencies are going to exert authority over things typically within state and local jurisdiction. (p. 2)

Agency Response: **See Agency Summary Response Essay 5.**

Airports Council International - North America (Doc. #16370)

4.68 This category needs more clarification and definition; it is overly vague and subject to interpretation, and it would appear to allow an overly inclusive interpretation. (p. 5)

Agency Response: **See Agency Summary Response Essay 5.**

Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)

4.69 The EPA's proposed expansion of the term other wetlands to other waters may be overreaching. Changing the term other wetlands to other waters may create more uncertainty and unpredictability within the regulated community. The term other waters is more inclusive and may subject new additional features to cumbersome and resource intensive case-specific significant nexus analysis. The term other waters may include new features not previously regulated under the CWA such as ephemeral ditches and purpose built stormwater management facilities which could expand regulatory oversight under the CWA. The City of Chesapeake does not support the expansion of CWA oversight to features such as stormwater management facilities, impoundments and ditches. (p. 6)

Agency Response: See Agency Summary Response Essay 3 and response 4.24 (Doc. #15484).

Gateway Water Management Authority (Doc. #10032)

4.70 The words "On a case-by-case basis" , while providing the US EPA, the Army Corps of Engineers and the Los Angeles Regional Water Quality Control Board a necessary degree of flexibility, are inherently unclear and provide little, if any guidance to the cities we represent which are responsible for complying with and implementing the various water quality measures. (p. 2)

Agency Response: See Agency Summary Response Essay 5.

Illinois Fertilizer & Chemical Association (Doc. #15129)

4.71 A degree of "significance" measurement must be added to the "Significant nexus" test as required by the U.S. Supreme Court. (p. 2)

Agency Response: See Agency Summary Response Essay 6.

American Wind Energy Association (Doc. #15208)

4.72 While the Agencies' have defined "significant nexus," they have failed to give any direction as to what similarly situated waters are under this rule. In short, AWEA disagrees with the Agencies' proposed new definition as it will result in increased uncertainty in the permitting process due to ambiguity related to its scope and minimally decrease, if at all, the rate at which the Agencies must do case-by-case analysis. (p. 5)

Agency Response: See Agency Summary Response Essays 1, 5 and 8.

Lower Colorado River Authority (Doc. #16332)

4.73 The example provided by EPA and USACE of non-similarly situated water includes an exception large enough to render the example unhelpful. LCRA believes that, as currently defined in the Proposed Rule, terms such as "sufficiently close" and "sufficiently close together" will allow for inappropriately broad interpretations of connectivity and, therefore, of jurisdiction. 79 Fed. Reg. at 22,214. (p. 10)

Agency Response: See Agency Summary Response Essays 1, 5 and 8.

4.74 Due to the lack of limitations on what constitutes an other water and a lack of clarity in the definition of "significant nexus" to clearly explain the term "similarly situated," LCRA respectfully requests that EPA and USACE revise the Proposed Rule to include appropriate and defined limitations on what could be considered a jurisdictional other water. (p. 10)

Agency Response: **See Agency Summary Response Essays 1, 5, 6 and 8.**

Partners in Amphibian and Reptile Conservation (Doc. #7499.1)

4.75 We have some questions in regard to terms and language used in the proposed rule. We hope that these questions will be helpful to consider while crafting language related to jurisdictional determinations for "other waters" in the final rule as it pertains to the following areas:

- significant nexus
- biological integrity
- present climatic condition

... "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 (s)(l) through (3) of this section."

At what point does biological connectivity become a significant nexus (i.e., are there established / defined criteria)? Many amphibian and reptile species use both traditionally navigable waters (TNW) and other nearby bodies of water during their lives. For example, some species may use TNW for adult habitat, but may breed and occasionally forage in wetlands that may be kilometers away. Does one species or individual exhibiting such behavior constitute a significant nexus? Or does it require several species or a certain number of individuals? (p. 2)

Agency Response: **See Agency Summary Response Essay 10.**

4.76 Does gene flow or migration within a population(s) constitute evidence of a significant nexus between TNW and other small water bodies? (p. 2)

Agency Response: **See Agency Summary Response Essay 10.**

4.77 What is meant specifically by the term "biological integrity"? This term could refer to multiple components of an ecosystem and could be interpreted in a myriad of manners. Is this definition focused primarily on physical, chemical, and/or geological components of a system or rather on the organismal components? Does the EPA plan to develop a standardized scoring metric to evaluate biological integrity? How large of a role will the "biological integrity" component play in the determination of significant nexus? Given that understanding individual, species, population, and community-level information from a site often requires years of study, what are the expectations for a permittee in documenting biological integrity? (p. 2)

Agency Response: **The term "biological integrity" appears in the Congressional declaration of the goals for the Clean Water Act. In order to interpret the scope of**

jurisdictional waters of the United States to support this goal, the agencies have focused on the concept of significant nexus, as established and refined by the Supreme Court. In order to determine if a water has a significant nexus with a traditional navigable water, interstate water, or territorial sea, that water's functions must be evaluated in relation to the (a)(1)-(a)(3) water. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3) of this section." Evidence of a significant nexus to the biological integrity on downstream 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 effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and biological integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus.

Due to regional variability, the agencies do not anticipate developing standardize scoring metrics or other universal quantitative measure for evaluating significant nexus.

4.78 How do rare or at risk species affect the biological integrity of a system? Will there be a certain metric of rarity that will be used during review (e.g., IUCN Red List, NatureServe rankings, listings under the Endangered Species Act)? Is the extirpation of a rare species, even if it was only found in low numbers prior to the loss, detrimental to the biological integrity of a system? Likewise, does a shift in species abundance and community composition signal a loss of biological integrity? Or is it simply a shift to another form of biological integrity? (p. 2)

Agency Response: **As stated in the preamble, population size is included in the list of factors influencing biological connectivity under a significant nexus evaluation. A limited or at-risk population may be a consideration within this factor, but would not in and of itself constitute significance for the purposes of CWA jurisdiction.**

Rock the Earth (Doc. #12261)

4.79 Under the new Rule, "other waters" will be jurisdictional on a "case-specific basis." However, the case specific analysis of the other waters' nexus applies only to its nexus to (a)(1) - (a)(3) waters and excludes consideration of waters with a significant nexus to tributaries and adjacent waters.[14] The EPA should expand its definition of "other waters" to include those waters which have a significant nexus to jurisdictional tributaries and adjacent waters. The legislative intent behind the Clean Water Act and the importance of a water's functional contribution to the hydrologic system dictate that this definition requires expansion. (p. 11)

Agency Response: The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe this approach is consistent with the CWA as interpreted by the Supreme Court. See the Technical Support Document for the agencies' legal interpretation.

Cahaba River Society (Doc. #12827)

4.80 This "or" not "and" distinction is extremely important in making determinations about the definition of "other waters". Therefore, the language of the proposed rule should reflect the more inclusive form of definition for purposes of determination of a "significant nexus" and for definition of jurisdictional waters or "other waters". (p. 2)

Agency Response: 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 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 a traditional navigable water, interstate water, or the territorial sea. Case-specific determinations of significant nexus require (a)(7) or (a)(8) waters to be evaluated either alone, or in combination with other similarly situated waters in the region. The agencies' definition of significant nexus is based upon the language in *SWANCC* and *Rapanos*. The definition is also consistent with current practice, where field staff evaluate the functions of the waters in question and the effects of these functions on downstream waters. In order to add clarity to the definition of significant nexus, the agencies have listed in the definition the functions that will be considered in a significant nexus analysis. 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) in order to have a significant nexus. The final rule makes clear that

[14] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22211 (proposed Apr. 21, 2014) (to be codified as 40 CFR Parts 110, 112, 116, et al.).

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 identified in paragraphs (a)(1) through (3).

Hackensack Riverkeeper, Hudson Riverkeeper, Milwaukee Riverkeeper, NY/NJ Baykeeper and Raritan Riverkeeper (Doc. #15360)

4.81 Waters of the United States include all tributaries to navigable or commercial waters, and all wetlands contiguous to navigable or commercial waters and all wetlands possessing a significant nexus – including a significant nexus to tributaries – to navigable or commercial waters. We thus recommend that type (vii) waters, i.e., those waters that "on a case---specific basis" that "alone, or in a combination with other similarly situated waters, included wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (l)(1)(i) through (iii) of this section" be amended to include other waters with a significant nexus to a water identified in paragraphs (l)(1)(i) through (vi).

The Agencies clearly intend that tributaries to tributaries, tributaries to covered wetlands and wetlands with a nexus to tributaries are definitional Waters of the United States --- --- especially when considering the SAB Report. However, the text of the definition introduces the possibility that type (iv), (v), (vi) and (vii) waters will not be ruled jurisdictional if their direct connection is only to other type (iv), (v), (vi) and (vii) waters. Therefore, we recommend that the Agencies rewrite the definition to read:

§401.11 General Definitions

(iv) All impoundments of waters identified in this section;

(v) All tributaries of waters identified in this section;

(vi) All waters, including wetlands, adjacent to a water identified in this section; and

(vii) 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 water identified in this section. (p. 13)

Agency Response: **See response 4.79 (Doc. #12261).**

Delaware Riverkeeper Network (Doc. #15383)

4.82 The proposed definition of "other waters" excludes some water bodies that affect downstream waters. "Other waters" should be identified via a flowpath approach or by considering the movement of aquatic biota since distance should not be the primary metric. The exclusion of "other waters" that are not geographically proximate is not supported by science as they may affect downstream waters.[15] (p. 3-4)

[15] Memorandum from Dr. Rodewald to Dr. Allen, Regarding 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." (Sept. 2, 2014).

Agency Response: **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. The agencies establish a threshold for case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that the threshold described by (a)(8) reasonably identifies the areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. This approach also supports the goal of providing greater clarity to the public. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends. The case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3) of this section." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of an effect on biological integrity 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 an effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and *biological* integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus.**

Eastern Municipal Water District (Doc. #15544)

4.83 "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 all

"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 Agency Summary Response Essays 1, 6 and 17. See also response 4.2 (Doc. #13024). While the agencies considered identifying ecoregions as the appropriate spatial scale at which to consider similarly situated waters, 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. 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* proposal Appendix A, Scientific Analysis, 79 FR 22246, Science Report, and Technical Support Document.

National Barley Grow Association (Doc. #15627)

4.84 The Proposed Rule asks for comments on whether to conclude by rule that certain types of "other waters," including prairie potholes and perhaps other categories of waters, have

significant nexus and should ALL be considered jurisdictional under the Clean Water Act. This is an example of the ambiguous language that suggests broad expansion of federal authority under the Clean Water Act. A small pool of water that may or may not appear annually, where water does not stand permanently, is a far cry from what is generally considered "wetlands" or "navigable waters" and thus, jurisdictional. This definition needs substantial narrowing. (p. 5)

Agency Response: **See response 4.1(Doc. #16386)**

The Property Which Water Occupies (Doc. #8610)

4.85 If the Rules were intended to clarify jurisdiction under the CWA, they would recognize jurisdiction is not a dichotomy of either no protection for water, or complete control over private property. Any CWA jurisdiction beyond navigable waters must be limited to that which is necessary to protect the quality of downstream public/navigable waterways; the presence of water alone does not and cannot invoke CWA jurisdiction. Outside of navigable water, CWA jurisdiction does not exist without a real threat to navigable waters; even then, only those land uses necessary to prevent real threats to downstream waters could invoke jurisdiction. The parameters for when jurisdiction could be invoked over private lands – which may be covered at times by water – remain ambiguous and as written establishes and arbitrary and capricious standard for invoking the CWA. The Rules fail to clarify this standard and instead create an arbitrary standard for a Federal Agency or Private Citizen to invoke CWA jurisdiction. (p. 15-16)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe this approach is consistent with the CWA as interpreted by the Supreme Court. See the Technical Support Document for the agencies' legal interpretation. 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. Aside from explicitly listing waters not considered jurisdictional, the final rule establishes case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). These changes coupled with additional exclusions, reflect the agencies' intent to only cover waters with significant effect on an (a)(1) through (a)(3) water.**

The 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 to reflect the consideration for the body of science that exists. 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 and more than speculative and insubstantial.

The rule has expanded the section on waters that are not considered waters of the United States, including many of the features listed in the comment, such as artificial lakes and ponds created in dry land, water-filled depressions incidental to mining or construction, constructed grassed waterways and non-wetland swales, and stormwater and wastewater detention basins constructed in dry land.

AES-US Services (Doc. #3242)

4.86 Please clarify how a facility should report releases to "other waters" when such waters are not clearly defined as jurisdictional. (p. 1)

Agency Response: **The scope of regulatory jurisdiction in this rule is narrower than that under the existing regulation. Fewer waters will be defined as "waters of the United States" under the rule than under the existing regulations, in part because the rule puts important qualifiers on some existing categories such as tributaries. The "other waters" concept arises directly from Justice Kennedy's opinion, and the agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, or biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal. The rule does not affect the reporting requirement for spills and the procedures for reporting are outside the scope of this rule. If a spill has occurred into any water, the National Response Center (NRC) should be notified, regardless of the jurisdictional status of the water. The NRC is the federal government's national communications center, which is staffed 24 hours a day by U.S. Coast Guard officers and marine science technicians. The NRC is the sole federal point of contact for reporting all hazardous substances releases and oil spills. The NRC receives all reports of releases involving hazardous substances and oil that trigger federal notification requirements under several laws. The number is 1-800-424-8802.**

4.2. BASIS FOR JURISDICTION BY RULE

Agency Summary Response

The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe this approach is consistent with the CWA as interpreted by the Supreme Court. With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. These two circumstances under which case-specific evaluations will be made to determine significant nexus were identified using today's science and the law, and in response to public comments that encouraged the agencies to ensure more consistent determinations and reduce the complexity of conducting jurisdictional determinations. Under the significant nexus standard articulated in the Supreme Court opinions, waters are "waters of the United States" if they significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas.

Specific Comments

National Association of State Foresters (Doc. #14636)

4.87 While the concepts of *significant nexus, ecoregion*, and *other situated waters* attempt to address scale and specific conditions, they tend to produce generalized findings and potentially unnecessary conclusions about the need for federal jurisdiction. Due to the high variability in water features across the United States, the rule should provide some flexibility for regional or state-specific criteria rather than a one size fits all national standard. Such an approach is needed to maintain the role of local knowledge and to provide managers with flexibility while ensuring program consistency. (p. 2)

Agency Response: The Agencies agree that some flexibility is needed to account for regional differences in aquatic resources. The final rule provides more clarity regarding definitions and categories of waters jurisdictional by rule, while also retaining flexibility for the Agencies (or State, under 404(g)) to make case-specific determinations of jurisdiction in (a)(7) and (a)(8), based on significant nexus.

As stated in the preamble, the agencies support using data (such as floodplain, LIDAR, and topographic maps) generated by States and local governments, as well as 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 the agencies have interpreted its scope in this rule.

State of Idaho (Doc. #9834)

4.88 While the Proposed Rule and related preamble are clear that "other waters" may be jurisdictional, they are not clear about how, when, or in which circumstances EPA and the Corps will perform case-by-case analyses to determine the jurisdictional status of

such waters. This lack of clarity could be interpreted to mean that the status of all "other waters" is unknown until EPA and the Corps determine otherwise at some unnamed point in the future. This result leaves landowners and users in limbo regarding the status of "other waters" located on their property and runs counter to the Proposed Rule's stated purpose of increased clarity. It potentially leaves landowners in the position of having to prove "other waters" located on their property are non-jurisdictional should they desire to develop their land, or risk the possibility of incurring fines and other penalties. This uncertainty will negatively affect property values and beneficial land use projects. (p. 3)

Agency Response: **See Agency Summary Response Essays 1 and 5.**

New Mexico Department of Agriculture (Doc. #13024)

4.89 Because the catch-all category *other waters* includes case-by-case jurisdictional determinations, many stakeholders are apprehensive about the duration of these processes. Moreover, the path EPA has proposed could create substantial backlogs and force agricultural producers to postpone activities that may require a jurisdictional determination thus leading to a potential delay in agricultural production and economic losses.

In addition to the duration of the process, stakeholders are unclear of the steps involved in the jurisdictional determination and still have many questions. Will the Corps be the sole agency responsible for making determinations or will they consult with external experts? Will the process take into consideration economic activity that could be disrupted? How will stakeholders be notified if their operations occur on or near a jurisdictional water? Will stakeholders have the right to request an appeal?

To help mitigate these concerns, NMDA requests written guidance for agricultural producers that would clarify how to proactively determine if they may have jurisdictional waters on or near their owned or leased property.

The *Federal Register* notice for this proposed rule specifically states, " ...To improve efficiencies, the EPA and Corps are working in partnership with states to develop new tools and resources that have the potent al to improve precision of desk based jurisdictional determinations ...(79 FR 22195)." As of yet, the tools mentioned in this passage are unknown to NMDA. These tools as well as those that help the regulated proactively determine jurisdiction should be made available as soon as possible. Will these tools and resources be shared with the regulated community prior to the final rule publication? Additionally, NMDA requests clarification on how these tools and resources will help stakeholders ensure their compliance. (p. 7)

Agency Response: **See Agency Summary Response Essay 5. The Agencies recognize of the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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, or biological**

integrity of traditional navigable water, interstate waters, and the territorial seas. The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

Further, this rule does not affect the exemptions provided in the Clean Water Act in Section 404(f)(1) (33 U.S.C. § 1344(f)(1)) exempts many normal farming activities from the Section 404 permitting requirement. The Agencies believe the changes reflected in the final rule will minimize delays and costs, and improve predictability and consistency for landowners and regulated entities

North Carolina Department of Agriculture and Consumer Services (Doc. #14747)

4.90 NCDA&CS is concerned about the category of jurisdictional waters detailed in (a)(7). The "other waters" category is the most nebulous, and relies almost exclusively on the opinion of the regulator. This category is highly likely to include waters that were not intended to be jurisdictional by the CWA or the Supreme Court. NCDA&CS is opposed to the inclusion of this category in the rule. If included in the final rule, the parameters under which an "other water" will be jurisdictional need to be far more clearly defined.

Additionally, the wording in this category causes concerns about how the significant nexus test will be demonstrated in the field. Will waters be evaluated on an individual basis, or will one water body be evaluated, and then used to lump all other nearby water bodies into jurisdiction? A water body should not be jurisdictional merely because it is near another water body that met the significant nexus test.

The proposed rule also appears to allow for a situation where many small water bodies which individually do not have a significant nexus are aggregated until the insignificant connections add up to some minimal level of connection. Because the number of waters and geographic area to be considered are undefined, concern exists a large increase in jurisdiction could result from this proposed change.

These issues lead to the concern that the "other waters" category is an expansive catch-all meant to capture as many waters as possible. If "other waters" are included as a category in the final rule, all "other waters" should meet the significant nexus test individually or be excluded from jurisdiction. (p. 4)

Agency Response: See Agency Summary Response Essays 1, 5, 9, 6, and 8 . See response 4.61 (Doc. #7930). The concept that a water either alone or in combination with similarly situated waters in the region may have a significant nexus on a downstream navigable water, interstate water or territorial sea arises directly from Justice Kennedy's opinion. Consistent with the observation of the U.S. Court of Appeals for the Fourth Circuit in Precon, limiting consideration of significant nexus to the effect of single waters would result in "death by a thousand cuts" to the integrity of downstream waters.

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

4.91 NCDENR recommends, at a minimum:

- Deletion of the "other waters" provision, which pulls into the definition, based on site specific characteristics when none of the other criteria are met, waters which clearly should remain in the ambit of the state regulators because currently it is clear from the already ample breadth of the rule that the significance of any nexus of such water would be minimal. 33 CFR 328.3(a)(7), 40 CFR 110.l(l)(vii), 40 CFR 112.2(l)(vii), 40 CFR 116.3(l)(vii), 40 CFR 117. l(i)(l)(vii), and 40 CFR 122.2(a)(7) (p. 7)

Agency Response: See Agency Summary Response Essays 1 and 6. See response 4.90 (Doc. #14747).

Great Lakes Indian Fish and Wildlife Commission (Doc. #15048)

4.92 The use of science to define a "significant nexus" is appropriate and is supported by the available scientific literature. However, as the Federal Register notice acknowledges, "significant nexus" is not a scientific term. Although science should remain a fundamental part of determinations related to "other waters," the law does not appear to prohibit using a connection to commerce as a relevant consideration when determining "significant nexus". Clearly however, the commerce connection must go beyond the use of the waterbody by migratory birds.

The Federal Register notice for this rulemaking states that the EPA and the Army Corps are not proposing any changes to how waters under subsection (s)(1) are determined, that is, they will continue to define those waters as those subject to regulation under sections 9 and 10 of the Rivers and Harbors Act, and by applicable federal court decisions. The waterbodies currently defined as subsection (s)(1) waters encompass a relatively small number of large waterbodies (primarily rivers and some large lakes) that have a fairly obvious commerce connection.

Until the SWANCC decision and under the current definition of "waters of the US," the EPA and the Army Corps examined interstate or foreign commerce in their evaluations of smaller waterbodies that may not have as obvious a connection to commerce (subsection (s)(3) of the existing regulation). According to the Supreme Court in the SWANCC case however, the connection to interstate commerce provided by the use of a waterbody by migratory birds is not sufficient to trigger the assertion of Clean Water Act jurisdiction.

There should remain some level of interstate or foreign commerce – greater than migratory bird use but less than traditional notions of navigability under the Rivers and Harbors Act – that should qualify a waterbody as a water of the US. A water otherwise falling into the "other waters" category should be analyzed not only for its chemical, physical and/or biological connection to downstream waters, but also for its use or potential use in commerce. Commercial sale of fish or wild rice from that water, particularly by tribal members exercising treaty rights, are considerations that should be explicitly included as factors in making determinations about the status of "other waters" under the Act. Including such a provision would give effect to the interstate commerce connection, one that appears to be greatly diminished under the rule as proposed. (p. 3-4)

Agency Response: **See Agency Summary Response Essays 1 and 11. All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document.**

North Dakota Office of the Governor, et al. (Doc. #15365)

4.93 Most fundamentally, EPA's definition of nexus makes no sense with respect to actual federal jurisdiction over remote waterbodies.

The significant nexus criterion makes sense in recognizing a federal jurisdiction over the quality of tributary water or neighboring waters at the confluence with navigable waters related to interstate commerce, and which affect the quality of those waters. EPA's proposed definitions do not provide jurisdictional clarity, they only expand jurisdiction.

However, it is difficult to argue that CWA jurisdiction does not allow federal regulatory limitations (with reference to specific standards) on entry of pollutants into clearly delineated federal (navigable) waters at the confluence of the tributary with those waters. It is quite another matter, however, to claim federal jurisdiction over the influent tributary upstream of the confluence, and apply the same standards to that waterbody as to the navigable stream – and then subsequently expand the federal jurisdiction and the same standards to tributaries feeding the influent tributary in a chain of dependent jurisdictions all the way up to and including agricultural ditches. It is the cumulative effect of upstream management, which affects navigable streams related to interstate commerce and which affects federal interests, not the individual upstream tributaries themselves. Upstream tributaries, which are not directly influent to navigable waters, belong under State jurisdiction to allow for flexibility in managing upstream water-use impact problems and their effects on State and local priorities. (p. 13)

Agency Response: **As stated in the preamble, the agencies have determined that the scope of regulatory jurisdiction in the final rule is narrower that under previously existing regulation. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe this approach is consistent with the CWA as interpreted by the Supreme Court and support by the Science Report and the SAB review of that report. . The agencies also believe that this approach is consistent with the express intent of Congress that: "Water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source." S. Rep. No. 414, 92d Cong., 1st Sess. 77 (1971). See the Technical Support Document for the agencies' legal interpretation. Best available science supports the significant effect that waters outside of the narrower limits of**

adjacency can have on downstream waters, and therefore should be evaluated for jurisdiction, where not otherwise excluded.

Wyoming Department of Environmental Quality (Doc. #16393)

4.94 The handling of isolated waters is also made substantially less clear by the proposed rule. Subsequent to the SWANCC decision, isolated waters have not been considered jurisdictional because they lack a connection to navigable waters. Under the proposed rule, isolated waters may or may not be jurisdictional depending upon some yet to be determined analysis of the effect of "similarly situated" isolated waters in the area.

The proposed rule should be withdrawn and re-written based upon the clear concepts in the Rapanos plurality opinion rather than the much more ambiguous "significant nexus" concepts settled upon by the agencies in this rulemaking. In the alternative, the significant nexus test should be refined to include procedures to evaluate the actual flow and significance of the effects of individual tributaries on downstream navigable waters, rather than relying simply on connectivity, however tenuous. And unless they are by themselves navigable or cross state boundaries, the proposed rule should treat isolated waters as non jurisdictional precisely because they are hydrologically isolated from downstream navigable waters. The proposed rule could be made considerably clearer and easier to implement if "other waters" were presumed to be non jurisdictional unless affirmatively shown in a case-specific analysis to have a significant effect on downstream navigable waters. (p. 4-5)

Agency Response: Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, or biological integrity of our Nation's waters. The agencies believe this approach is consistent with the CWA as interpreted by the Supreme Court and support by the Science Report and the SAB review of that report.

Department of Health and Environmental Control, State of South Carolina (Doc. #16491)

4.95 As a report prepared for the Environmental Council of States (ECOS)[16] and others have noted, the Proposed Rule represents a significant shift in the legal justification which the Agencies use to assert CWA jurisdiction. Under the existing regulations, jurisdiction is

[16] The American College of Environmental Lawyers (ACOEL) prepared a report (ACOEL Memo on Waters of the U.S. Under the CWA) for ECOS members that was released to the public on September 15, 2014.

based on the potential scope of authority under the Commerce Clause. Hence, the regulations discuss waters, "which could affect interstate or foreign commerce..."[17] It was this connection to the Commerce Clause in SWANCC the led the Corps to assert jurisdiction over non-navigable intrastate waters that were used by migratory birds. The Corps' reasoning was that the amount of money spent annually on recreational pursuits relating to migratory birds had a significant effect on interstate commerce. This concerned the Supreme Court and led the plurality to explain that "the Corps' interpretation stretches the outer limits of Congress's commerce power and raises difficult questions about the ultimate scope of that power."[18]

With the Proposed Rule, the Agencies have shifted the focus of jurisdiction from the Commerce Clause to Justice Kennedy's concurring opinion in Rapanos. In Rapanos, Justice Kennedy's concurring opinion posits the "significant nexus" approach to asserting CWA jurisdiction. The significant nexus test requires a finding that "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."[19]

Accordingly, the Proposed Rule defines jurisdiction based on the significant nexus test. Thus, while the current regulations define "other waters" as being jurisdictional based on whether or not they could affect interstate or foreign commerce, the new test for determining jurisdiction for "other waters" under the Proposed Rule is whether they have a significant nexus to jurisdictional waters.

This represents a significant departure in the underlying jurisdictional analysis that runs throughout the Proposed Rule and SCDHEC believes that the Agencies have taken this approach to assert CWA jurisdiction to the maximum extent. (p. 2)

Agency Response: **See response 4.93 (Doc. #15365).**

4.96 Perhaps the most significant change the Agencies are proposing concerns the hew approach to "other waters." The existing regulations extend CWA jurisdiction to "other waters" as follows:

"All other waters such as intrastate lakes, rivers, streams (incindifig intermittent streams), mudflats, Sandflats, wetlands, sloughs, prairie potholes, Wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

(I) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(II) From which fish or shellfish are or could be taken and sold ir interstate or foreign commerce; or

[17] 40 C.F.R. Section 230.3(s)(3). (2014).
[18] Solid Waste Agency of Northern Cook County v. Army Corps of Engineers, 531 U.S. at 738. (2001).
[19] Rapanos v. United States, 547 U.S. at 780. (2006).

(III) Which are used or could be used for industrial purposes by industries in interstate commerce;"[20]

Accordingly, these "other waters" are jurisdictional if their use, degradation or destruction could affect interstate or foreign commerce. As noted in #1 above, this connection to interstate or foreign commerce, which runs throughout the current regulations, has been all but removed from the Proposed Rule. In its place, the Agencies have inserted the dependence on a significant nexus analysis for determining CWA jurisdiction. Hence, the new language for "other waters" states that:

> "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 water identified in paragraphs (s)(1) through (e) or this section."[21]

SCDHEC is very concerned that this shift away from a connection to the Commerce Clause in favor of a significant nexus analysis will result in CWA jurisdiction being applied more broadly than Congress intended. SCDHEC questions whether or not, under such an interpretation, there may be any waters, reflecting pools aside, which would not be found to be jurisdictional. As noted above, isolated waters such as those involved in the SWANCC decision would likely be jurisdictional under such an analysis. (p. 4-5)

Agency Response: Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*.

The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal

[20] 40 C.F.R. 230.3(s)(3). (2014).
[21] Fed. Reg. at 22269.

prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. As stated in the preamble, the agencies have determined that the scope of regulatory jurisdiction in the final rule is narrower that under previously existing regulation. See response 4.93 (Doc. #15365).

Lac du Flambeau Band of Lake Superior Chippewa Indians (Doc. #16538)

4.97 The Lac du Flambeau Tribe collaborated with the United State Geological Survey to study ground water and surface water interactions on the Reservation. From this collaboration a scientific peer reviewed report was published titled "Simulation of Groundwater Flow and Interaction of Groundwater and Surface Water on the Lac du Flambeau Reservation, Wisconsin"[22]. The report shows in Table 3, a direct connection to groundwater for every surface water, where some wetlands and pothole lakes have over 90% of their inflows contributed by groundwater thus confirming connection to surface waters. This report shows a significant nexus is evident for all "other waters" and should be protected under the Clean Water Act. (p. 1)

Agency Response: **See Agency Summary Response Essay 1.**

Sokaogon Chippewa Community, Sokaogon, Mole Lake Band of the Lake Superior Chippewa Indians, Crandon Wisconsin (Doc. #16591)

4.98 There should remain some level of interstate of foreign commerce – greater than migratory bird use but less than traditional notions of navigability under the Rivers and Harbors Act that should qualify a waterbody as a water of the US. A water otherwise falling into the "other waters" category should be analyzed not only for its chemical, physical and/or biological connection to downstream waters, but also for its use or potential use in commerce. Commercial sale of fish or wild rice from that water, particularly by our tribal members exercising treaty rights, are considerations that should be explicitly included as factors in making determinations about the status of "other waters" under the Act. Including such a provision would give effect to the interstate commerce connection, one that appears to be greatly diminished under the rule as proposed. (p. 2)

Agency Response: **See Agency Summary Response Essay 11.**

[22] Juckem, Paul E, Fienen, M. N., Hunt, R. J. "Simulation of Groundwater Flow and Interactions of Groundwater and Surface Water on the Lac du Flambeau Reservation, Wisconsin, prepared in cooperation with the lac du Flambeau Band of Lake Superior Chippewa and Indian Health Service". U.S. Department of the Interior, U. S. Geological Survey. By: Scientific Investigations Report 2014-5020; Reston, VA; http://pubs.usgs.gov/sir/2014/5020/pdf/sir20145020.pdf Pg. 17

Murray County Board of Commissioners (Doc. #7528)

4.99 In a theoretical sense, we agree that all water on the ground, in the ground, and in the air has a connection. School children are taught about the water-cycle. But the significance of that connection to navigable waters within the legal jurisdiction of Congress under the Commerce Clause is limited. Use of the word "navigable" expresses that the Clean Water Act draws a distinction between "waters of the United States" and "waters of the States." (p. 3)

Agency Response: The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report. See Agency Summary Essay 1.

City of Chesapeake (Doc. #9615)

4.100 The City of Chesapeake supports the EPA's determination that the category of "other waters" should not be jurisdictional by Rule and shall require a case-specific significant nexus analysis; however, the EPA's proposed expansion of the term other wetlands to other waters may be overreaching. Changing the term other wetlands to other waters may create more uncertainty and unpredictability within the regulated community. The term other waters is more inclusive and may subject new additional features to cumbersome and resource intensive case-specific significant nexus analysis. The term other waters may include new features not previously regulated under the CWA such as ephemeral ditches and purpose built stormwater management facilities which could expand regulatory oversight under the CWA. (p. 6)

Agency Response: Based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos*, Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the

United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. While Justice Kennedy's discussion of the application of the significant nexus standard 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." *Id.* at 767 (emphases added). Fundamentally, Justice Kennedy's significant nexus analysis is about the fact, long-acknowledged by Supreme Court caselaw, that protection of waters from pollution can only be achieved by controlling pollution of upstream waters. It would be inconsistent with Justice Kennedy's opinion as a whole, science, and common sense to apply Justice Kennedy's significant nexus standard to wetlands adjacent to tributaries and not to the tributaries themselves.

Grant County Commission, New Mexico (Doc. #10963)

4.101 By identifying each project and watercourse individually, jurisdictional data is consistently being collected whereas a blanket identification redefining "waters of the United states" could clearly leave room for error and or violation of the proposed rule. As proposed in the rule "other waters" would still have to have a case specific analysis for jurisdictional status and would still be subject to permitting requirements of the Clean Waters Act. The proposed rule also allows for blanket identification of "other waters" by simply defining similarities with other waters associated by region, similar characteristics, or simply by hydrological connection.

In conclusion although the proposed rule consistently refers to simplification of process, jurisdictional identification, and is design to reduce documentation requirements it does exactly the opposite. By redefining the term tributaries, and by not specifically containing a definition or identification of "other waters", the proposed rule does nothing more than remove current duties specific to the USACE and place the burden onto the local governments to identify and provide evidence that they are not in violation of the "Clean Water Act". Therefore, referring to the initial comment of this document the County of Grant in New Mexico is opposed to the implementation of the proposed rule the definition of "Waters of the United States" Under the Clean Water Act. (p. 1-2)

Agency Response: 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The rule specifies which waters are subject to regulation under the Clean Water Act. The rule does not alleviate the Corps of any of their responsibility under the Act. Based on comments received, the final rule also contains a revised definition of tributary.

Soil and Water Conservation District (Doc. #14943)

4.102 Under the proposed rule, groundwater may be used in the making of determinations of a significant nexus. This is over-reach by the federal agencies. The 1877 Desert Lands Act severed all non-navigable waters in the public domain from the land itself and left those waters to the control of territories and states for appropriation of beneficial use. NMSA 1978-72-12-1. The US Supreme Court, in 1935, confirmed after the 1877 Act, all non-navigable waters including groundwater, were subject to the plenary control of the territories or the states. The NM Supreme Court has ruled that in the State of New Mexico, all water within the state, above or beneath the surface, is owned by New Mexico. (p. 4)

Agency Response: The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium.

Maui County (Doc. #19543)

4.103 In SWANCC, the U.S. Supreme Court ruled that agencies have no jurisdiction over non-navigable, isolated, and intrastate waters. The EPA is using the "significant nexus" concept to extend CWA jurisdiction to those waters currently outside the scope of the CWA, in contradiction with SWANCC, which was not overruled by Rapanos. (p. 2)

Agency Response: The commenter is incorrect. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). See the Technical Support Document for the agencies' legal interpretation.

4.104 The proposed rule shifts from defining "other waters" in terms of interstate and foreign commerce to defining other waters in terms of connectivity to WOTUS. By design, this change is intended to extend CWA jurisdiction to isolated wetlands and other waters not within the riparian area or floodplain. Notably, "significant nexus" could also be found where a water has a complete absence of hydrologic connectivity to a WOTUS, being that it retains or prevents chemical, physical, or biological impact. The County submits

that this exceeds CWA jurisdiction as well as the U.S. Supreme Court's decisions on the same. (p. 3)

Agency Response: **See response 4.94 (Doc. #16393)**

Sonoma County Water Coalition (Doc. #8535)

4.105 The most important aspect of this rulemaking is the intent to firmly base it in established peer-reviewed science, cited extensively in Appendix A of the proposed rule. But even though established peer reviewed science has shown that groundwater contributions are important to maintaining stream flow for many of the rivers defined as "Waters of the United States," EPA and ACE have expressly eliminated groundwater from the consideration of significant nexus elements (p. 22193, para 7). [Winter, T.C., 2007. The Role of Ground Water in Generating Streamflow in Headwater Areas and in Maintaining Baseflow. Journal of the American Water Resources Association 43, DOI: 10.1111/j.1752-1688.2007.00003.x]. This is a significant omission, which should be reconsidered. (p. 1-2)

Interstate streams that receive substantial groundwater contributions to their headwaters flows should provide a significant nexus for assessing such waters as the eastern prairie potholes belt, western and southern vernal pools, and other similar land features. We suggest that groundwater in the western Minnesota prairie potholes region may significantly contribute to stream flow in several tributaries of the upper Mississippi River system, for instance. Without them, the Upper Mississippi might become a shriveled tributary to the main stem Missouri-Mississippi system. Laguna de Santa Rosa vernal pools have a significant nexus with the Russian River, because flooding and (or) high oceanic tides intermittently overflow into the Laguna, providing nutrients to the Russian River, and allowing anadromous fish to migrate into Laguna tributary streams. (p. 2)

Agency Response: **The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.**

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium.

Ann McCammon Soltis, Director, Division of Intergovernmental Affairs, Great Lakes Indian Fish and Wildlife Commission (Doc. #15454)

4.106 There should remain some level of interstate or foreign commerce – greater than migratory bird use but less than traditional notions of navigability under the Rivers and Harbors Act – that should qualify a waterbody as a water of the US. A water otherwise falling into the "other waters" category should be analyzed not only for its chemical, physical and/or biological connection to downstream waters, but also for its use or potential use in commerce. Commercial sale of fish or wild rice from that water, particularly by tribal members exercising treaty rights, are considerations that should be explicitly included as factors in making determinations about the status of "other waters"

under the Act. Including such a provision would give effect to the interstate commerce connection, one that appears to be greatly diminished under the rule as proposed. (p. 2)

Agency Response: **See Agency Summary Response Essay 11.**

Kent Connelly, Chairman, Coalition of Local Governments (Doc. #15516)

4.107 Congress recognized in a 1977 House Bill that navigable waters under Section 404 were those waters "presently used or are susceptible to use in their present condition or with reasonable improvement to transport interstate or foreign commerce." H.R. Rep. No. 95- 830 (1997), reprinted in 1977 U.S.C.C.A.N. 4424, 4472. Although this proposed definition was not ultimately included in the CWA amendments, this was also the Corps' original interpretation of the CWA, as its regulations defined "navigable waters" to mean "those water of the United States which are subject to the ebb and flow of the tide, and/or are presently, or have been in the past, or may be in the future susceptible for use for purposes of interstate or foreign commerce." SWANCC, 531 U.S. at 168 (quoting 33 C.F.R. §209.120(d)(1) (1975)). Through these proposed definitions, the EPA and Corps are attempting to ensure that every water will be presumed to have a "significant nexus" to the "waters of the United States." Such a broad definition greatly exceeds the authority granted by the CWA without regard to whether the water is navigable, involved in interstate commerce, or even a visually identifiable body of water. (p. 13)

Agency Response: **The commenter is incorrect. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The first three categories of jurisdictional waters ((a)(1)-(a)(3)), traditional navigable waters, interstate waters, and the territorial seas, are jurisdictional by rule in all cases. Impoundments of jurisdictional waters ((a)(4)) are also jurisdictional by rule in all cases. The waters in the next two categories, "tributaries" ((a)(5)) and "adjacent" waters ((a)(6)), are jurisdictional by rule, as defined, not because they are "presumed" to have a significant nexus, but because the science confirms that as defined they have a significant nexus to traditional navigable waters, interstate waters, or territorial seas. The final two categories of jurisdictional waters ((a)(7) – (a)(8)) are those waters subject to case-specific analysis to determine whether they have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas, either alone or in combination with similarly situated waters in the region. All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document.**

American Foundry Society (Doc. #15148)

4.108 EPA and the Corps could, therefore, consider the cumulative impacts of multiple waters to determine the jurisdictional status of a particular area that has, or had, the presence of some water at some time. Accordingly, under the proposed rule it is difficult for a landowner to assess the jurisdictional status of an area without undertaking a comprehensive, complex, and costly watershed study.

The definition of "other waters" is similarly vague and overly broad. This further expansion of CWA jurisdiction goes beyond any authority that Congress intended to provide and leaves metalcasting operations and other landowners vulnerable to unnecessary and inappropriate enforcement actions, because no clear guidance is provided by the proposed rule. (p. 7-8)

Agency Response: See Agency Summary Response Essays 2 and 5.

National Association of Manufacturers (Doc. #15410)

4.109 Remarkably, having proposed a rule that would assert Clean Water Act jurisdiction over *all* navigable-in-fact waters, *all* interstate waters, *all* territorial seas, *all* tributaries of any such waters (including all indirect tributaries), and *all* waters "adjacent" to such waters – including even isolated waters that are merely within the "flood plain" or "riparian area" of such waters – the proposed rule nonetheless strives to leave no water unregulated and proposes to regulate "other waters" beyond these waters in an open-ended catch-all provision. Specifically, the proposed rule would allow the agencies to assert jurisdiction under the Clean Water Act over any water that has a "significant nexus" to a traditionally navigable-in-fact water that are not otherwise covered under the sweeping definitions of "tributary" and "adjacent" waters. In determining this "significant nexus," the agencies may consider whether the water "alone or in combination with other similarly situated waters in the region (the watershed that drains to the nearest [navigable-in-fact water]), significantly affects the chemical, physical, or biological integrity of [the navigable-in-fact water]." Proposed 33 C.F.R. § 328.3(a)(7), (c)(7), 79 Fed. Reg. at 26663. Not only does the definition of "other waters" leave no waters over which states can exercise their primary responsibility to regulate, this proposed definition of "other waters" is grossly overbroad, contrary to the statute and controlling Supreme Court precedents, and arbitrary and capricious.

Most fundamentally, given the breadth of the proposed rule's definition of "tributaries" and "adjacency," there can be no basis for ever finding "other waters" to have a "significant nexus" to a navigable in fact water. By definition, such "other waters" have no established surface hydrological connection to any traditional navigable water (or otherwise they would be "tributaries") and are not even within the floodplain or riparian area of a traditional navigable water (otherwise they would be "adjacent" waters). Thus, these "other waters" are the paradigm isolated waters that the Supreme Court in *SWANCC* held were not "navigable waters" under the Clean Water Act. 531 U.S. at 171, 172.

The proposed rule effectively recognizes this, acknowledging that if a "significant nexus" analysis is conducted on a "case-specific basis for each individual 'other waters,'" that "few if any other waters [would be] found jurisdictional." 79 Fed. Reg. at 22217. To

justify the assertion of jurisdiction over these "other waters," the proposed rule says they should be analyzed in aggregate. In particular, all "similarly situated" other waters would be considered together, with all waters in a "single landscape unit" being considered "similarly situated." Id. at 22213.

Contrary to the proposed rule's assertion, the Supreme Court's Clean Water Act precedents do not authorize the EPA to consider all waters in a "single landscape unit" to determine "significant nexus." The proposed rule asserts (Id. at 22212-13) that Justice Kennedy endorsed such "aggregation" when he stated in *Rapanos* that "wetlands" immediately adjacent to a tributary could be found to possess the "requisite nexus . . . if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect" the water quality of navigable-in-fact waters. 547 U.S. at 780. As explained above, however, the proposed rule over-reads this non-authoritative dicta as a general matter.

The proposed rule's spin on Justice Kennedy's statement is particularly flawed in this context—not to mention inconsistent with the agencies' prior analysis on this very issue. See *Rapanos* Guidance at 9 n.32 ("When applying the significant nexus standard to tributaries and wetlands, it is important to apply it within the limits of jurisdiction articulated in *SWANCC*. . . . It is clear . . . that Justice Kennedy did not intend for the significant nexus standard to be applied in a manner that would result in assertion of jurisdiction over waters that he and the other justices determined were not jurisdictional in *SWANCC*."). Justice Kennedy joined the majority in *SWANCC*, 531 U.S. at 162, drew the "significant nexus" test from that decision, 547 U.S. at 767, 776, and expressly acknowledged that isolated waters were "held to fall beyond the Act's scope in *SWANCC*." 547 U.S. at 781-82 (Kennedy, J., concurring). Indeed, because *SWANCC* expressly held that the Clean Water Act "clear[ly]" did not extend jurisdiction over "nonnavigable, isolated, intrastate waters," 531 U.S. at 172, the EPA has no authority to use its rulemaking authority to adopt a broader interpretation, *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Serv*., 545 U.S. 967, 982 (2005).

The agencies' proposed approach for determining whether a "significant nexus" exists also independently violates *SWANCC*, by effectively readopting the "Migratory Bird Rule." To determine whether a "significant nexus" exists, the agencies propose to look for "biological connectivity" of the waters which in turn asks whether "[n]on-aquatic species or species such as non-resident migratory birds" have a "life cycle dependency on the identified aquatic resource" and whether these species might travel from a tributary system to the "other water" (or vice-versa). 79 Fed. Reg. at 22214. This is just a reformulation of the "Migratory Bird Rule" struck down in *SWANCC*. While the dissent in *SWANCC* found that such attenuated ecological connections could be used to support Clean Water Act jurisdiction, 531 U.S. at 176, n.2 (Stevens, J., dissenting), the majority rejected them as inconsistent with the "clear" language of the Act, Id. at 171-72.

Besides being contrary to the relevant case law, the proposed rule's approach to "other waters" is also arbitrary and capricious because it is internally inconsistent. The "significant nexus" standard in the proposed rule considers scores of factors as potentially determinative of whether an "other water" has a "significant" impact on water quality. Virtually anything that might be an indication of "chemical," "physical," or "biological" connectivity is potentially relevant to the determining the existence of a "significant

nexus." See 79 Fed. Reg. at 22214. If the "significant nexus" test is so fact- and context-dependent, then there is no way in which any *a priori* determination can be made as to whether "other waters" in the same "region" are "similarly situated."

Under the logic of the proposed rule's "significant nexus" test, a body of water in the region could only be deemed to be "similar" to the "other water" at issue only after the agencies undertook the detailed, case-by-case examination of the factors it deems relevant to making the significance determination. The proposed rule cannot claim numerous factors are relevant to whether a body of water has a "significant" impact on downstream water quality but then ignore those same factors for determining whether various bodies of water are "similarly situated" with regard to how they affect downstream water quality. At a minimum, the agencies cannot simply deem all bodies of "other waters" in a particular area to be "similarly situated" without undertaking the analysis they have determined is necessary to assess how each body of "other water" impacts the quality of distant navigable-in-fact waters.

Additionally, the broad and amorphous definition of "other waters" is not a valid exercise of the agencies' rulemaking authority, and, to the extent that the agencies would propose to bring an enforcement action against "other waters" with such a vaguely defined "significant nexus" to traditional navigable waters, that would violate due process because there would not be "fair warning" of conduct that is proscribed. The "requirement of clarity in regulation is essential to the protections provided by the Due Process Clause of the Fifth Amendment." *FCC v. Fox Television Stations, Inc*., 132 S. Ct. 2307, 2317 (2012). As the Supreme Court observed in *Grayned*, 408 U.S. at 108-09:

> It is a basic principle of due process that an enactment is void for vagueness if its prohibitions are not clearly defined. Vague laws offend several important values. First, because we assume that man is free to steer between lawful and unlawful conduct, we insist that laws give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly. Vague laws may trap the innocent by not providing fair warning. Second, if arbitrary and discriminatory enforcement is to be prevented, laws must provide explicit standards for those who apply them. A vague law impermissibly delegates basic policy matters to policemen, judges, and juries for resolution on an ad hoc and subjective basis, with the attendant dangers of arbitrary and discriminatory application.

As Justice Alito recently emphasized, even the far narrower and circumscribed case-by-case analysis set forth by the agencies in their Rapanos Guidance raised substantial concerns because it failed to provide "clear and [a] sufficiently limited definition" of "waters of the United States." *Sackett* v. EPA, 132 S. Ct. at 1375 (Alito, J., concurring). The proposed rule's "case-by-case" standard for determining "other waters" creates even greater risks of unconstitutional, arbitrary enforcement by the agencies.

Under the proposed rule, the "significant nexus" of an "other water" is not determined on the basis of that water itself, but rather in combination with all waters in "a single landscape unit." 79 Fed. Reg. at 22213. No meaningful definition of "landscape unit" is provided. The proposed rule indicates that waters will be similarly situated if they "are within a contiguous area of land with relatively homogenous soils, vegetation and

landform." Id. at 22213. However, even this vague statement was not broad enough for the agencies, as the proposed rule also notes that waters located in "different landforms, [that] have different elevation profiles, or [that] have different soil and vegetation characteristics" can still be considered "similarly situated" if they "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 navigable water." Id.

Thus, by aiming to be broad and all-encompassing, the proposed "significant nexus" test provides no meaningful guidance to those that would be regulated by the agencies. "Functions of water that might 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." Id. at 22213. Overall, the agency will consider any "factor" that may "influence the chemical, physical, or biological connections the 'other water' has" with the downstream navigable water. Id. at 22214. For "chemical connectivity," potential relevant factors may include "hydrological connectivity . . ., surrounding land use and land cover, the landscape setting, and deposition of chemical constituents"; for "physical connectivity," potential relevant factors may include "rain intensity, duration of rain events or wet season, soil permeability, and distance of hydrological connection[,] . . . depth from surface to water table, and any preferential flowpaths"; and for "biological connectivity," potential relevant factors may include "species' life history traits, species' behavioral traits, dispersal range, . . . distance [to navigable waters], the presence of habitat corridors or barriers, and the number, area and special distribution of habitats." Id. The proposed rule does not reveal the weight that will be given to any one factor or how the many factors will be balanced, nor does the proposal reveal the metrics used to determine amorphous factors like species' "life history traits" and "landscape setting."

These vague, open-ended and non-exclusive factors fail to provide "the person of ordinary intelligence a reasonable opportunity to know what is prohibited." Grayned, 408 U.S. at 108-09. They invite discriminatory and inconsistent enforcement by the agencies over waters that, by definition, are isolated and have no direct hydrological connection to any navigable water. This is incompatible with the Supreme Court's precedents and is arbitrary and capricious. (p. 23-27)

Agency Response: **The agencies believe the final rule is not overly broad and the final 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. As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3) of this section." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Best available science supports the significant effect that waters outside of the narrower limits of adjacency can have on**

downstream waters, and therefore should be evaluated for jurisdiction, where not otherwise excluded. The Science Report and SAB's review supports that the connectivity of waters and wetlands. The agencies' interpretation of the Supreme Court rulings in SWANNC and Rapanos is addressed in the Technical Support Document (TSD).

The agencies disagree that there are no waters beyond tributaries as defined and adjacent waters as defined that could have a significant nexus to a downstream traditional navigable water, interstate water, or territorial sea. That being said, The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The agencies believe that the final rule provides clarity that will allow a landowner to assess whether a particular local water is likely covered. The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. In lieu of the broad provision for other waters in the proposed rule, the final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

The agencies disagree that the approach to case specific determinations and the use of aggregation to consider some water "in combination" with others is expansive or vague, or that the use of "similar situated" waters will result in overbroad regulation. The proposal did ask for several approaches on how to consider waters "in the region." The final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region."

With regard to the agencies' interpretation of the Supreme Court rulings in SWANNC and Rapanos, see Technical Support Document, section II.

Federal Water Quality Coalition (Doc. #15822.1)

4.110 As with ditches and ephemeral waters, the history of the expansion of federal jurisdiction over isolated waters is instructive. In the early 1970s, the Corps did not attempt to assert jurisdiction over isolated waters. In 1975, the Corps' interim final regulations regulated navigable intrastate lakes up to their ordinary high water mark, if they were utilized in interstate commerce.[23] In 1977, the final Corps regulations regulated isolated lakes and other isolated intrastate waters if the degradation or destruction of the waters could affect interstate commerce.[24] Further expansion of jurisdiction over isolated waters occurred in the 1980s. In 1985, the EPA General Counsel issued a memorandum stating that waters that are used or would be used by migratory birds or endangered species are regulated (Migratory Bird Rule).[25] In 1986, the preamble to a final Corps regulation included a recitation of the Migratory Bird Rule.[26] In 1989, in Tabb Lakes v. U.S. the Fourth Circuit held that the Migratory Bird Rule is invalid because it was illegally promulgated without notice and comment rulemaking.[27] However, federal regulators continued to apply it.[28] In 1997, in U.S. v. Wilson, the Fourth Circuit went further and held that asserting jurisdiction over isolated waters merely because they "could affect" interstate commerce is invalid because it goes beyond the authority provided by the Commerce Clause, which requires a showing of actual, substantial, effects.[29] In 1998, the Agencies issued a memorandum instructing federal regulators to follow the Wilson case only in the Fourth Circuit, and to continue to assert jurisdiction over isolated waters in other parts of the country, even absent proof of actual use in interstate commerce.

> Of course, for a particular 'isolated,' intrastate water body, Corps or EPA field staff may be able to document only some relatively small-scale connections between that water body and interstate and foreign commerce (e.g., that the isolated water body serves as habitat for migratory birds). Nonetheless, EPA and the Corps believe, and if necessary will demonstrate, that each of these classes of interstate commerce-related activities associated with isolated waters (e.g., migratory bird usage of isolated waters), taken as a whole or in the aggregate, has a substantial effect on interstate or foreign commerce…..[30]

As discussed below, in 2001, in SWANCC, the Supreme Court invalidated the use of the Migratory Bird Rule as a basis for federal jurisdiction.

[23] 40 Fed. Reg. at 31324.
[24] 42 Fed. Reg. at 37127-28.
[25] Memorandum from Francis S. Blake, EPA General Counsel, to Richard E. Samderson, Acting Assistant Administrator, EPA Office of External Affairs (Sept. 12, 1985).
[26] 51 Fed. Reg. at 41217.
[27] *Tabb Lakes, Ltd. V. United States*, 715 F. Supp. 726, 729 (E.D. Va. 1988), aff'd, 885 F.2d 866 (4th Cir. 1989).
[28] Memorandum from John Elmore, Department of the Army, Directorate of Civil Works, and David Davis, EPA, Office of Wetlands Protection, Re: Clean Water Act Section 404 Jurisdiction Over Isolated Waters in Light of Tabb Lakes v. United States (January 24, 1990).
[29] *United States v. Wilson*, 133 F.3d 251, 257 (4th Cir. 1997).
[30] Robert Wayland, Office of Water, EPA, and Charlie Hess, Director of Civil Works, U.S. Army Corps of Engineers, Guidance for Corps and EPA Field Offices Regarding Clean Water Act Section 404 Jurisdiction Over Isolated Waters in Light of United States v. James J. Wilson (May 29, 1998).

The agencies have replaced the Migratory Bird Rule with "significant nexus." This rationale for federal jurisdiction is an inappropriate outgrowth of the Kennedy opinion in Rapanos v. United States, 547 U.S. 715 (2006), discussed below.

Under the proposed rule a significant nexus can be based on the movement of biota, so any water could be considered jurisdictional if used by a bird, insect, amphibian, or mammal. If any single water is considered jurisdictional using that criterion, then all waters that are "similarly situated" (i.e., perform the same functions, such as ponds, wetlands, swales, etc.) also are jurisdictional. Thus, any water located anywhere could be considered jurisdictional, and the landowner has to worry not just about water on his or her own property, but must also be concerned with the status of water anywhere in the watershed that could be considered "similarly situated."[31] This is an expansion of federal jurisdiction that has caused enormous uncertainty. (p. 15-17)

Agency Response: **For the agencies' overview of the history of the extent of applicability of the CWA, see the Technical Support Document. See response 4.109 (Doc. #15410).**

The agencies disagree that they are "replacing" the Migratory Bird Rule. The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

4.111 Similarly, the Draft Connectivity Report does not support the agencies' analysis for isolated waters. According to the agencies, "[a]vailable literature indicates that ''other waters'' have important hydrologic, water quality, and habitat functions that have the ability to affect downstream waters if and when a connection exists between the 'other water' and downstream waters.[32] However, there is no support for that assumption and, as noted above, the ecological studies cited do not address water quality impacts on navigable or interstate waters. As noted by Dr. Ali, one of the SAB Panel members, extending jurisdiction over "other waters" requires a showing that materials are actually transferred from those waters to downstream navigable waters:

> 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

[31] See 79 Fed. Reg. at 22211; 79 Fed. Reg. at 22263 (proposed 33 C.F.R. § 328.3(c)(7) (defining significant nexus)).
[32] 79 Fed. Reg. at 22248.

> 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).[33]

As a result, even if "connectivity" was an appropriate test for asserting jurisdiction, the record developed by the agencies does not support the proposed rule. And, as discussed above, connectivity alone is not sufficient to demonstrate jurisdiction. (p. 51)

Agency Response: **The Agencies disagree that the scientific literature does not support non-adjacent waters being covered in the rule. While the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, 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 these (a)(1) through (a)(3) waters. 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.**

In addition, in the evaluation of "other waters" the SAB found that "scientific literature has established that 'other waters' can influence downstream waters, particularly when considered in aggregate." The SAB thus found it "appropriate to define 'other waters' as waters of the United States on a case-specific basis, either alone or in combination with similarly situated waters in the same region." Based in part on these findings, the final rule contains 9 relevant factors to be used in case-specific significant nexus evaluations, which include physical, chemical, and biological functions of the water in question.

Water Advocacy Coalition (Doc. #17921.1)

4.112 The proposed rule impermissibly allows for the use of non-jurisdictional features (that are explicitly excluded from the waters of the United States definition) as connections for purposes of establishing jurisdiction over adjacent waters and other waters. The preamble states, "even when not jurisdictional waters, these non-wetland swales, gullies, rills and specific types of ditches may still be a surface hydrologic connection for purposes of the proposed definition of adjacent under paragraph (a)(6) or for purposes of a significant nexus analysis under paragraph (a)(7)." 79 Fed. Reg. at 22,219. If gullies, rills, and swales can supply the requisite connection to render waters jurisdictional, what about classic instances of runoff as sheet flow?

The use of non-jurisdictional connections to establish adjacency or a significant nexus for "other waters" has no limits. The proposed rule essentially allows for all waters to be jurisdictional based on these connections. This amounts to the "any hydrological connection" theory rejected in Rapanos and hardly clarifies jurisdiction. The agencies

[33] SAB Rule Review, at 12.

should eliminate the use of excluded features and waters as a basis for jurisdiction. (p. 73)

Agency Response: **Based on comments received, the agencies have modified the criteria for waters to be found jurisdictional as adjacent to (a)(1)-(a)(3) waters, and waters requiring case-specific significant nexus evaluations.**

While excluded features are not "waters of the United States," they can be considered in a case-specific significant nexus determination when they serve as a hydrologic, nonjurisdictional connection. The agencies' decision is consistent with the law and current practice. For example, the agencies' 2008 Rapanos guidance states, "Under this definition, the agencies consider wetlands adjacent if one of following three criteria is satisfied. First, there is an unbroken surface or shallow sub-surface connection to jurisdictional waters. This hydrologic connection may be intermittent." In addition, the science strongly supports the important role shallow subsurface connections can play when assessing the effects of surface waters, and it is appropriate to consider them in a significant nexus determination. See Technical Support Document. Therefore, the agencies will continue the current practice of considering whether non-jurisdictional features contribute to the type and strength of functions provided by a water or similarly situated waters when making a case-specific significant nexus determination. See Section 5 Significant Nexus; Features and Waters Not Jurisdictional compendium

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4.113 Even if the Reliance on Justice Kennedy were Warranted, the Agencies have Inappropriately Applied his "Significant Nexus" Test.

The proposed rule is based upon Justice Kennedy's concurring opinion in Rapanos, in which he notes that "[t]he 'objective' of the Clean Water Act . . . is 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[34] To this end, Justice Kennedy's concurring opinion establishes the "significant nexus" test: whether or not "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.'"[35] Employing Justice Kennedy's analysis, the Agencies attempt to establish jurisdiction over all waters that have a "significant nexus" in terms of their potential to affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, or the territorial seas. The application of Justice Kennedy's significant nexus standard as the sole basis for determining CWA jurisdiction, however, is problematic for several reasons.

1. Justice Kennedy's "Significant Nexus" Test Must be Applied on a Case-by-Case Basis to Avoid Unreasonable Applications of the Clean Water Act.

The "significant nexus" test, as described by Justice Kennedy, is only to be used on a case-by-case basis: "Absent more specific regulations, the Corps must establish

[34] Rapanos, 547 U.S. at 759 (quoting 33 U.S.C. § 1251(a)).
[35] Id. at 780.

significant nexus on a case-by-case basis when seeking to regulate wetlands based on adjacency to nonnavigable tributaries, in order to avoid unreasonable applications of the Act."[36] By asserting automatic jurisdiction over all tributaries and all adjacent waters on the *presumption* that they exhibit a significant nexus to downstream waters, the Agencies have improperly applied the test and run the risk of unreasonably applying the Act.

2. Justice Kennedy Required the "Significant Nexus" Test to be Used for Wetlands, not all Waterbodies.

In defining the jurisdictional status of "tributaries," "adjacent waters," and "other waters," the Agencies misinterpret and wrongfully expand Justice Kennedy's "significant nexus" test beyond wetlands. The proposed rule declares that all tributaries have a significant nexus to traditional navigable waters: "With this proposed rule, the agencies conclude, based on existing science and the law, that a significant nexus exists between tributaries . . . and the traditional navigable waters, interstate waters, and the territorial seas . . . Consequently, this rule establishes as 'waters of the United States,' all tributaries . . . of the traditional navigable waters, interstate waters, and the territorial seas . . . it has been determined that as a category, [tributaries] have a significant nexus and thus are 'waters of the United States.'"[37] The proposed rule also states "that adjacent waters, rather than simply adjacent wetlands, are 'waters of the United States.'"[38] The Agencies emphasize that 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. According to the proposed rule, the term "waters of the United States" also means "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."[39]

Unfortunately, this application of "significant nexus" is flawed. In truth, Justice Kennedy's "significant nexus" test applied only to wetlands, not tributaries, not adjacent waters, and not other waters. In *Rapanos*, Justice Kennedy opined that "the Corps' jurisdiction over *wetlands* depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense."[40] As the Corps has long recognized, *wetlands* have specific ecological functions, and these functions are different than the functions of tributaries or other waterbodies. Justice Kennedy was also aware of these differences, and it is unreasonable for the Agencies to expand the "significant nexus" test beyond his intent.[41] Furthermore, Justice Kennedy adopted the "significant nexus" test from Riverside Bayview, an earlier wetland case, and his

[36] Id. at 782 (emphasis added).
[37] 79 Fed. Reg. at 22,193.
[38] Id. (emphasis added).
[39] Id. at 22,193.
[40] Rapanos, 547 U.S. at 779 (emphasis added).
[41] Id. at 766.

Rapanos opinion is focused on wetlands.[42] Not even in dicta does he suggest the same test for other types of waterbodies. More recently, in San Francisco Baykeeper v. Cargill Salt Division the U.S. Court of Appeals for the Ninth Circuit squarely rejected the application of the significant nexus test to non-wetland waters, explaining that "Rapanos, like Riverside Bayview, concerned the scope of the Corps' authority to regulate adjacent *wetlands* . . ."[43] The Agencies must restrict the application of Justice Kennedy's "significant nexus" test only to wetlands as he intended.

3. Justice Kennedy, Citing the Objective of the Clean Water Act, Required a Physical, Chemical AND Biological Nexus to Satisfy a "Significant Nexus" Test.

Under Justice Kennedy's "significant nexus" analysis, wetlands that "significantly affect the chemical, physical, and biological integrity of other covered waters understood as navigable in the traditional sense" are "waters of the United States."[44] Justice Kennedy states that significant nexus "must be assessed in terms of the [CWA's] goals and purpose. Congress enacted the law to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[45] The Agencies have misread Justice Kennedy's test and Section 101(a) of the CWA by replacing the word "and" with the word "or."

Justice Kennedy used the conjunctive "and," not the disjunctive "or" to describe a "significant nexus." By interpreting "and" to mean "or," the Agencies are violating two rules of construction.[46] First, words must be given their ordinary meaning.[47] "And" is generally a conjunctive, meaning "along with or together with."[48] Second, "and" can mean "or" if using the word "and" would produce an absurd result or defeat the writers purpose.[49] However, there is no indication that Justice Kennedy would agree that a wetland is jurisdictional if it had only a biological, physical, or chemical effect on a traditional navigable water. In fact, in Rapanos, the government had shown that the wetlands in question had a hydrologic connection (a physical connection) to downstream waters, and yet five Justices rejected this as a basis for jurisdiction. Thus, the plain language used by Justice Kennedy requires that all three factors (physical, chemical, and

[42] See SWANCC, 531 U.S. at 167 (It was the significant nexus between the wetlands and "navigable waters" that informed our reading of the CWA in Riverside Bayview Homes.)
[43] See SWANCC, 531 U.S. at 167 (It was the significant nexus between the wetlands and "navigable waters" that informed our reading of the CWA in Riverside Bayview Homes.)
136 See San Francisco Baykeeper v. Cargill Salt Division, 418 F.3d 700, 707 (9th Cir. 2007) (emphasis in original) (rejecting Baykeeper's argument that the Supreme Court has held that the CWA protects all waterbodies with a significant nexus to navigable waters).
[44] Rapanos, 547 U.S. at 780 (emphasis added).
[45] U.S.C § 1251(a).
[46] NAHB recognizes that the Agencies are not interpreting the language used by Congress, but the same rules should apply when interpreting the language used by the Supreme Court. Furthermore, NAHB suspects that Justice Kennedy is well aware of the difference between "and" and "or."
[47] E.g., Wall v. Kholi, 131 S.Ct. 1278, 1284 (2011).
[48] American Bankers Ins. Group v. United States, 408 F.3d 1328, 1332 (2005); Websters Third New International Dictionary 80 (2nd ed. 2002).
[49] E.g., Officemax, Inc. v. United States, 428 F.3d 583, 589-90 (6th Cir. 2005).

biological) be satisfied before a wetland is jurisdictional.[50] By substituting "and" with "or" the Agencies have expanded CWA jurisdiction to waters that only significantly affect one of the three attributes of a traditional navigable water Justice Kennedy's "significant nexus" test required.

Furthermore, by replacing "and" with "or" the Agencies now claim that waterbodies that "act as sinks by retaining floodwaters, sediment, nutrients, and contaminants" (i.e., do not have a physical connection to a jurisdictional water) can have a significant nexus.[51] Thus, under the government's interpretation, if a waterbody either has or does not have a physical connection to a jurisdictional water, it can satisfy the significant nexus test. This leads to the conclusion that all waterbodies have a significant nexus to a jurisdictional water and are therefore themselves jurisdictional. This is clearly absurd. Justice Kennedy demanded more.

What's more, the categorical finding of jurisdiction over all tributaries and adjacent waters is not based on any scientific data generated by the Agencies for rulemaking purposes nor does the scientific literature reviewed by the Agencies, as discussed in Section IX, provide sufficient support to claim categorical jurisdiction over all tributaries and adjacent waters on the basis that they significantly affect downstream waters. Indeed, the draft Connectivity Report that the Agencies claim provides the science supporting the proposed rule only describes the presence, not the significance, of connections between streams and wetlands and downstream waters (see Section IX for a more in depth discussion of this topic).

4. The Broad Definition of "Water" Allows the Agencies to Wrongly Assert Biological Connections Alone can Satisfy Justice Kennedy's Significant Nexus Test and, in turn, Invalidates the SWANCC and Rapanos Holdings.

The current regulatory definition of "waters of the United States" has been on the books since 1986.[52] For the first time in nearly 30 years, the Agencies are proposing to redefine the term, and yet have only included a definition of "water" and "waters" as a footnote in the preamble. What's more, the Agencies are not limiting the terms "water," "waters," and "water bodies" to their traditional meanings, stating,

> "The agencies use the term 'water' and 'waters' in the proposed rule in categorical reference to rivers, streams, ditches, wetlands, ponds, lakes, playas, and other types of natural or man-made aquatic systems. The agencies use the terms 'waters' and 'water bodies' interchangeably in this preamble. *The terms do not refer solely to the water contained in these aquatic systems, but to the system as a whole including associated chemical, physical, and biological features.*"[53]

[50] See Bruce v. First Federal Sav. and Loan Ass'n of Conroe, Inc., 837 F.2d 712, 715 (5th Cir. 1988) ("The word 'and' is . . . to be accepted for its conjunctive connotation rather than as a word interchangeable with 'or' except where strict grammatical construction will frustrate clear legislative intent.").
[51] 79 Fed. Reg. at 22,223.
[52] 51 Fed. Reg. at 41,206 (Nov. 13, 1986).
[53] 79 Fed. Reg. at 22,191 n.3 (emphasis added).

This is problematic on several fronts. First, in a rule defining "waters of the United States" under the CWA, it is inappropriate for the Agencies to define "water" in a mere preamble footnote. This critical definition should be part of the proposed regulatory text.

Second, the definition is overbroad and contravenes both the SWANCC and Rapanos Courts. In SWANCC, the Supreme Court held that the use of isolated, intrastate gravel ponds by migratory birds cannot be used to assert jurisdiction over such waters. In Rapanos, the Court rejected the notion that the Agencies could assert jurisdiction over wetlands adjacent to non-navigable tributaries on the basis of a mere hydrologic connection to a traditional navigable water. And yet, in the proposed rule the Agencies define "water" so broadly as to assert jurisdiction over "other waters" on the basis of biological connectivity. The Agencies cite the following as evidence of biological connectivity between "other waters" and (a)(1) through (3) waters: "Evidence of biological connectivity and the effect on waters can be found by identifying: resident aquatic or semi aquatic species present in the 'other 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 'other water,' and if so whether such dispersal extends to the tributary system or beyond or from the tributary system to the 'other water.' Factors influencing biological connectivity include species' life history traits, species' behavioral traits, dispersal range, population size, timing of dispersal, distance between 'other water' and an (a)(1) through (a)(3) water, the presence of habitat corridors or barriers, and the number, area, and spatial distribution of habitats. Nonaquatic 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 purposes of this rule."[54]

Appendix A of the proposal goes on to provide examples of biological connections between "other waters" and (a)(1) through (3) waters:

"'Other waters' can be biologically connected to each other and to downstream waters through the *movement of seeds, macroinvertebrates, amphibians, reptiles, birds, and mammals* . . . Generally, 'other waters' are further away from stream channels than adjacent waters, making hydrologic connectivity less frequent, and increasing the number and variety of landscape barriers over which organisms must disperse. Plants, though non-mobile, have evolved many adaptations to achieve dispersal over a variety of distances, including water-borne dispersal during periodic hydrologic connections, 'hitchhiking' on or inside highly mobile animals, and more typically via *wind dispersal of seeds and/or pollen . . . Mammals* that disperse overland can also contribute to connectivity and can act as transport vectors for hitchhikers such as algae. . . *Invertebrates also utilize birds and mammals to hitchhike*, and these hitchhikers can be an important factor structuring invertebrate metapopulations in 'other waters' and in aquatic habitats separated by hundreds of kilometers . . . *Numerous flight-capable insects* use both 'other waters' and downstream waters; these insects move outside the tributary

[54] Id. at 22,214.

network to find suitable habitat for overwintering, refuge from adverse conditions, hunting, foraging, or breeding, and then can return back to the tributary network for other lifecycle needs . . . *Amphibians and reptiles* also move between 'other waters' and downstream waters to satisfy part of their life history requirements . . . *Alligators* in the Southeast, for instance, can move from tributaries to shallow, seasonal limesink wetlands for nesting, and also use these wetlands as nurseries for juveniles; subadults then shift back to the tributary network through overland movements . . . Similarly, *amphibians and small reptile species, such as frogs, toads, and newts*, commonly use both tributaries and 'other waters,' during one or more stages of their life cycle, and can at times disperse over long distances."[55]

The draft Connectivity Report also extensively references biological connections that can occur between water bodies.[56]

The Agencies state that connectivity is "the degree to which components of a system are joined, or connected, by various transport mechanisms and is determined by 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."[57] As a specific example, the Agencies state, "[prairie] [p]otholes . . . support a community of highly mobile organisms, *from plants to invertebrates that move among potholes and that can biologically connect the entire complex to the river network*. Based on these connections and the strength of their effects, individually or in combination with other prairie potholes in the watershed, on the chemical, physical, or biological integrity of an (a)(1) through (a)(3) water, the agencies could conclude by rule that prairie potholes have a significant nexus and are jurisdictional."[58]

Indeed, by defining "water," "waters," and "water bodies" so absurdly as to include biological elements associated with aquatic ecosystems and stating that biological connections can be used to meet Justice Kennedy's significant nexus test, the proposed rule turns SWANCC and Rapanos on their heads.

The Supreme Court rejected the notion that migratory birds, as a result of their potential impacts on interstate commerce, could be used to assert jurisdiction over the isolated ponds in SWANCC. Under this proposal, however, the Agencies could assert jurisdiction over the SWANCC ponds if migratory birds (provided they are "resident" and "demonstrat[e] a life cycle dependency on the identified aquatic resources"), or any other plant or animal for that matter, merely has habitat in both an (a)(1) through (3) water and any other water, located anywhere. This is nonsensical. The Court already opined that asserting jurisdiction over waters based on the presence of migratory birds "push[es] the limit of congressional authority."[59] Similarly, basing jurisdiction on biological connectivity alone renders the term "navigable" in "navigable waters"

[55] Id. at 22,249 (emphasis added).
[56] See Draft Connectivity Report at 3-47, 5-16, 5-31 through 5-32, 5-73.
[57] 79 Fed. Reg. at 22,195 (emphasis added)
[58] Id. at 22,250 (emphasis added).
[59] SWANCC, 531 U.S. at 173.

meaningless. Indeed, in SWANCC, the Court stated, "We cannot agree that Congress' separate definitional use of the phrase 'waters of the United States' constitutes a basis for reading the term 'navigable waters' out of the statute. We said in Riverside Bayview Homes that the word 'navigable' in the statute was of 'limited import,' 474 U.S., at 133, and went on to hold that § 404(a) extended to non navigable wetlands adjacent to open waters. But it is one thing to give a word limited effect and quite another to give it no effect whatever."[60]

In Rapanos, both the plurality[61] and Justice Kennedy[62] rejected the notion that waters could be deemed jurisdictional based on an "any hydrologic connection" theory. Yet, by expanding the definition of "water" in the proposal and claiming federal jurisdiction can be determined based upon biological connectivity alone, the Agencies would now embrace an "any biological connection" approach to assert jurisdiction over "other waters." If any hydrologic connection didn't cut the mustard with the Rapanos plurality and Justice Kennedy, it's hard to believe any biological connections including "dispersal of seed and plant fragments and . . . wind dispersal of invertebrates"[63] would suffice. To quote the Rapanos plurality, to assert CWA jurisdiction on the basis of biological connections between other waters and (a)(1) through (3) waters would "stretch[] the term 'waters of the United States' beyond parody"[64] and "would permit the Corps to regulate the entire country as 'waters of the United States."[65] The Agencies have clearly gone too far. (p. 43-49)

Agency Response: **With regard to the agencies' interpretation of the Supreme Court rulings in SWANNC and Rapanos, see Technical Support Document, section II.**

The agencies disagree with the commenter's assertion the agencies may not establish that categories of waters have a significant nexus to downstream traditional navigable waters, interstate waters, or territorial seas. Quite the opposite, Justice Kennedy stated that the significant nexus analysis must be applied on a case-by-case basis "absent more specific regulations." 547 U.S. at 780-81 (Kennedy, J., concurring). Justice Kennedy invited the agencies to establish categories of covered waters. *Id.* at 780—81. The agencies also disagree that the final rule asserts jurisdiction over tributaries as defined and adjacent waters as defined based on a presumption of significant nexus. To the contrary, identification of (a)(5) and (a)(6) waters as jurisdictional by rule is based upon the best available peer-reviewed science as well the text of the statute, Supreme Court decisions, public input, ,and the agencies' technical expertise and experience.

The agencies also disagree with the commenter's assertion that Justice Kennedy's opinion confines the significant analysis to wetlands. Based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the

[60] Id. at 172.
[61] See Rapanos, 547 U.S. at 736 n.7
[62] See id. at 784, 785.
[63] 79 Fed. Reg. at 22,236.
[64] Rapanos, 547 U.S. at 734.
[65] Id. at 749.

significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos*, Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. While Justice Kennedy's discussion of the application of the significant nexus standard 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." *Id*. at 767 (emphases added). Fundamentally, Justice Kennedy's significant nexus analysis is about the fact, long-acknowledged by Supreme Court caselaw, that protection of waters from pollution can only be achieved by controlling pollution of upstream waters. It would be inconsistent with Justice Kennedy's opinion as a whole, science, and common sense to apply Justice Kennedy's significant nexus standard to wetlands adjacent to tributaries and not to the tributaries themselves.

The agencies also disagree with the commenter's assertion that Justice Kennedy's opinion requires a significant nexus to all three objectives, i.e., the physical, chemical and biological integrity of a downstream traditional navigable water, interstate water or territorial sea. 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 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 a traditional navigable water, interstate water, or the territorial sea. Case-specific determinations of significant nexus require (a)(7) or (a)(8) waters to be evaluated either alone, or in combination with other similarly situated waters in the region. The agencies' definition of significant nexus is based upon the language in *SWANCC* and *Rapanos*. The definition is also consistent with current practice, where field staff evaluate the functions of the waters in question and the effects of these functions on downstream waters. In order to add clarity to the definition of significant nexus, the agencies have listed in the definition the functions that will be considered in a significant nexus analysis. 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) in order to have a significant nexus. The final rule makes clear that a water has a significant nexus when any single function or combination of functions performed by the water, alone or in combination with similarly situated waters in the region, contributes significantly to the chemical, physical, or biological integrity of the nearest water identified in paragraphs (a)(1) through (3).

The Agencies believe that it is appropriate to consider biological connections as one of the factors in the significant nexus evaluation, particularly in light of Congress' reference to "biological" integrity as a stated objective of the CWA and Justice Kennedy's own references to biological integrity. It is also consistent with the post-*Rapanos* holdings of several appellate courts. See Technical Support Document for a summary of the post-*Rapanos* holdings of the U.S. Courts of Appeals. The final rule lists 9 specific functions to be used in significant nexus evaluations. This list includes "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 water identified in paragraphs (a)(1) through (3) of this section." See response 4.25 (Doc. #14569). The preamble also states that non-aquatic species or non-resident migratory birds do not demonstrate life cycle dependency for case-specific evaluations, and therefore are not evidence of biological connectivity for purposes of this rule. The Agencies believe this change provides the necessary specificity in biological connectivity.

4.114 The Agencies' proposed "other waters" category is designed to capture any wet feature that cannot be found categorically jurisdictional under the "tributary" or "adjacent water" provisions. Under the proposed rule, the Agencies will assert jurisdiction over "other waters, including wetlands," that "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 territorial sea.[66] As is the case with "adjacent waters," the Agencies do not explain which "waters" may be considered (a)(7) "other waters." The preamble simply states that "other waters" "do not meet the criteria of any of the categories of waters in (a)(1) through (a)(6), and also are not one of the waters and features excluded . . . in section (b)."[67] As discussed in Section VI. c. vi., the "other waters" category violates *SWANCC* by allowing for assertion of jurisdiction over isolated waters, such as prairie potholes or industrial ponds, that have little or no connection to traditional navigable waters. Indeed, by extending jurisdiction beyond (a)(6) "adjacent waters" to (a)(7) "other waters," the Agencies contravene the SWANCC ruling in which the Supreme Court held, "In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water [i.e., 'other waters']. But we conclude that *the text of the statute will not allow this*."[68]

With the proposed aggregation of all "similarly situated" waters in a watershed, the proposed rule allows for regulation of waters that are not proximate to traditional

[66] Id. at 22,263.
[67] Id. at 22,211.
[68] SWANCC, 531 U.S. at 167-168 (emphasis added).

navigable waters. Under the proposed rule, the Agencies will find that "other waters" have a significant nexus, and are therefore jurisdictional, if the "either alone or in combination with other *similarly situated* waters in the region (i.e., the *watershed* that drains to the nearest [traditional navigable water, interstate water, or territorial sea]), significantly affect[] the chemical, physical, or biological integrity" of a traditional navigable water, interstate water, or territorial sea.[69] The Agencies will find waters to be "similarly situated" when they "perform 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* . . ."[70]

Importantly, not all features within a "single landscape unit" are similarly situated. The preamble suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, so long as they "perform similar functions" and are located "sufficiently close" to a "water of the United States" to allow them to collectively function together.[71] This interpretation stretches the concept of "similarly situated" beyond reason and would allow the Agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assess jurisdiction.

Furthermore, the proposed "other waters" standard is problematic because the "case-by-case" significant nexus analysis touted by the Agencies for "other waters" is not really a case-by-case analysis. Indeed, the Agencies propose to evaluate similarly situated waters within a watershed "as a group."[72] They will aggregate all similarly situated "other waters" within a watershed to determine if, when combined, all of those waters have a significant nexus with a traditional navigable water, interstate water, or territorial sea.[73] The Agencies will *not* perform an individual analysis on the feature at issue unless they cannot make a finding that there are "similarly situated" features in the region. As noted above, if "other waters" that are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, can all be treated as "similarly situated," it seems unlikely that the Agencies would ever be in a situation where they could not find similarly situated features in the region. Clearly, the "other waters" analysis described in the preamble can hardly be characterized as a "case-by-case" analysis.

In addition, the Agencies note that information relevant to finding that an "other water" has a significant nexus "need not always be specific to the water whose jurisdictional status is being evaluated," but instead can be based on "regional and national studies of the same type of water" or a "desktop" analysis.[74] If the Agencies intend to make significant nexus determinations remotely, they have read all meaning out of Justice Kennedy's test.

[69] 79 Fed. Reg. at 22,263 (emphasis added).
[70] Id. (emphasis added).
[71] Id. at 22,213.
[72] Id. at 22,211.
[73] Id.
[74] Id. at 22,214.

The end result of the proposed process for evaluating "other waters" will be the assertion of jurisdiction over many isolated features that, like the isolated, non-navigable ponds at issue in SWANCC, are a far cry from the "waters of the United States" to which the CWA extends. (p. 96-97)

Agency Response: **The agencies believe the final rule is not overly broad and it is not the case that any water would be considered a "waters of the United States" under the "other waters" category. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. The agencies believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters. See Agency Summary Response Essays 1, 5 and 8.**

See Agency Summary Essay 10 for a discussion of how the Congressional goal of restoring and maintaining the biological integrity of our Nation's waters will be implemented through the significant nexus analysis.

Home Builders Association of Tennessee (Doc. #19581)

4.115 Since the Agencies have applied the significant nexus test to all other covered waters in addition to wetlands, in guidance and in the Proposed Rule, then it is essential that the Agencies properly define the limits of what constitutes a significant nexus not only from a scientific viewpoint but also from a legal and constitutional basis. The Agencies appear to be reframing Justice Kennedy's meaning of speculative or insubstantial by stating that the scientific application of speculative or insubstantial is not the same as a legal one. The following excerpt illustrates the issue: (…)

It is clear from the express language that the Agencies are applying the significant nexus test differently than Justice Kennedy intended. As a result the Agencies have greatly expanded the universe of waters that Justice Kennedy had in mind by its reapplication of those terms. (p. 3-4)

Agency Response: **See Agency Summary Response Essays 1 and 6.**

4.116 A significant portion of the Proposed Rule is set aside to justify and describe regulation of tributaries. The regulatory basis of this jurisdiction is Justice Kennedy's opinion in Rapanos. However, the context for which Justice Kennedy rendered his opinion, as well as his express ruling on significant nexus related only to wetlands and not streams or tributaries. While we understand at least three United States Circuit Courts of Appeal have extended this theory to non-wetland features, the Supreme Court has not provided any further legal guidance. Therefore, to the extent the Significant Nexus test is used, the Agencies must apply it only to wetlands and not tributaries. (p. 9-10)

Agency Response: See Agency Summary Response Essays 6 and 13 and Technical Support Document, section I.

Continental Resources, Inc. (Doc. #14655)

4.117 "Other waters" are likely to include, for example, ponds, prairie potholes, mudflats, wet meadows, playa lakes, lakes, small isolated waters, washes, purely intrastate waters, and non-adjacent waters. There is no legal basis to extend Justice Kennedy's treatment of adjacent wetlands "to other waters such as ponds, lakes, and non-adjacent wetlands that may have a significant nexus to a traditional navigable water, an interstate water, or the territorial seas" as the agencies propose. 79 Fed. Reg. at 22,261. *Rapanos* never addressed these types of waters and there is no reason to believe non-adjacent, non-wetlands that were previously deemed non jurisdictional demonstrate any of the important functions of wetlands. Justice Kennedy would not have expanded jurisdiction to cover these other waters nor applied his articulation of the "significant nexus" test to these waters. Sweeping in these types of inconsequential waters, will impose new costs and delays that are wholly unsupported by law and science.

This is the only area where the agencies admit there is likely to be an expansion of jurisdiction. Economic Analysis at 12 (admitting 0 percent of these waters are currently jurisdictional and 17 percent would be jurisdictional under the Proposed Rule). The agencies vastly misrepresent the jurisdictional expansion and workload that will accompany this "other waters" category. The economic costs and timing delays associated with analyzing these waters is unlikely to justify the meager environmental benefits of including new waters never before considered jurisdictional. The Proposed Rule language is particularly egregious for two additional reasons. First, the Proposed Rule abandons the current requirement that such waters "affect interstate or foreign commerce" extending jurisdiction beyond the bounds of the Commerce Clause requirements in the Constitution. Compare 40 C.F.R. §§ 328.3(a)(3)(i)-(iii) with 79 Fed. Reg. at 22,263 (Proposed 40 C.F.R. § 328.3(a)(7)). Second, many of these inconsequential "other waters" will not ever be analyzed individually but may be aggregated together under the definition of significant nexus. Under the Proposed Rule, significant nexus for the subject water is based upon "*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)" where similarly situated waters are those that "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[s]*." 79 Fed. Reg. at 22,263 (Proposed 40 C.F.R. § 328.3(c)(7)) (emphasis added). Additional uncertainty is raised because the terms

"sufficiently close" and "similar functions" are mentioned in the preamble but not included in the proposed regulatory language. 79 Fed. Reg. at 22,213. The agencies' preamble discussion raises many more questions than it answers as it is unclear how the agencies will gather information and judge whether areas of land have homogeneous soils, vegetation and landform, and whether waters function to provide habitat, water storage, sediment retention, pollution sequestration. 79 Fed. Reg. at 22,213.

Application of Justice Kennedy's significant nexus test on individual "other waters" is likely to be illusory. Many "other waters" might never receive the individual significant nexus review that Justice Kennedy required in Rapanos. The proposed definition of significant nexus suggests that the agencies are likely to clump together a wide range of diverse waters and treat them as "similarly situated" if they are within the same watershed or single landscape unit. This approach to jurisdiction is unprecedented and likely to sweep in marginal, low value waters "in the region" or watershed that have never been jurisdictional in the past and should not be considered jurisdictional now. (p. 12-13)

Agency Response: **To the extent the comment asserts that the significant nexus analysis should be applied only to wetlands, see response 4.100 (Doc. #9615) and Technical Support Document, section II. The agencies disagree that the "other waters" category should be removed. The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."**

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). As set forth in the Preamble to the final rule, 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. 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 and the fundamental premise of the rule that these waters are the ultimate focus of CWA protections.

The commenter appears to confuse two different baselines. It is incorrect to say, as the commenter implies, that certain features such as intrastate lakes, etc. have "never" been considered as within the scope of the CWA. As evidence for this assertion, the commenter appears to point to the Economic Analysis for the rule. For purposes of the Economic Analysis, however, the agencies evaluated costs and benefits associated with the difference in jurisdictional determinations between the new rule and current field practice, which is based on the 2008 EPA and Corps jurisdiction guidance. The scope of waters over which the agencies have exerted CWA jurisdiction during the 2008-2011 timeframe analyzed in the economic analysis is considerably smaller than the scope of waters historically covered prior to the 2001 and 2006 Supreme Court decisions. Many of the waters identified in the comment in fact have historically been considered as within the applicability of the CWA. To the extent the commenter implies that the agencies' decision to delete former 33 C.F.R. 328.3(a)(3) (waters with an interstate commerce connection) and base CWA applicability on a significant nexus to traditional navigable waters, interstate waters or territorial seas is intended to or in fact does expand coverage under the CWA, the agencies disagree. See response 4.94 (Doc. #16393).

Sinclair Oil Corporation (Doc. #15142)

4.118 Justice Kennedy proposed the significant nexus test as a means of determining the jurisdictional status of a water on a case-specific basis. See *Rapanos*, 457 U.S. at 782 ("the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries"). While Justice Kennedy acknowledged that there may be circumstances where it would be appropriate to "presume covered status for other comparable wetlands in the region" once a significant nexus is established for a particular wetland, his opinion does not provide support for the Agencies' assertion of broad per se jurisdiction based on the assumption that all waters falling within certain defined categories have a significant nexus. Id. Such an approach puts the cart before the horse by presuming a nexus where one has not been proven and may not exist. (p. 7)

Agency Response: **The agencies disagree with the commenter's assertion the agencies may not establish that categories of waters have a significant nexus to downstream traditional navigable waters, interstate waters, or territorial seas. Quite the opposite, Justice Kennedy stated that the significant nexus analysis must be applied on a case-by-case basis "absent more specific regulations." 547 U.S. at 780-81 (Kennedy, J., concurring). Justice Kennedy invited the agencies to establish categories of covered waters. *Id.* at 780—81. The agencies also disagree that the final rule asserts jurisdiction over tributaries as defined and adjacent waters as defined based on a assumption of significant nexus. To the contrary, identification of (a)(5) and (a)(6) waters as jurisdictional by rule is based upon the best available peer-reviewed science as well the text of the statute, Supreme Court decisions, public input, ,and the agencies' technical expertise and experience. See Tributaries and Adjacent Waters Compendiums**

4.119 As the preamble acknowledges, all waters in a watershed have some effect on each other, and when enough of those waters are aggregated together, the effect will always rise above insubstantial. See 79 Fed. Reg. 22,247-250. Given this fact, the proposed rule could be interpreted as asserting that all waters in a watershed are jurisdictional waters. Such an approach would extend jurisdictional waters well beyond the limits established in *SWANCC*. In fact, the very waters deemed non-jurisdictional in *SWANCC* would almost certainly be considered jurisdictional because, under the proposed rule, the aggregated waters would have a more than insubstantial effect on a navigable water within the watershed. The ambiguity in the definition of "other waters" makes the proposed rule legally unsupportable. (p. 8-9)

Agency Response: **The final 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. See Agency Summary Response Essays 1, 2, 5, 6, 7, 8, 13. See response 4.61 (Doc. #7930), 4.82 (Doc. #15383)**

Barrick Gold of North America (Doc. #16914)

4.120 The most obvious flaw in the "other waters" proposal is that it would operate like a regulatory Trojan Horse. It is presented as a fair and objective process for making a Clean Water Act jurisdictional determination, but in fact the process itself – and the potential outcome – remains a mystery to the regulated entity until the very end. Barrick assumes good intentions on behalf of the agencies, but believes that this process would not be fair because there are no criteria upon which to judge the potential outcome. Over time, the agencies would have to develop guidance to implement this rule; without it, locally produced jurisdictional decisions will be contentious and chaotic. The same lack of consistency that afflicts agency decision making now will be the result.[75] In a rulemaking this important, and one where the agencies are pressing at, if not well beyond, the outer limits of their legal jurisdiction, the proposed rule must present a more detailed and clear explication than is discernible here. If the agencies believe that a process for asserting jurisdiction over "other waters" is necessary, and that they have the authority to

[75] See, e.g., GAO Report 04-297, Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction (Feb. 2004).

do so under the Clean Water Act, they should take more time to consider more fully how that process should work, how "significance" and "connectivity" should be determined in a way that is legally justifiable under the Clean Water Act, and propose a rule that meets the requirements of the Administrative Procedure Act. (p. 24)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.**

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The rule defines "significant nexus" at (c)(5) to provide specific physical, chemical, and biological functions to be considered in evaluating significant nexus to (a)(1) – (a)(3) waters. At (a)(8), the final rule places a threshold on the the waters that can be subject to a case-specific determination., and provides specific physical, chemical, and biological functions used to evaluate significant nexus to (a)(1)-(a)(3) waters. The preamble also contains expanded discussion of the terms "similarly situated" and "in the region". See Agency Summary Response Essays 1, 2, 5, 6, 8, 12. See response 4.39 (Doc. # 16564), 4.61 (Doc. #7930)

4.121 The agencies devote a large part of the preamble to explaining how and when "other waters" would be aggregated for jurisdictional determinations under the proposed rule. As explained above, Barrick believes the agencies have gone beyond their Clean Water Act authority in relying upon Justice Kennedy's "similarly situated" dicta in Rapanos to propose broad categorical aggregation of waters. Rapanos concerned adjacent wetlands (using the Corps' existing definition of "adjacent"), and Justice Kennedy observed that the Corps might, under certain circumstances, make jurisdictional decisions for "comparable" wetlands. 547 U.S. at 782. In his view, however, this process would begin

with a determination for one wetland, and then could proceed to affect wetlands "comparable" to that one.[76] In the proposed rule, the aggregated waters would be similar to each other (allegedly), but need not be similar to a specific water for which the requisite jurisdictional nexus has been established. This is the approach Justice Kennedy suggested, and its absence in the proposed rule is a fundamental flaw.

The "similarly situated" discussion in the context of "other waters" stretches Justice Kennedy's observation even further. For tributaries and adjacent waters, aggregation under the proposed rule is discussed as being limited to other waters in the "watershed," explained to be the "the drainage basin within whose boundaries all precipitation ultimately flows to the nearest single traditional navigable water." 79 Fed. Reg. at 22,212. This does not in fact limit the effect of aggregation in any way, because the proposed rule defines "similarly situated" in such a way that allows the agencies to find every water in a watershed to be similarly situated. 79 Fed. Reg. at 22,263 ("Other waters, including wetlands, are similarly situated when they perform similar functions and are sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit…"). Such a definition gives local agency personnel unfettered discretion to determine that any water present in the watershed is a jurisdictional water. Supreme Court precedent does not allow such a result. (p. 24-25)

Agency Response: **The commenter appears to confuse two aspects of Justice Kennedy's opinion. With respect to ascertaining significant nexus, Justice Kennedy clearly stated that the significant nexus of a particular water may be analyzed "alone or in combination with similarly situated lands in the region." As a matter of administrative convenience for purposes of regulatory implementation, Justice Kennedy noted that '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."** ***Compare*** **547 U.S. at 779 (Kennedy, J., concurring),** ***with*** **547 U.S. at 781 (Kennedy, J., concurring. See Agency Summary Response Essays 1, 7, 8. See 4.83 (Doc. #15544), 4.120 (Doc. #16914).**

Oregon Cattlemen's Association (Doc. #5273.1)

4.122 The exercise of jurisdiction over such isolated waters does not comport with Supreme Court precedent. In *SWANCC*, the Court expressly rejected the exercise of jurisdiction over areas serving "other functions". *SWANCC*, 531 U.S. at 167-168 (holding that the provision of habitat for migratory birds is not an independent basis for the Corps to assert jurisdiction).

The *SWANCC* Court also clarified that it allowed the Corps to exercise jurisdiction over the wetlands at issue in *Riverside Bayview* because there was a "significant nexus" between those wetlands and navigable waters. Id. A "significant nexus" existed because

[76] "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." 547 U.S. at 782.

those wetlands were adjacent to "open water" and therefore "inseparably bound up with 'waters' of the United States." *Id*.; *see also Riverside Bayview*, 474 U.S. at 134. (p. 6)

Agency Response: The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The final rule clarifies and defines "significant nexus" at (c)(5) to provide specific physical, chemical, and biological functions to be considered in evaluating significant nexus to (a)(1) – (a)(3) waters.

See Agency Summary Response Essays 1, 10.

Montana Wool Growers Association (Doc. #5843.1)

4.123 The Proposed Rule should expressly exclude all Section (a)(7) "other waters."

Section (a)(7) is counterproductive to the Agencies' reason for issuing the Proposed Rule. The Agencies' primary goal in issuing the Proposed Rule was "minimizing the number of case-specific determinations" of CWA jurisdiction. (p. 5)

Agency Response: As stated previously, the agencies disagree with the removal of the other waters category and have made changes that are now reflected in (a)(7) and (a)(8). The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report and necessary to achieve the Congressional goal of restoring and maintaining the physical, chemical, and biological components of the Nation's waters. See Agency Summary Response Essay 1.

4.124 Section (a)(7) contradicts the Agencies' assertions that "[t]he proposed rule would not regulate land or land use." EPA, Waters of the U.S., Ditch the Myth, http://www2.epa.gov/uswaters/ditch-myth (accessed Aug. 18, 2014). Section (a)(7) permits regulation of land within a region whose waters collectively form a "significant nexus" to an (a)(1) through (a)(3) water. A region is a "single point of entry watershed," which "includes all lands, streams, wetlands, lakes, and other waters within its boundaries." 79 Fed. Reg. at 22212 (emphasis added). Additionally, "waters" and "water bodies," as used in the Proposed Rule, "do not refer solely to water contained within these aquatic systems, but to the system as a whole ... " 79 Fed. Reg. at 22191 n. 3.

At worst, these statements suggest every activity not explicitly excluded would be subject to regulation, whether it be in water or on land, if the region is found to have a significant nexus to (a)(1) through (a)(3) waters.

At best, these statements allow anyone to sue the Agencies to force a case-by-case analysis of whether any water within such region should be regulated (including rainfall and snowmelt) if collectively those waters would have "more than [a] speculative or insubstantial" effect on the (a)(1) through (a)(3) water. (p. 5-6)

Agency Response: **The agencies modified the proposed "other waters" category, creating two categories which allow for case specific analysis to specific types of waters or those within a threshold. See response 4.1(Doc. #16386).**

The waters subject to case specific analysis are limited by type in (a)(7) and in (a)(8) by presence in the 100 year floodplain of an (a)(1) – (a)(3) water and/or within 4000 feet from an OHSM or high tide line of an (a)(1) – (a)(5) water, whichever is broader. Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

In the final rule, the agencies provided clear and explicit exclusions for a variety of non-jurisdictional features, including erosional features, puddles, certain types of ditches and water-filled depressions. In sum, the agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal and by providing a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed.

See Agency Summary Response Essays 1, 2, 5, 6, 7, 8.

Alameda County Cattlewomen (Doc. #8674)

4.125 In Justice Kennedy's concurring opinion in *Rapanos* he states, "Taken together these cases establish that in some instances, as exemplified by *Riverside Bayview*, 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. In other instances, as exemplified by *SWANCC*, there may be little or no connection. Absent a significant nexus, jurisdiction under the Act is lacking."[77] What the agencies have done under the proposed rule is to contort this language and stretch it beyond its conscionable limit. The phrase "…may be so close" is a far cry from what the agencies have done under the proposed rule in the "Other Waters" category, which is to potentially aggregate similarly situated waters (even puddles) within the same watershed to find them all jurisdictional.[78] The agencies have left themselves enough flexibility to find all isolated puddles (the agencies specifically chose not to exclude puddles) in the same watershed could hold back enough water to qualify as meeting the agencies flexible "significant nexus" determination. (Proposed Rule at 22218). (p. 14)

[77] *Rapanos*, J. Kennedy, concurring, at 10.

[78] Proposed Rule at 22211, ("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 (a)(3)…))".

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780**

The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

While the proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded, inconsideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

The preamble to the final rule has added language regarding "significant nexus" and "similarly situated" in order to clarify their use in determination case-specific jurisdictional determinations. The final rule specifically excludes puddles by rule.

Western Growers Association (Doc. #14130)

4.126 As is made clear in Rapanos (both in the Scalia plurality and Kennedy opinions) a hydrological connection is the critical factor to consider in establishing a 'significant nexus' – that concept should be used consistently throughout the proposed rule. In fact

the agencies seem to understand the importance of this concept because in examining "adjacent waters" the agencies note that "[f]or waters outside of the riparian area or floodplain, confined surface hydrologic connections are the only types of surface hydrologic connections that satisfy the requirements for adjacency."[79] Hydrological factors should likewise be the critical factor to point to in making any 'significant nexus' determination and an overly broad proposed standard for a nexus in "other waters" determinations should be withdrawn and modified. (p. 19)

Agency Response: **The agencies agree that the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, but do not agree that a hydrologic connection is 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 these (a)(1) through (a)(3) waters. 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. The final rule contains 9 relevant factors to be used in case-specific significant nexus evaluations, which include physical, chemical, and biological functions of the water in question.**

Kentucky Farm Bureau (Doc. #14567.1)

4.127 The Agencies are asserting jurisdiction over areas of land where water flows in direct response to precipitation. In doing so, the Agencies are extending federal authority beyond streams and rivers to include any area of land w here rainfall and snow melt may flow. This blurs the distinction between nonpoint source runoff and jurisdictional water. (p. 3)

Agency Response: **The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary."**

As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. *See, e.g.*, SAB 2014b. These significant effects on traditional navigable waters, interstate waters, and the territorial seas occur even when the tributary is small, intermittent, or ephemeral.

[79] Id at 22,208.

National Corn Growers Association (Doc. #14968)

4.128 We have significant concerns about the lawfulness of designating remote, isolated "other" waters as WOTUS (see the discussion in Section III below). But should the agency move forward with this proposed approach to such isolated waters, we cannot stress enough how critical it is that the Agencies come up with more objective standards for determining the significant nexus between an isolated water or wetland and a downstream TNW. (p. 16)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. See Technical Support Document for the agencies' legal interpretation.**

See Agency Summary Response Essays 1, 4 and 5 See response 4.123 or 4.124 (Doc. #5843.1), 4.125 (Doc. #8674)

4.129 Lastly, in light of SWANCC and its rejection of the premise that isolated ponds could be WOTUS, we question the lawfulness of the proposed rule's treatment of the more remote and isolated "other" waters as possibly being WOTUS, case-by-case. Perhaps there are instances where their remoteness and isolation are not so great as to make it impossible for them to have a nexus integral or significant to the navigability characteristic of the TNWs. Almost by definition, though, these other waters fall into a class of features comparable to the feature in dispute in SWANCC. As such, we expect it would be highly unusual for one of these other waters to meet a significant nexus test, appropriately defined. (p. 21)

Agency Response: **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. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

The agencies disagree that the final rule would place all ditches, ephemeral drainages, natural or man-made ponds, seeps, flood plains, and other occasionally or seasonally wet areas under federal jurisdiction. The final rule narrowly defines waters that are *per se* jurisdictional and specifically excludes a subset of these water types, including ephemeral features that do not satisfy the definition of tributaries. When waters are not excluded and otherwise are not jurisdictional by rule, they may be analyzed under (a)(7) (if applicable) or, if they fall within the thresholds provided in (a)(8), they are subject a case specific analysis. See Agency Summary Response Essay 4.

National Pork Producers Council (Doc. #15023)

4.130 This same definition of "significant nexus" is, in turn, to be used under the proposed rule in the case-by-case determinations of what are WOTUS in the instances of the (a)(7) "other" waters that are remote and not considered "adjacent" to tributaries. In deciding to use this significant nexus definition, the Agencies explicitly discuss the decision not to develop objective measures to determine significance in the case of these "other" waters, saying that to do so would restrict the necessary flexibility needed to make site-specific decisions case by case.[80] (p. 5)

Agency Response: See Agency Summary Response Essays 1, 4. See response 4.128 or 4.129 (Doc. #14968) See Agency Summary Response Essays 1 and 5

National Alliance of Forest Owners (Doc. #15247)

4.131 There are numerous problems with the Agencies' approach to "other waters" in the proposed rule. First, as explained above in Part I.C, the assertion of jurisdiction over "other waters" is premised on the application of a "significant nexus" test that is deeply flawed. Second, the "other waters" category does not actually require a case-by-case analysis as the proposed rule suggests. Rather, the Agencies allow for the evaluation of similarly situated waters (not just wetlands, as Justice Kennedy directed[81]) within a watershed "as a group," and they will only undertake an analysis of a specific water body in isolation if they are unable to find "similarly situated" waters in the watershed.[82] The Agencies proclaim that evidence that an "other water" meets the "significant nexus" test does not have to "be specific to the water whose jurisdictional status is being evaluated," and can actually come from "regional and national studies of the same type of water" or a "'desktop' analysis."[83] Such studies or analysis is hardly case-specific. Third, the "significant nexus" test in the proposed rule incorporates vague concepts such as "single landscape unit" and "similarly situated," with very little guidance as to how they are to be applied.

Finally, the preamble to the proposed rule sets forth many physical, biological, and chemical connections that regulators can look to in determining whether there is a significant nexus.[84] It is unclear how many of these factors need to be present or how to determine whether the presence of one or more factors rises to the level of establishing a significant nexus. Of particular concern are the biological factors mentioned in the preamble: "resident aquatic or semi-aquatic species present in the 'other water' and the tributary system (e.g., amphibians, aquatic and semi-aquatic reptiles, aquatic birds);

[80] "The Agencies do not propose absolute standards such as flow rates, surface acres or a minimum number of functions for ''other waters'' to establish a significant nexus. A determination of the relationship of ''other waters'' to traditional navigable waters, interstate waters or territorial seas and, consequently, the significance to these waters requires sufficient flexibility to account for the variability of conditions across the country and the varied functions that different waters provide." (22198.)

[81] See 547 U.S. at 779-80 (concluding that wetlands should be deemed jurisdictional if they "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'") (emphasis added).

[82] See 79 Fed. Reg. at 22,211.

[83] Id. at 22,214.

[84] See id. at 22,213-14.

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 a reason to expect presence or dispersal around the 'other water,' and if so whether such dispersal extends to the tributary system or beyond or from the tributary system to the 'other water.'"[85]

This standard for identifying "other waters" based on a "significant nexus" expands the Agencies' jurisdiction beyond what is permissible under Justice Kennedy's significant nexus test. While Justice Kennedy recognized that the presence or absence of a hydrologic connection is not dispositive in determining a significant nexus, he made clear that there must be a connection to navigable waters. As Justice Kennedy explained, a significant nexus must be assessed in terms of the CWA's goals and purposes to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[86] Thus, a wetland could have a significant nexus to a navigable water even though it did not have a hydrologic connection "*in the sense of interchange of waters*," because its pollutant filtering, flood control, and runoff storage had a significant effect on the *aquatic system*.[87] Justice Kennedy never approved the finding of a significant nexus where there was no connection to waters of the U.S. In fact, throughout his opinion, Justice Kennedy makes clear that what is at stake is *downstream water quality*.[88]

Biological connectivity established by the residence and life-cycle dependency of aquatic species, however, has no bearing on a wetland's impact on downstream water quality. Indeed, aquatic species such as turtles and ducks can travel great distances and may use several waters across their life cycle that have no hydrologic connection at all. This test could result in isolated wetlands with no connection to navigable waters being deemed jurisdictional. In fact, this test could result in the assertion of jurisdiction over not just isolated wetlands, but virtually any waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. Designating an adjacent water "jurisdictional" based on biological connectivity alone overreaches and unlawfully expands the Agencies' CWA jurisdiction.

This new significant nexus test for isolated wetlands and "other waters" appears to reinstate the Agencies' pre-*SWANCC* jurisdiction and raises the same concerns. In *SWANCC*, the Supreme Court made it clear that CWA jurisdiction does not extend to "nonnavigable, isolated, intrastate waters."[89] The Court rejected the Corps' assertion of jurisdiction over "isolated ponds, some only seasonal . . . because they serve as habitat for migratory birds," while emphasizing that a ruling upholding the Corps' view would assume that the word "navigable" lacks any independent significance.[90] The Court went on to clarify that even if the statute were not clear on whether CWA jurisdiction extends

[85] Id. at 22,214.
[86] Rapanos, 547 U.S. at 779 (quoting 33 U.S.C. § 1251(a)).
[87] Id. at 786 (emphasis added).
[88] See, e.g., id. at 784 (requiring "some measure of the significance of the connection for downstream water quality").
[89] 531 U.S. at 168.
[90] Id. at 171.

to nonnavigable, isolated, intrastate waters, it would decline to affirm the Corps' interpretation of the statute because it "would result in a significant impingement of the States' traditional and primary power over land and water use."[91] In Rapanos, Justice Kennedy reinforced that where a nonnavigable water has "little or no connection" to a navigable water, "as exemplified in *SWANCC*," there is no basis for CWA jurisdiction.[92]

"Other waters" by their nature tend to be isolated, intrastate, nonnavigable waters. The proposed rule's approach to "other waters" sets the bar too low for the exercise of jurisdiction over these waters. This raises the same constitutional and federalism concerns expressed in *SWANCC*. Accordingly, we request that the Agencies eliminate the "other waters" category from the proposed rule. Waters that do not fall within one of the other categories of jurisdictional waters should not be subject to CWA regulation, as they are precisely the sort of isolated, nonnavigable waters with "little or no connection" to navigable waters that the Supreme Court has instructed should not be jurisdictional. Alternatively, the Agencies could establish a test for determining whether "other waters" have a "significant nexus" to jurisdictional waters, so long as the test is truly a case-specific inquiry and correctly applies the "significant nexus" concept from Supreme Court precedents. (p. 18-21)

Agency Response: **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. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

The final rule provides narrow definitions of waters that are covered *per se*. With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters

[91] Id. at 174.
[92] Rapanos, 547 U.S. at 767.

can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies also believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. We also believe that the view that certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings. While the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, 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 these (a)(1) through (a)(3) waters. 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 response 4.12 (Doc. #17921.1)

The agencies believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters. With respect to effect on biological integrity, See response 4.10 (Doc. #15161), 4.25 (Doc. #14569). To the extent the commenter infers that it is inappropriate to use of geographic information system from generally recognized sources, remote sensing, and scientific literature as part of a significant nexus analysis, the agencies disagree. The agencies long have utilized many tools and many sources of information, including U.S. Geological Survey (USGS) and state and local topographic maps, aerial photography, soil surveys, watershed studies, scientific literature and references, and field work. For example, USGS and state and local stream maps and datasets, aerial photography, gage data, watershed assessments, monitoring data, and field observations are often used to help assess the contributions of flow of tributary streams, including intermittent and ephemeral streams, to downstream traditional navigable waters, interstate waters or the territorial seas. Similarly, floodplain and topographic maps of federal, state and local agencies, modeling tools, and field observations can be used to assess how wetlands are trapping floodwaters that might otherwise affect downstream waters.

With regard to the agencies' interpretation of the Supreme Court rulings in SWANNC and Rapanos, see Technical Support Document, section I.

Union County Cattlemen (Doc. #15261)

4.132 The science provided did not stratify the types of manuscripts and information being used. It certainly does not support the explanations in the register notice, which are not written in a clear manner. The caselaw referred to is a stretch as the rule interprets what the case opinions already interpreted to be consistent with law. The jurisdictional scope

of the CWA is limited to "navigable waters," defined in the CWA as "the waters of the United States, including the territorial seas." 33 U.S.C. §1362 (7).

Before the CWA was enacted, the Supreme Court interpreted the phrase "navigable waters of the United States" as it was used in statutes preceding the CWA to refer to waters that are "navigable in fact" or readily susceptible of being rendered so. See Rapanos v. United States, 547 U.S. 715, 723 (2006) (citing The Daniel Ball, 77 U.S. 557, 563 (1870); United States v. Appalachian Elec. Power Co., 311 U.S. 377, 406 (1940)). Furthermore, cases have referred to "navigable waters of the United States" to mean rivers or waterway, i.e., flowing streams and not ephemeral or intermittent drainages. State and local governments are better suited to regulate for clean water and are doing just that. Federal interference within these proposed rules will harm small businesses, the agriculture industry and many of our members and producers. (p. 2-3)

Agency Response: **The Supreme Court has recognized that Congress, in enacting the CWA in 1972, "intended to repudiate limits that had been placed on federal regulation by earlier water pollution control statutes and to exercise its powers under the Commerce Clause to regulate at least some waters that would not be deemed 'navigable' under the classical understanding of that term." *Riverside Bayview Homes,* 474 U.S. 121, 133 (1985); *see also International Paper Co. v. Ouellette,* 479 U.S. 481, 486, n.6 (1987). The distinction between traditional navigable waters as historically defined and the "waters of the United States" to which the CWA extends consistently has been acknowledged by nearly every court to consider the issue, including the Supreme Court in *Riverside Bayview Homes, Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers,* 531 U.S. 159 (2001) ("*SWANCC*"), and *Rapanos v. United States,* 547 U.S. 715 (2006). See the Technical Support Document, section I for the agencies' legal analysis; see the Science Compendium.**

Beet Sugar Development Foundation (Doc. #15368)

4.133 The proposed rules would extend CWA jurisdiction over all "other waters" that have a "significant nexus" to "waters of the United States."[93] Although this language appears to track that of Justice Kennedy's concurrence in Rapanos, the proposed rules go beyond the confines of Justice Kennedy's narrow holding.[94] The proposed rule applies the "significant nexus" test to all "other waters."[95] But the facts of Rapanos limit the applicability of Justice Kennedy's "significant nexus" test to wetlands.[96] Although Justice Kennedy might approve of applying his test to "other waters," the Rapanos

[93] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22263.
[94] Compare id. (proposing the "significant nexus" test for all other waters of the United States), with Rapanos, 547 U.S. at 780 (Kennedy, J., concurring) (applying the "significant nexus" test to only wetlands).
[95] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22263.
[96] See Rapanos, 547 U.S. at 759 (Kennedy, J., concurring) (framing the question before the court as "whether the term 'navigable waters' in the Clean Water Act extends to wetlands that do not contain and are not adjacent to waters that are navigable in fact."); id. at 779 ("[T]he Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense." (emphasis added)); id. at 780 ("Accordingly, wetlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters,' if the wetlands . . . ." (emphasis added)).

plurality did not endorse the "significant nexus" test and would not do so when applied to "other waters." The proposed rule expands CWA jurisdiction to all "other waters" without indication that the Supreme Court would approve of such an expansion. (p. 14)

Agency Response: **The rule is appropriately premised on the significant nexus standard as articulated by Justice Kennedy. 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." As set forth in greater detail in the Technical Support Document, all U.S. Courts of Appeal and virtually all U.S. District Courts that have applied *Rapanos* have held that Justice Kennedy's standard may be applied to identify jurisdictional waters. With respect to Justice Kennedy's reference to similarly situated "lands," based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos,* Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. While Justice Kennedy's discussion of the application of the significant nexus standard 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." *Id*. at 767 (emphases added). Fundamentally, Justice Kennedy's significant nexus analysis is about the fact, long-acknowledged by Supreme Court caselaw, that protection of waters from pollution can only be achieved by controlling pollution of upstream waters. It would be inconsistent with Justice Kennedy's opinion as a whole, science, and common sense to apply Justice Kennedy's significant nexus standard to wetlands adjacent to tributaries and not to the tributaries themselves.**

See the Technical Support Document, section I.

Peltzer & Richardson, LC (Doc. #16360)

4.134 In addition, if there is any place at all for an "other waters" rule, it should contain a nexus to interstate commerce. The current proposed rule eliminates this connection, and is subject to invalidation as a result. Only chemical, physical, or biological impacts that have a demonstrable effect on navigable waters should be considered "significant" in the meaning of the Clean Water Act jurisdiction. This could be cured by including an impact on interstate commerce as an element of the "significant nexus" definition. (p. 4)

Agency Response: See Agency Summary Response Essays 11. See reponse 4.94 (Doc. #16393), 4.128 or 4.129 (Doc. #14968). All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document.

Glenn-Colusa Irrigation District (Doc. #16635)

4.135 The "other waters" category is the first time the Proposed Rule explicitly references Justice Kennedy's significant nexus test. Notwithstanding it being a proper standard for jurisdiction, the Agencies fail to properly apply it. Here, after asserting by rule jurisdiction over traditional navigable waters, tributaries, adjacent waters, neighboring waters, riparian areas, and floodplains, the Agencies concede that certain waters remain outside the definition of WOTUS for which the Proposed Rule cannot assert jurisdiction. In these cases, the Proposed Rule would apply the significant nexus test to determine whether jurisdiction is proper. However, the Agencies' intent to apply the significant nexus test on a regional or watershed or ecosystem level to determine whether a significant chemical, physical, or biological standard exists strains all logic when read in the context of *Rapanos*.

The Agencies should not be allowed to apply either the relatively permanent test or the significant nexus test on a regional-watershed-ecoregion level where, in *Rapano*s, the Court intended both standards to restrict CWA jurisdiction. For example, in *Rapano*s, Justice Kennedy applied the significant nexus test to a pair of wetlands, each with an alleged separate and distinct connection to a more traditional navigable water, to determine whether the Corps' claim that the wetlands at issue provided critical functions related to the integrity of other waters was sufficient to assert CWA jurisdiction. In both instances, Justice Kennedy determined jurisdiction was not proper, finding that the wetlands' effects – argued to be sufficient for purposes of the significant nexus test – were too speculative and insubstantial to confer jurisdiction. Here, the Agencies must be held to the same standard. Thus, the Proposed Rule should not allow the Agencies to assert jurisdiction at a regional-watershed-ecoregional level without first demonstrating that the hydrologic connection, or chemical, physical, or biological effect between certain "other waters" and more traditional navigable waters is in fact certain or substantial.[97] (p. 7)

[97] Rapanos, 547 U.S. at 732.

Agency Response: **To the extent the commenter asserts Justice Kennedy applied the significant nexus standard to the waters at issue in *Rapanos,* the commenter is mistaken. Justice Kennedy joined the narrow majority decision to remand the case to the appellate court to consider the record in light of the Supreme Court's decisions in *Rapanos.* With respect to the remainder of the comment, See Agency Summary Response Essays 1, 5, 6, 7, 8. See Significant Nexus Compendium**

Association of American Railroads (Doc. #15018.1)

4.136 The proposed rule uses a new "fill and spill" concept to establish jurisdiction over "wetlands and open waters" that "fill" during heavy rain events and "spill" downgrade into a jurisdictional water. 79 Fed. Reg. 22,188, 22,208. This establishes almost limitless jurisdiction over any waters which may spill into jurisdictional waters during a flood event, including rail ditches and other currently non-jurisdictional, isolated water bodies, depressions in rail yards or upland areas. The Agencies do not provide any limiting principle for "fill and spill" jurisdiction, leaving open the possibility that a one-time flood event could create permanent CWA jurisdiction over an isolated water body that would, on its own, never be considered a Water of the United States. The "fill and spill" concept could even impact systems that would be covered under the waste treatment exception, such as designed biodetention systems or surface impoundments, because they could "fill" and "spill" into a jurisdictional water. (p. 12-13)

Agency Response: **The rule definition of "tributary" is narrow and requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." To the extent the commenter refers to those portions of the rule that identify neighboring waters, the proposal defined "neighboring" to include, among other things, waters with a surface connection to jurisdictional waters, which included "fill-and-spill connections," and some commenters recommended eliminating surface hydrologic connectivity as a basis for adjacency. The definition of neighboring in the final rule does not include a provision defining "neighboring" based on a surface hydrologic connection, but instead provides specific distance thresholds. Similarly the only waters subject to case-specific significant nexus determinations are those that fall within the types identified in (a)(7) or the threshold in (a)(8).**

In the final rule, the agencies provided clear and explicit exclusions for a variety of non-jurisdictional features, including erosional features, water treatment systems, puddles, certain types of ditches and water-filled depressions.

Union Pacific Railroad Company (Doc. #15254)

4.137 As if the Proposed Rule's other categories were not sufficiently expansive, the Agencies also seek to assert jurisdiction over "other waters" to capture features that are "similarly

situated" and "in the same region" as a jurisdictional water but which do not fit the other categories and are not expressly excluded. See 79 Fed. Reg. 22,211, 22,263. Each of these terms is vague and subject to differing interpretations. Moreover, the Agencies' explanation that "other waters" are "similarly situated" if 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" amounts to circular reasoning and injects more uncertainty. See 79 Fed. Reg. 22,263. Again, the Proposed Rule's assertion of jurisdiction over "other waters" is also contrary to *SWANCC* and *Rapanos*.

The Proposed Rule's assertion of jurisdiction based on "adjacent waters" and "other waters" is directly contrary to both the *Rapanos* plurality opinion and Justice Kennedy's concurring opinion, confusing and overbroad, and constitutes an impermissible attempt to expand CWA jurisdiction. The Agencies may not use this rulemaking to assert CWA jurisdiction over waters that the Supreme Court has ruled to be beyond their statutory and constitutional authority. (p. 21)

Agency Response: **See Agency Summary Response Essays 1, 4, 14, 13, 15.**

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

4.138 The proposed rule ignores the clear holding of the *SWANCC* decision that isolated, non-navigable ponds should be excluded from the WOTUS definition. *SWANCC* at 172. Instead, the proposed rule attempts to consolidate these waters with other "similarly situated waters" or look to an entire watershed to cobble together a significant nexus in order to justify conferring federal jurisdiction over these waters. 79 Fed. Reg. 22210-22215. Waters that do not have jurisdiction alone should not be found to be jurisdictional merely by artificially combining them with other non-jurisdictional waters.[98] While State and local authorities may choose to focus regulation on a watershed level to achieve economies of scale or allow for trading programs to address non-point sources of pollution not directly regulated by the CWA, these activities do not warrant federal control over what would otherwise be non-navigable, intrastate waters. The rule should take a jurisdictional step backwards to the scope of the Army Corps' original regulations under the Act, which extended only to those waters and adjacent "wetlands" that were part of or directly connected to navigable waters. (p. 8-9)

Agency Response: **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. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases**

[98] See U,S. v. Morrison, 529 U.S. 598 (although not directly on point, this case discussed the impropriety of using aggregation to establish a substantial connection to interstate commerce),

meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document

The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies also believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. We also believe that the view that certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings. While the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, 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 these (a)(1) through (a)(3) waters. 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.

The agencies believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters. The rule is appropriately premised on the significant nexus standard as articulated by Justice Kennedy. 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." As set forth in greater detail in the Technical Support Document, all U.S. Courts of Appeal and virtually all U.S. District Courts that have applied *Rapanos* have held that Justice Kennedy's standard may be applied to identify jurisdictional waters. With respect to Justice Kennedy's reference to similarly situated "lands," Based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos,* Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759.

Clearwater Watershed District, et al. (Doc. #9560.1)

4.139 We believe that the proposed rule does nothing to clarify the jurisdiction of "other waters" from the muddled bureaucracy that already plagues this issue . Per the rule, "[t]he support for a determination that the nexus is significant will be based on a record that documents the scientific basis for concluding which functions are provided by the waters and why their effects on a traditional navigable water, interstate water, or the territorial seas are significant, including that they are more than speculative or insubstantial. The rule does not identify the "gradient" it refers to nor does it clarify how the point of "significant nexus" is calculated. Additionally, the rule provides no test for the regulated community to evaluate which "functions" will be relevant to development of the record used to document the scientific basis. (p. 9)

Agency Response: The agencies modified the proposed "other waters" category, creating two categories which allow for case specific analysis for to specific types of waters or those within a threshold. The waters subject to case specific analysis are limited by type in (a)(7) and by location in (a)(8). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. The final rule states that an

evaluation of the functions provided by the water must be conducted in order to demonstrate a significant nexus with (a)(1) through (a)(3) waters. The final rule lists nine functions relevant to the physical, chemical, and biological significant nexus, one of which is "provision of life cycle dependent aquatic habitat." The preamble highlights that streams, wetlands, and open waters provide life-cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, and use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas. Many species require different habitats for different resources (e.g., food, spawning habitat, overwintering habitat), and thus move throughout the river network over their life-cycles. At the core of the "significant nexus" analysis, the protection of upstream waters must be critical to maintaining the integrity of the downstream waters. These upstream waters function as integral parts of the aquatic environment, and if these waters, alone or in combination with similarly situated waters in the region, are polluted or destroyed there is a significant effect downstream. For a discussion of how the agencies assess the significance of the nexus in terms of the CWA's objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" see response 4.54 (Doc. #15538). 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 and more than speculative and insubstantial. See Technical Support Document for a further discussion of the agencies' interpretation of the significant nexus standard and when a nexus is neither speculative nor insubstantial

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble

By limiting the application of the case specific determination and providing more detail regarding the definition of significant nexus in the rule, which includes listing the specific functions that can be considered in the analysis, the agencies believe individual regulators who conduct the analysis have clear and consistent parameters to consider during their review in making case specific jurisdictional determinations. This in turn provides transparency to the regulated public over which factors will be considered.

Duke Energy (Doc. #13029)

4.140 Duke Energy is concerned that the proposed rule allows non-jurisdictional features, that are explicitly excluded from the "waters of the United States" definition, to be used as connections for the purposes of establishing jurisdiction over "adjacent" and "other waters." As stated in the Preamble, "even when not jurisdictional waters, these non-wetland swales, gullies, rills and specific types of ditches may still be a surface hydrologic connection for purposes of the proposed definition of adjacent under paragraph (a)(6) or for purposes of a significant nexus analysis under paragraph (a)(7)."[99]

[99] Id.

In addition to non-jurisdictional erosional features and certain ditches, the agencies state that shallow subsurface water or groundwater can also be used to establish a connection to determine jurisdictional adjacent or other waters.[100] The agencies state that "[s]hallow subsurface connections are distinct from deeper groundwater connections, which do not satisfy the requirement for adjacency."[101] However, this raises further questions on the extent of "shallow subsurface connections." Where do "shallow subsurface connections" end and deeper groundwater connections begin? Who makes this determination and with what criteria?

To add to the confusion, the agencies also state "[w]ater does not have to be continuously present in the confined surface or shallow subsurface hydrologic connection and the flow between the adjacent water and the jurisdictional water may move in one or both directions."[102] How can it be proven that a shallow subsurface connection doesn't exist if water doesn't even need to be present? Who has the burden of proof to determine whether a connection exists or not? Once again, this leaves open the possibility of subjective interpretations allowing jurisdiction to be established far beyond historical determinations creating liability and permitting obligations not previously required.

The use of non-jurisdictional connections, including groundwater, to establish adjacency or a significant nexus has no limits. The proposed rule essentially allows for all waters to be deemed jurisdictional based on these connections. This is, again, similar to the "any hydrological connection" theory rejected in Rapanos and hardly clarifies jurisdiction. Duke Energy recommends that the agencies eliminate the use of excluded features and waters as a basis for connections to establish further jurisdiction. (p. 49-51)

Agency Response: The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium.

North Dakota EmPower Commission (Doc. #13604)

4.141 The Court's rationale in SWANCC for rejecting jurisdiction over non-navigable isolated waters was reaffirmed in Justice Kennedy's Rapanos concurrence. Based on this clear guidance from the Court, EmPowerND believes that the agencies' proposed regulation over "other waters" should be excluded from the rule. (p. 7)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. See response

[100] Id. at 22,208.
[101] Id.
[102] 79 Fed. Reg. at 22,208

4.133 (Doc. #15368). For a discussion of the agencies interpretation of the caselaw, see Technical Support Document at Section I.

Murray Energy Corporation (Doc. #13954)

4.142 We note that this radical departure from the established meaning of connectivity appears to be premised on a misinterpretation of one isolated statement by Justice Kennedy in his Rapanos concurrence. Unfortunately, the Agencies have failed to read this particular statement in its appropriate context and thus misinterpret its meaning.

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 functional relationship to the traditional navigable water, interstate water or the territorial seas. These functional relationships include retention of flood waters 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 the interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme").

Proposed Rule at 22213. The Agencies fail to note that Kennedy's comment here was made in response to the plurality's argument as to why wetlands adjacent to TNWs, but separated by a manmade berm, may still have a significant nexus to TNWs and thus be subject to the Corps' regulations. See 547 U.S. at 775. Justice Kennedy was highly skeptical of and rejected the plurality's "any hydrological connection" test, opining that a hydrological connection alone would be inadequate in some cases to assert jurisdiction (". . . mere hydrologic 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.") Id. at 784-785. Justice Kennedy never concluded that jurisdiction as a general matter could be broadly asserted in the absence of hydrologic connection. Rather, Justice Kennedy specifically called into question the Corps' overly broad proposed definition of jurisdictional tributaries, i.e., those that "feed[] into a traditional navigable water (or tributary thereof) and possess an ordinary high-water mark," arguing that such as expansive definition could in fact reach tributaries that lacked significant nexus. Id. at 781 ("Yet the breadth of this standard – which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water-volumes towards it – precludes its adoption as the determinative measure . . ."). In sum, the Agencies' misreading of Supreme Court precedent leads us to conclude that this particular approach to defining jurisdiction over "other waters" is fatally flawed. (p. 17)

Agency Response: See Agency Summary Response Essays 1, 4, 13, 15. See response 4.128 or 4.129 (Doc. #14968), 4.133 (Doc. #15368). For a discussion of the agencies' interpretation of the caselaw, see Technical Support Document Section I

Florida Electric Power Coordinating Group, Inc. (Doc. #13993)

4.143 Also problematic is the fact that EPA has chosen to propose expanding the meaning of Justice Kennedy's concurring opinion. In the preamble statement EPA and the Corps admit that Justice Kennedy's significant nexus standard applied specifically to wetlands, and then go on to assert that "it is reasonable to utilize the same standard" for non-

wetland waters. 79 Fed. Reg. at 22,204, 22,209, 22,212. But EPA and the Corps do not articulate an adequate explanation identifying why it would be reasonable to extend CWA jurisdiction categorically to non-wetland waters; in many cases other types of waters typically will not serve the same functions (for traditional navigable waters) as wetlands. (This is especially true of waste treatment systems.) Indeed, the plain language of Justice Kennedy's concurrence and later case law interpreting the significant nexus concept demonstrate that the concept should not be applied categorically to other waters. (p. 3-4)

Agency Response: **See response 4.100 (Doc. #9615), 4.133 (Doc. #15368). The agencies note that the final rule continues the historic exclusion of wastewater treatment systems designed consistent with the CWA.**

Southern Nevada Water Authority (Doc. #14580)

4.144 While "other waters" may provide a potential benefit to, and may even be critical to, the life cycle of non-aquatic species such as mammals and birds, for assertion of CWA jurisdiction through biological connection there must be a potential effect on the biological integrity of a traditional WOTUS. It is unlikely such effect on the biological integrity of a traditional WOTUS could result from simple use of "other waters" by non-aquatic species such as mammals and birds. SNWA recommends the Proposed Rule clearly identify that for the purposes of determining CWA jurisdiction, biological connectivity determinations must demonstrate an effect on the biological integrity of a traditional WOTUS. SNWA also recommends biological connectivity evaluations be limited to consideration of aquatic and semi-aquatic organisms, including fish, amphibians, and invertebrates, which use both upstream and downstream waters during critical life stages, and that non-aquatic species such as mammals and birds are not evidence of biological connectivity for purposes of CWA jurisdiction, regardless of their life cycle dependency on the identified aquatic resource. (p. 4)

Agency Response: **In order to add clarity to the definition of significant nexus, the agencies have listed in the definition the functions that will be considered in a significant nexus analysis. 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) in order to have a significant nexus. The final rule makes clear that 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 identified in paragraphs (a)(1) through (3). 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 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 a traditional navigable water, interstate water, or the territorial sea. Case-specific determinations of significant nexus require (a)(7) or (a)(8) waters to be evaluated either alone, or in combination with other similarly situated waters in the region. The agencies' definition of significant nexus is based upon the language in *SWANCC* and *Rapanos*. The**

definition is also consistent with current practice, where field staff evaluate the functions of the waters in question and the effects of these functions on downstream waters. See Agency Summary Response Essay 10.

4.145 The Proposed Rule identifies that evidence of chemical connectivity can be found by identifying "whether the properties of the water in question are similar or dissimilar" (79 FR 22214). These terms are vague, and could lead to confusion and different interpretations. SNWA recommends the terms similar or dissimilar be defined and examples provided. SNWA also recommends the Proposed Rule clearly state that determinations of chemical connectivity must show an effect of the "other waters" on the chemical integrity of a traditional WOTUS. (p. 4)

Agency Response: The final rule has been modified to list 9 specific functions to be used in significant nexus evaluations. This list includes several functions relevant to chemical connectivity which contribute significantly to the integrity of the nearest (a)(1) through (a)(3) waters, including "sediment trapping", "nutrient recycling", and "pollutant trapping, transformation, filtering, and transport". The chemical effects that case-specific waters have on downstream waters are linked to their hydrologic connection downstream, though a surface connection is not needed for a water to influence the chemical integrity of the downstream water. Because the majority of case-specific waters are hydrologically connected to downstream waters via surface or groundwater connections, most case-specific waters can affect water quality downstream (although these connections do not meet the definition of adjacency). Whigham and Jordan 2003 at 542. Case-specific waters can act as sinks and transformers for nitrogen and phosphorus, metals, pesticides, and other contaminants that could otherwise negatively impact downstream waters. Science Report at 5-30 (citing Brooks *et al.* 1977; Hemond 1980; Davis *et al*. 1981; Hemond 1983; Ewel and Odum 1984; Moraghan 1993; Kao *et al*. 2002; Boon 2006; Dunne *et al*. 2006; Jordan *et al*. 2007; Whitmire and Hamilton 2008). Also *see, e.g.,* Isenhart 1992. The body of published scientific literature and the Science Report indicate that sink removal of nutrients and other pollutants by case-specific waters is significant and geographically widespread. Science Report at 5-30. Water quality characteristics of case-specific waters are highly variable, depending primarily on the sources of water, characteristics of the substrate, and land uses within the watershed. Whigham and Jordan 2003 at 541. These variables inform whether a case-specific water has a significant nexus to an (a)(1) through (a)(3) water. In addition, where there is a hydrologic connection, waters may provide a source of freshwater dilution to downstream waters, reducing instream concentration of pollutants. The Agencies believe this change provides the necessary specificity in chemical connectivity.

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

4.146 The key terminology used in the definition of "significant nexus," such as "similar functions," "sufficiently close," and "the functions performed (by waters)" is vague, creating the potential for confusion rather than providing clarity. Metropolitan is concerned about how these terms will be applied in the arid west, and about the reliance on the discretion of individual regulators in interpreting these vague standards. For

example, a 2004 GAO Report noted significant inconsistencies among Corps districts in identifying what waters are subject to CWA jurisdiction. GA0-04-297, at 3-4. If it is the intent of the Agencies to provide the details of determining jurisdiction for "other waters" in technical manuals and Regional Guidance Letters, then Metropolitan again requests that these documents be circulated for public review and comment prior to their implementation and use and before the proposed rule is finalized. (p. 13)

Agency Response: The agencies believe the rule provides greater clarity regarding which waters are subject to CWA jurisdiction, reducing the instances in which permitting authorities, including the states and tribes with authorized section 402 and 404 CWA permitting programs, to make jurisdictional determinations on a case-specific basis. In the final rule, the agencies established case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). The final rule has been modified to list 9 specific functions to be used in significant nexus evaluations. These changes coupled with additional exclusions, reflect the agencies' intent to cover waters with significant effect on an (a)(1) through (a)(3) water.

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble and for reasons stated in the previous paragraph believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters. See Agency Summary Response Essays 1, 5, 6, 8.

While the agencies may in the future develop additional technical guidance, the agencies believe the rule, together the the preamble and Technical Support Document provide sufficient clarity to allow implementation. See Agency Summary Response Essay 5. The final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule.

Arizona's Generation & Transmission Cooperatives (Doc. #14901)

4.147 This approach is not consistent with the concept of "significant nexus" put forth in Justice Kennedy's concurring opinion in the *Rapanos* case. In that opinion, Justice Kennedy noted that "remote," "insubstantial," "speculative," or "minor" features or flows do not rise to the level of having a significant nexus with downstream TNWs. Justice Kennedy recognized that, in order to give the term "navigable" (as in "navigable waters") meaning, one must acknowledge that there are surface water features that are so small, so remote, or provide such negligible flow that they cannot be considered waters of the U.S. and are thus beyond the scope of federal jurisdiction.

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: The Agencies acknowledge there are surface water features that cannot be considered waters of the United States. Aside from explicitly listing waters not considered jurisdictional, the final rule establishes case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). These changes coupled with additional exclusions, reflect the agencies' intent to only cover waters with significant effect on an (a)(1) through (a)(3) water.

The 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 to reflect the consideration for the body of science that exists. 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 and more than speculative and insubstantial.

It is important to note that many ephemeral waters listed are jurisdictional under current regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. The agencies have historically regulated of ephemeral waters is under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime. See Agency Summary Response Essays 3, 6, 13, 15. See response 4.127 (Doc. #14567.1)

Association of American Pesticide Control Officials (Doc. #14940)

4.148 AAPCO recognizes that the CWA is not a cost benefit statute, as is FIFRA. However, the water quality standards and discharge permits used to implement the CWA are not zero-tolerance regulatory mechanisms. Therefore, AAPCO recommends that EPA and the Corps develop a mechanism to utilize the loading potential of land areas or practices to waters rather than the arbitrary and expanded narrative definition of waters in the proposed WOTUS Rule as the basis for including or excluding waters from CWA jurisdiction. (p. 3)

Agency Response: Water quality standards and discharge permit conditions are beyond the scope of this rule. This rule does not change the implementation of the CWA. The agencies disagree with the approach based on the loading potential of land areas or practices.

American Public Power Association (Doc. #15008)

4.149 **The Proposed Rule Impermissibly Regulates Isolated Features as "Other Waters."**

The agencies' proposed "other waters" category is designed to capture any wet feature that cannot be found jurisdictional under the "tributary" or "adjacent water" categories. Under the proposed rule, the agencies will assert jurisdiction over "other waters, including wetlands," that "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 territorial sea. 79 Fed. Reg. at 22,263. The proposed rule suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, as long as they "perform similar functions" and are located "sufficiently close" to a water of the U.S. to allow them to collectively function together. 79 Fed. Reg. at 22,213. This interpretation stretches the concept of "similarly situated" beyond reason and would allow the agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assert jurisdiction.

The agencies' proposal for "other waters" is overbroad, ambiguous, and confusing. Without question the provision is meant to assert jurisdiction over isolated waters, such as industrial ponds, impoundments, and other similar formations for their operations, that have little or no connection to traditional navigable waters. The Supreme Court has also determined such isolated waters are not within the agencies' authority to regulate under the CWA. For these reasons, APPA recommends the elimination of the proposed provision. (p. 7)

Agency Response: See Agency Summary Response Essays 1, 13, 15, 8. See response 4.128 or 4.129 (Doc. #14968)

Utility Water Act Group (Doc. #15016)

4.150 The latter option for demonstrating a significant nexus, whereby "other" waters' effects are considered in combination (i.e., through aggregation), is especially broad and undefined, as the Proposed Rule does not define "single landscape unit." Proposed 33 C.F.R. § 328.3(c)(7), 79 Fed. Reg. at 22,263 col. 3 (using but not defining the term "single landscape unit"). Presumably the term is broader than floodplain or riparian area, since waters within the same floodplain or riparian area meet the definition of "adjacent" waters. It appears that, for purposes of "adjacent" waters and "other waters," the Agencies believe that both surface flows (e.g., ditches) and subsurface flows (e.g., groundwater) can serve as evidence of jurisdiction. 79 Fed. Reg. at 22,208 col. 3, 22,216 col. 1, 22,219 col. 3. (p. 42-43)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The agencies also have clarified which waters could be considered similarly situated for purposes of (a)(8). As set forth in the Preamble to the final rule, 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.

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. The agencies have provided revised and expanded definitions within the rule and the preamble that they believe provide the desired clarity. The comment is correct in that both surface and shallow subsurface flows are factors to be considered in case-specific analysis of significant nexus.

4.151 The Proposed Rule's reliance solely on Justice Kennedy's "significant nexus" test is inconsistent with Marks, would inappropriately elevate a single Justice's concurring opinion (not joined in the holding by any other Justice) to the supreme law of the land, reflects a broader interpretation of CWA jurisdiction over many waters than the plurality

opinion in *Rapanos* would allow, and is otherwise unlawful. The Proposed Rule goes far beyond even Justice Kennedy's significant nexus concept. For example, Justice Kennedy applied the concept to wetlands, not waters generally as the Proposed Rule would do. Furthermore, Justice Kennedy rejected the Agencies' notion of a tributary (as a water with an ordinary high water mark that flows into a traditional navigable water or tributary thereof) to determine CWA jurisdiction because of "the breadth of this standard – which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it . . . ." *Rapanos*, 547 U.S. at 781. Yet the Proposed Rule would reach many ditches and streams that are remote from navigable-in-fact waters, carry only minor water volumes, or both. (p. 43-44)

Agency Response: See Agency Summary Response Essays 4, 13, 15. See Features and Waters Not Jurisdictional Compendium and Ditches Compendium

4.152 The Agencies' reliance on case-by-case determinations and the exercise of discretion and judgment to determine CWA jurisdiction will come at great expense and is completely contrary to one of the stated goals of this Proposed Rule, which is to "make the process of identifying 'waters of the United States' *less complicated and more efficient*." 79 Fed. Reg. at 22,190 col. 3 (emphasis added). Instead, reliance on subjective criteria will enable the Agencies to continue to make inconsistent (and unfair) determinations of jurisdiction, *see supra* pp. 25-26, potentially even causing the jurisdictional status of a single feature to change over time. (p. 54-55)

Agency Response: The 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 to reflect the consideration for the body of science that exists. 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 and more than speculative and insubstantial. See Agency Summary Response Essays 2.

4.153 While the Draft Connectivity Report provides an overall discussion of how gradients of connectivity vary spatially (e.g., across biomes) and temporally (e.g., seasonal fluctuations), the Proposed Rule proposes no objective measures or parameters of how frequency, magnitude, and duration are to be evaluated in the "nexus test." Rather, the Agencies (besides the "other water" category, of which a site-specific assessment is allowed) categorically define all surface water and groundwater linkages as establishing a "significant nexus," thus triggering CWA jurisdiction. (…)

Those waterbodies categorized as having a significant nexus carte blanche do not, in fact, represent predictable, "in equilibrium" ecosystems. But, since the Agencies offered no measures of connectivity significance (see discussion above), the reader is led to believe that all waters are in a perpetual state of "stasis." It is UWAG's opinion that most aquatic systems are shaped by stochastic, rather than deterministic, processes:

> Depending on which variables one uses to evaluate equilibrium and over what spatiotemporal scales, many if not all natural rivers exist in a non-equilibrial or perhaps quasi-equilibrial state. . . . Ecologists could reasonably question whether

> river networks can ever achieve true equilibrium because they are open systems subject to major hydrological variations over several temporal scales which introduce substantial stochasticity within and amongst patches.

Thorp et al. (2006)[103] at 134.

If lotic waters are truly shaped by stochastic rather than deterministic dynamics (as Thorp et al. argue), then the frequency, magnitude, and duration of those factors affecting connectivity should be important in determining whether, and if so how, upstream waters influence the chemical, physical, and biological attributes of downstream or down-gradient reaches. In studying benthic fish species in a Minnesota stream, Coon (1987)[104] reported that the survival, age structure, and recruitment of most species studied were heavily influenced by the timing and extent of disturbance events (stream discharge extremes):

> Thus the benthic fishes of these streams may be thought of as being disturbance specialists. Each species is vulnerable to environmental extremes, but the timing and the type of extremes may determine which species is most strongly affected in a given year. . . . Such observations support the hypothesis that the factors regulating stream-fish populations range over a gradient from variable, disturbance-regulated to stable populations regulated by resource limitation and interspecific interactions.

Id. at 84-85.

Regarding geographically isolated wetlands, Golden et al.[105] state that " [t]hese systems are inherently complex and seasonally variable," Id. at 191, and "are influenced by a combination of surface, near surface, and groundwater processes . . . ," id. at 202. In discussing non-navigable streams and adjacent wetlands (NNSAWs) – waterbody types that EPA has categorically deemed to have a significant nexus in the Proposed Rule – Leibowitz et al. (2008)[106] state that:

> The importance of connections between NNSAWs and navigable waters to the integrity of navigable waters typically varies with landscape setting, watershed characteristics, and stream network characteristics. . . . Significant nexus is more complex than hydrological permanence. It involves not only the hydrological characteristics of the NNSAW, but its physical, chemical, and biological attributes.

Id. at 366-67.

[103] James H. Thorp et al., The Riverine Ecosystem Synthesis: Biocomplexity in River Networks Across Space and Time, 22 RIVER RES. & APPLICATIONS 123 (2006).
[104] Thomas G. Coon, Responses of Benthic Riffle Fishes to Variation in Stream Discharge and Temperature, in COMMUNITY AND EVOLUTIONARY ECOLOGY OF NORTH AMERICAN STREAM FISHES 77 (W.J. Matthews et al. eds, 1987).
[105] Heather E. Golden et al., Hydrologic Connectivity Between Geographically Isolated Wetlands and Surface Water Systems: A Review of Select Modeling Methods, 53 ENVTL. MODELING & SOFTWARE 190 (2014).
[106] Scott G. Leibowitz et al., Non-Navigable Streams and Adjacent Wetlands: Addressing Science Needs Following the Supreme Court's Rapanos Decision, 6 FRONTIERS ECOLOGY & ENV'T 364 (2008).

LaBaugh et al. (1998)[107] reviewed the scientific literature on prairie wetlands with an emphasis on hydrological functions. Regarding the variety of functions, the authors state:

> Prairie-pothole or slough wetlands are depressional wetlands that can store surface water, recharge ground water, be a source of water to the atmosphere, and provide an aquatic environment for wetland organisms. These all are examples of the hydrologic functions of prairie pothole wetlands.

Id. at 18.

The authors also state that the water balance of these wetlands can vary geographically while important region-specific factors are bedrock and soil type, climate, and connectivity with groundwater. The authors conclude, however, that atmospheric exchange is the most important process regarding water fluxes for most of these wetlands:

> Existing studies of hydrologic processes in prairie wetlands have found that atmospheric deposition, evaporation and transpiration are the major components of the water balance of the wetlands. . . . Although groundwater may have a small role in the water balance of these wetlands, interaction with groundwater helps to define the hydrologic function of these wetlands.

Id. at 22 (citations omitted).

The magnitude of flow variability (and thus the magnitude of hydraulic connectivity) is a factor that strongly affects the structure and function of biotic communities. Thoms (2006)[108] states:

> It is thought that contrasting states of flood and drought result in periods of high and low connection and this strongly influences the composition of aquatic communities. . . . Strong associations between the measures of flow variability and the assemblage composition of the four [Australian] rivers were found, suggesting that flow variability and, therefore, variable levels of habitat connectivity may be strong determinants of broad scale assemblage composition in dryland rivers.

Id. at 119. In the Proposed Rule, the Agencies offer no comprehensive discussion of how measures of flow variability affect biotic assemblages in watersheds.

The Agencies, seemingly, simply chose to disregard the parameters of frequency, magnitude, and duration in categorizing all tributaries and adjacent waters as having a significant nexus. Even after a comprehensive review of the scientific evidence on connectivity, the Agencies simply made a proclamation – untethered to the scientific evidence or principles of frequency, magnitude, and duration – that all of these waterbodies have significant hydrological connectivity. (p. 115-118)

<u>Agency Response:</u> As noted in the preamble, significant nexus is not a purely scientific determination and neither is the agencies' interpretation of the scope of

[107] James W. LaBaugh et al., Hydrologic Functions of Prairie Wetlands, 8 GREAT PLAINS RES. 17 (1998).
[108] Martin C. Thoms, Variability in Riverine Ecosystems, 22 RIVER RES. & APPLICATIONS 115 (2006).

"waters of the United States;" instead the agencies' interpretation is informed by the Science Report and the review and comments of the SAB, but not dictated by them. The 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. The agencies have taken a conservative approach, ensuring that the available science supports the agencies' determination.

The agencies limited the definition of 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, signifying sufficient duration and frequency of flow to support a finding of significant nexus based upon available science. In the same manner, the final rule limits jurisdictional adjacent waters to those located within the floodplain of the traditional navigable waters, interstate water, territorial sea, tributary, or impoundment to which they adjacent, or are otherwise sufficiently proximate. The agencies have determined that location within the floodplain and proximity ensure that the aquatic functions performed by adjacent waters are effectively and consistently provided to downstream waters.

The final rule The final rule lists nine functions relevant to the physical, chemical, and biological significant nexus. See Significant Nexus Compendium. The preamble and Technical Support Document discuss the basis for these limitations and the hydrologic, chemical, and biological functions provided by covered tributaries and adjacent waters.

4.154 UWAG recommends that the Agencies provide guidance to, and work with, the SAB, states, and the regulated community on defining concise, measurable metrics for duration, magnitude, and frequency parameters of hydraulic connectivity. A corollary to this could be the development of multi-metric biological criteria, such as the Index of Biotic Integrity. Karr and Chu (2000).[109] Attributes of specific community composition (e.g., faunal groups stratified by trophic mode, tolerance to pollutants, or taxonomic class) are summed to produce a composite score. Metrics related to "healthy" communities are used in conjunction with those typically associated with "degraded" communities. We recommend that the Agencies use such an approach, whereby they develop an index of connectivity that identifies metrics associated with "high connectivity" and those related to "disconnectivity" to allow scientifically supportable, objective measures of a significant nexus.

For example, Leibowitz et al. (2008) proposed two hydrological permanence metrics: Dmax,q (maximum duration – in days – of continuous surface or hyporheic flow), and Dmax,c (maximum duration of continuous surface or hyporheic connection between an adjacent wetland and a jurisdictional stream). Id. at 367. These metrics clearly address the duration variable of hydrological connectivity.[110] The same authors also proposed metrics to quantify the significance of how non-navigable streams and adjacent wetlands

[109] James R. Karr & Ellen W. Chu, Sustaining Living Rivers, 422-423 HYDROBIOLOGIA 1 (2000).
[110] UWAG believes, however, that, due to difficulties in measuring the presence and extent of hyporheic flow, this variable should not be included as a metric of connectivity.

influence the chemical, physical, and biological properties of downstream waters: (1) supply of beneficial materials (e.g., the transport of coarse particulate organic matter); (2) the removal of harmful materials (i.e., sediment and pollutant sink function); (3) and refuge function (e.g., providing habitat during extreme hydrological events). Id. at 367-68. The Agencies could develop and stratify such functional metrics for different physiographic regions such as ecoregions, or more inclusive ecosystems such as biomes. The elucidation of such metrics would provide a more sound scientific foundation for the designation of waterbodies demonstrating actual and significant functional connectivity, rather than a determination by rule that all waters defined by EPA as "tributaries" or "adjacent waters" have an assumed significant nexus. (p. 118-119)

Agency Response: **Due to regional variability and the complexity required, the agencies do not anticipate developing standardize scoring metrics or other universal quantitative measure for evaluating significant nexus. The agencies believe the final rule reflects the agencies' goal of providing simpler, clearer, and more consistent approaches for identifying the geographic scope of the CWA. The rule establishes jurisdiction in three basic categories: waters that are jurisdictional in all instances, waters that are jurisdictional but only if they meet specific definitions in the rule, and a narrowed category of waters subject to case-specific analysis. The preamble and Technical Support Document discuss the basis for these limitations and the hydrologic, chemical, and biological functions provided by covered tributaries and adjacent waters.**

4.155 In the Proposed Rule, the Agencies informally equate the significant nexus of "tributaries" (including ephemeral and intermittent streams), "adjacent waters," and "other waters" to jurisdictional waters with the function of affecting the chemical, physical, and biological attributes of those downstream waters. In the Proposed Rule, the Agencies have not, but should have, addressed the following questions:

- Which of the three types of attributes is most important or has the greatest weighting? Why? Does the most important attribute vary spatially and temporally?
- If only one of the three attribute types is affected, and this occurs during statistically rare intervals, does the waterbody type still have a significant nexus?
- Must the "effect" be positive or beneficial to downstream waters? For example, during pulse flooding events, hydrological connectivity is high, but this comes at the expense of faunal displacement and habitat (e.g., sediment components that may provide microhabitat for benthic species) scouring and/or displacement.
- Shouldn't the duration, frequency, or magnitude of dis-connectivity be a factor that is considered? During these periods (e.g., droughts) the effects of traditional nonjurisdictional waters on the chemical, physical, and biological properties of downstream waters either do not exist, or serve as a harmful disturbance. For example, Power et. al. (1988)[111] cite Smith (1982)[112] who documented that the

[111] Mary E. Power et al., Biotic and Abiotic Controls in River and Stream Communities, 7 J. N. AM. BENTHOLOGICAL SOC'Y 456 (1988).

reestablishment of a sculpin species (Cottus gulosus) to a 2-kilometer stretch of stream took over ten years following a drought event. (p. 119-120)

Agency Response: **In order to determine if a water has a significant nexus with a traditional navigable water, interstate water, or territorial sea, that water's functions must be evaluated in relation to the traditional navigable water, interstate water, or the territorial sea. 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 as foraging, feeding, nesting, breeding, spawning, use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas. Duration, frequency, or magnitude of connectivity or dis-connectivity may be a factor to be considered within many of these functions, but do not establish or remove jurisdiction alone. 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 and more than speculative and insubstantial.**

These factors are to be evaluated on an equal basis, with no one factor being considered more important in the evaluation. It is important to note, however, that a water or wetland can provide just one function that may significantly affect the chemical, physical or biological integrity of the downstream water. 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 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 a traditional navigable water, interstate water, or the territorial sea. There is no requirement that the effect on downstream waters be beneficial in order to be evaluated.

4.156 The Agencies in the Proposed Rule (and EPA in the Draft Connectivity Report) meticulously highlight the beneficial functions of connectivity on the chemical, physical, and biological attributes of downstream waters. One of the functions that the Agencies identify regarding downstream transport of water is nutrient spiraling (i.e., headwaters provide nutrients – in many cases via allochthonous inputs – and these nutrients undergo chemical transformation or biological assimilation as they are transported along a longitudinal axis). Spiraling, however, *can only occur during periods of connectivity*:

Spiraling is nutrient cycling combined with downstream transport, i.e., nutrients are displaced downstream as they pass through a cycle.

[112] Jerry J. Smith, Fishes of the Pajaro River System, in DISTRIBUTION AND ECOLOGY OF STREAM FISHES IN THE SACRAMENTO-SAN JOAQUIN DRAINAGE SYSTEM 83, 115 (Peter B. Moyle et al. eds. 1982).

Meyer et al. (1988)[113] at 420.

Thus, while the Agencies readily point out the ecological benefits of connectivity to downstream waters (e.g., nutrient spiraling, allochthonous-based energy sources such as coarse particulate matter, corridors for biological movement and/or colonization), the Agencies also cite numerous benefits during periods of hydraulic isolation/dis-connectivity (e.g., retention and sequestration of nutrients and pollutants). *UWAG believes that the Agencies cannot make a categorical determination of connectivity for "tributaries," "adjacent waters," and (in some cases) "other waters" to (a)(1) to (a)(4) waters while also citing ecological benefits that are only realized during periods of disconnectivity*. If the Agencies *had* developed and proposed frequency, duration, and magnitude variables of connectivity (as advocated by UWAG and some SAB Panel members who evaluated the Draft Connectivity Report), this technical oxymoron could have been prevented. (p. 123-124)

Agency Response: **The agencies disagree these references to the proposed rule represent a "technical oxymoron". The final rule's evaluation of significant nexus is not based on the frequency, duration, and magnitude of flow of water between aquatic features, nor on any aspect of hydrologic connection alone. Instead, the final rule evaluates "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 as foraging, feeding, nesting, breeding, spawning, use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas" in order to determine jurisdiction.**

Additionally, as pointed out in the preamble to the final rule, the Science Report concludes, "Some effects of nonfloodplain wetlands on downstream waters are due to their isolation, rather than their connectivity", and as pointed out by Justice Kennedy, the absence of hydrologic connection could establish a significant nexus.

In the final rule, the agencies have determined that 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 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.

Edison Electric Institute (Doc. #15032)

4.157 Instead of relying on authority to protect the quality of navigable waters, the agencies have created an entirely new legal justification for federal jurisdiction in the proposed rule. The agencies have structured their proposed new definition of "waters of the U.S." by relying on the premise that the Act grants the agencies the authority to assert federal

[113] July L. Meyer et al., Elemental Dynamics in Streams, 7 J. N. AM. BENTHOLOGICAL SOC'Y 410 (1988).

jurisdiction over any water, located anywhere, if the agencies can find a "significant nexus" between that water and a navigable or interstate water or territorial sea. Building on this premise, the agencies assert that the "significant nexus" that creates federal jurisdiction can even be based on the movement of animals and insects from one water body or on the flow or retention of water[114], irrespective of the movement of pollutants and the potential for those pollutants to impact navigable waters.

To claim this jurisdiction, the agencies rely on section 101(a) of the CWA, "[t]he objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," without recognizing that the fundamental purpose of the Act as reflected throughout its provisions including section 101(a) is to address water quality issues. The agencies read the phrase "biological integrity" to mean the integrity of the birds, mammals, fish and insects that may reside for part of their lives in water, not the integrity of the water itself. However, this reading is not supported by the Act or its structure. As the rest of section 101(a) makes clear, to achieve the objective of restoring and maintaining the integrity of the nation's waters, the CWA is focused on water pollution.[115] The specific authorities granted by the CWA are related to the protection of water quality.[116] (p. 9-11)

Agency Response: **See Agency Summary Response Essays 10, 13, 15, Technical Support Document, section XI.**

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

4.158 The proposed jurisdictional-by-rule approach is based on an overly simplistic "connected versus not-connected" waters distinction. This approach fails to recognize that there is a wide spectrum or gradient of hydrologic connections among waters, with variations in the strength , duration, magnitude and consequences of various types of connections, some of which may only exist on an attenuated basis on a decadal time frame. All connections

[114] 79 Fed. Reg. at 22214.

[115] "In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act –
(1) it is the national goal that the *discharge of pollutants into the navigable waters* be eliminated by 1985;
(2) it is the national goal that wherever attainable, an interim goal of *water quality* which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;
(3) it is the national policy that the *discharge of toxic pollutants* in toxic amounts be prohibited;
(4) it is the national policy that Federal financial assistance be provided to construct publicly owned *waste treatment* works;
(5) it is the national policy that area wide treatment management planning processes be developed and implemented to assure *adequate control of sources of pollutants* in each State;
(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the *discharge of pollutants* into the navigable waters, waters of the contiguous zone and the oceans; and
(7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to *enable the goals of this Act to be met through the control of both point and nonpoint sources of pollution*." CWA § 101(a) (emphases added).

[116] See CWA § 301(a) (prohibiting the discharge of pollutants except where authorized); CWA § 303 (requiring EPA or states with delegated authority under the Act, to set water quality goals based on attainable uses of each water body); CWA §§ 402, 404 (regulating the discharge of pollutants and dredge and fill material).

may not support the assertion of jurisdiction under the CWA, but are assumed to do so under the automatically jurisdictional categories of waters in the proposed rule. (…)

Accordingly, we request that the agencies revise the proposed rule to eliminate the automatic jurisdictional-by-rule approach. In the alternative, the categories proposed should establish only a rebuttable presumption of jurisdiction. This would provide regulated entities with the option of either accepting jurisdiction or rebutting the presumption by demonstrating that a particular water in question does not have a nexus sufficient to support CWA jurisdiction. (p. 3)

Agency Response: **The Agencies believe that the jurisdictional categories provide needed bright lines, clarity and predictability, reflect the current state of the best available science, and are based upon the law and Supreme Court decisions, while recognizing the connectivity of waters occurs along a gradient. Each jurisdictional category in paragraphs (a)(4) – (a)(8) contains conditions, limits, and criteria that limit the types of waters covered to only those that have a significant nexus to paragraphs (a)(1) – (a)(3).**

4.159 We request that the significant nexus test under the proposed rule be revised to recognize the role of water quality protection as a keystone for assertion of jurisdiction under the CWA and to restore the essential role of a hydrologic connection in demonstrating the requisite nexus. (p. 9)

Agency Response: **The final rule interprets the CWA to cover those waters that require protection in order to restore and maintain the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, and the territorial seas. This interpretation is based not only on the CWA goal to restore and maintain the integrity of the Nation's waters, but legal precedent and the best available peer-reviewed science, as well as on the agencies' technical expertise and extensive experience in implementing the CWA over the past four decades.**

The agencies agree that the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, but do not agree that a hydrologic connection is 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 these (a)(1) through (a)(3) waters.

East Kentucky Power Cooperative (Doc. #15402)

4.160 There is no rational basis to understand the limits of jurisdiction using this line of thinking. This rule effectively provides the regulatory agencies unconstrained discretion to make arbitrary, case-specific determinations of jurisdiction without clear, consistent, and knowable standards. It will only create further confusion when trying to determine jurisdiction of features on the landscape. (p. 2)

Agency Response: **See Agency Summary Response Essays 1 and 6. See response 4.61 (Doc. #7930).**

Washington County Water Conservancy District (Doc. #15536)

4.161 The WWG objects to the Agencies' proposed treatment of "other waters." The "other waters" category, as defined in the Proposed Rule, would allow the Agencies to regulate the very same types of "nonnavigable, isolated, intrastate waters" that the *SWANCC* Court concluded were non-jurisdictional.[117] In the years since *SWANCC*, the Agencies have recognized its broad holding by including the following on its Jurisdictional Determination Form as a basis for determining that a water body is non-jurisdictional: "[r]eview area included isolated waters with no substantial nexus to interstate (or foreign) commerce."[118] The Agencies' proposal also finds no support in *Rapanos* or *Riverside Bayview*, in which the Supreme Court's holdings were based on the uniquely inseparable nature of adjacent wetlands. The Agencies should revise the rule to appropriately recognize the holding in *SWANCC* by clearly stating that the Agencies lack jurisdiction over nonnavigable, isolated, intrastate waters.

Moreover, even if the Agencies proposal to regulate "other waters" were supported by Supreme Court precedent, it lacks sufficient clarity to inform the regulated public of which types of waters the Agencies intend to regulate. Most glaringly, the Proposed Rule does not define the term "significant nexus" other than to note that, to be "significant," a nexus must be more than ''speculative or insubstantial."[119] Thus, the Proposed Rule could be interpreted to mean that any nexus that is more than speculative or insubstantial is a "significant" nexus that establishes jurisdiction. Such a reading would not be supported by any Supreme Court precedent, including Justice Kennedy's concurring opinion in *Rapanos*, which indicated that a finding of "more than speculative or insubstantial" was necessary, but did not suggest that such a finding would be sufficient to establish jurisdiction. To avoid such an absurd interpretation, and to assist the regulated public, the Agencies should include in the Proposed Rule a specific definition for the term "significant nexus" that provides meaningful guidance to the regulated community, and should re-publish their notice and solicit public comment on the proposed definition. (p. 20)

Agency Response: In *SWANCC*, the Court (in a 5-4 opinion) held that the use of "isolated" nonnavigable 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* 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. While recognizing that in *Riverside Bayview Homes,* it had found the term "navigable" to be of limited import, the Court in *SWANCC* noted that the term "navigable" could not be read entirely out of the Act. *Id.* at 172. The fundamental premise of the final rule is that

[117] SWANCC, 531 U.S. at 168.
[118] U.S. Army Corps of Engineers, Jurisdictional Determination Form Instructional Guidebook, Appendix B - Approved Jurisdictional Determination Form (May 2007), available at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/app_b_approved_jd_form.pdf.
[119] Proposed Rule, 79 Fed. Reg. at 22,192

for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). While commenter asserts that under the proposed rule the agencies' authority to assert jurisdiction is limitless, the final rule provides explicit limitations on the agencies' authority to make case-specific determinations. Case-specific determinations of jurisdiction are only authorized for five specific types of waters under (a)(7) and waters within the thresholds provided in (a)(8). A more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. The final rule limits the waters that can be considered similarly situated.

Association of Electronic Companies of Texas, Inc. (Doc. #16433)

4.162 AECT appreciates that EPA and the Corps recognize the conundrum that the significant nexus test would create and that it is an unworkable concept. The manner in which EPA and the Corps have solicited comments is a clear indication that the significant nexus test that has been offered as "the agencies' policy judgment about how to provide clarity and certainty"[120] is not well developed and would actually result in significant ambiguity and uncertainty. It would be inappropriate for EPA and the Corps to adopt a significant nexus test based on comments received on the undeveloped concept if the comments upon which a final rule is drafted have not been vetted with the public, the regulated community, and policymakers. Thus, if EPA and the Corps do not withdraw the Proposed Rule as a whole, AECT requests that the significant nexus test be eliminated from the Proposed Rule. (p. 10)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters." The agencies believe that the portions of the final rule addressing "other waters" and significant nexus are a logical outgrowth of the proposal and public comments.

Basin Electronic Power Cooperative (Doc. #16447)

4.163 The Agencies are attempting to assert jurisdiction over "other waters", such as the isolated waters of the Prairie Pothole Region. The Agencies make the assumption that the isolated wetlands, when aggregated, have a more than speculative or insubstantial

[120] 79 Fed. Reg. 22198.

effect on traditional navigable waters (TNW), even if the isolated wetland is many miles away from the TNW. This assumption is based on an extremely tenuous connection, and appears to be yet another misinterpretation and misapplication of previous court decisions. (p. 3)

Agency Response: In proposing the "other waters" (a)(7) category, it was the agencies' intent to ensure that waters that significantly affect a traditional navigable water, interstate water, the territorial sea (where otherwise not excluded) were regulated under the Clean Water Act. In consideration of comments, the agencies made changes to address concerns in the approach to "other waters."

The final rule modified the "other waters" category by establishing two exclusive and limited 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

Waters in the (a)(7) category, such as prairie potholes, are not assumed to have a significant nexus. Waters in these subcategories are not jurisdictional as a class under the rule. However, because the agencies determined that these subcategories of waters are "similarly situated," the waters within the specified subcategories that are not otherwise jurisdictional under (a)(6) of the rule must be assessed in combination with all waters of a subcategory in the region identified by the watershed that drains to the nearest point of entry of a traditional navigable water, interstate water, or the territorial seas (point of entry watershed). For the agencies' bases for identifying prairie potholes as similarly situated by rule, see the Preamble and the Technical Support Document at XI.

Battelle Energy Alliance, LLC (Doc. #16448)

4.164 The "other waters" portion of the rule does not address the status of groundwater as a conduit for pollutants in a "significant nexus" analysis. In a recent case, the District of Hawaii held that liability under the CWA arises as long as the groundwater is a conduit through which pollutants are reaching navigable-in-fact water.[121] "An aquifer with a substantial nexus with navigable-in-fact water may itself be protected under the Clean Water Act even if it is not necessarily a conduit for pollutants. But when it is established that groundwater is a conduit for pollutants, liability may attach to a discharge into that groundwater even if the groundwater is not itself protected under the Act."[122] The court went on to reason that "there is nothing inherent about groundwater conveyances and

[121] Hawai'i Wildlife Fund v. County of Maui, 2014 WL 2451565, 12 (D. Hawai'i 2014).
[122] Id. at 16.

surface water conveyances that requires distinguishing between these conduits under the [CWA]."[123] The case has not been appealed. Under a "significant nexus" analysis, should an aquifer, which is groundwater, be treated as a conduit allowing for CWA jurisdiction?

Lastly, the only portion of the "other waters" section that addresses aquifers specifically is with regard to "aquifer permeability" and its effect on quantity of flows for determining if waters are similarly situated.[124] The proposed rule also provides that under the "significant nexus test", "other waters" may provide numerous functions of potential benefit to traditional navigable waters . . . including . . . recharge of groundwater sources of river baseflow."[125] Does this mean that if the potential "other waters" recharge the groundwater sources of river baseflows then the CWA applies?

The proposed rule is an excellent opportunity for the Agencies to identify circumstances under which groundwater may or may not fall under CWA jurisdiction. Such clarification would address conflicts among district courts without waiting for a decision from the Supreme Court. It would also ensure that transaction costs are reduced because the rule clearly does or does not apply to groundwater.

In addition to the proposed rule failing to address CWA jurisdiction over groundwater, the rule fails to adequately address CWA jurisdiction over ephemeral streams and dry beds. (p. 6)

Agency Response: **The final rule explicitly excludes groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA. However, the final rule does allow for potential jurisdiction to be asserted based on shallow subsurface connections.**

See the Technical Support Document, section II.B. and groundwater summary response in the Features and Waters Not Jurisdictional Compenium.

4.165 (…) While the proposed rule specifically addresses ephemeral tributaries it does not address ephemeral waters in the "other waters" portion of the rule. Therefore, it is not clear how the ephemerality plays a role in the "significant nexus" analysis of "other waters." Here, the LLR has not been recorded to have run on the INL Site, but it has the potential to do so during high precipitation years. How will the rule apply to a potential "other water" that runs so seldom? It would be beneficial for the rule to address how ephemerality affects the "significant nexus" analysis for "other waters." (p. 7)

Agency Response: **The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the**

[123] Id. at 13.
[124] Id. at 22247.
[125] Supra note 3, at 22197.

physical indicators required under the definitions of "ordinary high water mark" and "tributary." To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

Texas Water Development Board (Doc. #16563)

4.166 The proposed rule interprets the Supreme Court's split decision in the broadest possible terms. Under the proposed rule, if a particular set of facts meets either Justice Scalia's "continuous surface connection" test or Justice Kennedy's "significant nexus" test, the EPA and the Corps consider it subject to the CWA. Simply because the decisions did not result in a majority, the EPA and Corps cannot choose the parts they like and ignore the rest. The most objective and clear path forward is to honor the tests set by Justice Scalia. Consequently the TWDS strongly requests that the Scalia test be used for CWA interpretation and that these limitations on federal jurisdiction be applied not only to wetlands but also to all nonnavigable waters. (p. 2)

Agency Response: The rule is appropriately premised on the significant nexus standard as articulated by Justice Kennedy. 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." As set forth in greater detail in the Technical Support Document, all U.S. Courts of Appeal and virtually all U.S. District Courts that have applied Rapanos have held that Justice Kennedy's standard may be applied to identify jurisdictional waters.

See Technical Support Document, section I.

4.167 The arbitrary nature of the significant nexus test is exemplified by the EPA and the Corps' attempt to extend CWA jurisdiction to intrastate lakes, ponds, mudflats, sand flats, playa lakes, and other non-wetland waters. This scheme will essentially overrule the Supreme Court's holding in SWANCC that the Corps' jurisdiction does not cover isolated intrastate ponds or mudflats. This use of the significant nexus test could hamper management of water resources by states and local authorities. Justice Kennedy's concurring opinion in Rapanos should be read as applying only to wetlands not intrastate lakes, ponds or other non-wetland waters. The EPA and the Corps can simply clarify that "other waters that are not physically proximate to jurisdictional waters" are non-navigable waters and therefore are not waters of the United States under the CWA. The fate of intrastate isolated waters was settled in SWANCC. Neither the EPA nor the Corps has authority to regulate such waters. (p. 5)

Agency Response: In proposing the "other waters" (a)(7) category, it was the agencies' intent to ensure that waters that significantly affect a traditional navigable water, interstate water, the territorial sea (where otherwise not excluded) were regulated under the Clean Water Act. In consideration of comments, the agencies made changes to address concerns in the approach to "other waters."

The final rule modified the "other waters" category by establishing two exclusive and limited 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

4.168 The EPA and Corps propose that if anyone of three criteria is satisfied (a significant chemical, physical, or biological impact on the jurisdictional water), then the water can be considered "a water of the U.S." The proposed rule provides no objective measures for what constitutes a significant effect on the jurisdictional water. The preamble even suggests that a hydrologic connection is not necessary because the effect may be demonstrated by the absence of a connection (e.g., pollutant trapping). This approach is a stretch even for applying the more expansive Kennedy opinion of significant nexus and the TWDB strongly recommends it be eliminated. (p. 7)

Agency Response: **See Agency Summary Response Essays 3 and 17.**

North Dakota Water Users Association (Doc. #19454)

4.169 The expansion of jurisdiction to "other waters" on the grounds of "biological connectivity" is equally disturbing. The preamble states that the presence of aquatic and semi-aquatic species may form such a biological connection to a traditional water. In North Dakota, a significant number of species such as geese, ducks, pelicans, and cranes exhibit "life cycle dependency on identified resources" such as "foraging, feeding, nesting, breeding, spawning and use as a nursery area." Therefore the presence of these species in a formerly non-jurisdictional water, such as an isolated slough or pothole, will invoke Federal authority under the proposed rule. In light of this overreach, the Association urges the agencies not to adopt any such test of biological connectivity. (p. 1)

Agency Response: **The final rule has been modified to list 9 specific functions to be used in significant nexus evaluations. This list includes "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 water identified in paragraphs (a)(1) through (3) of this section."**

In addition, the preamble states that non-aquatic species or non-resident migratory birds do not demonstrate life cycle dependency for case-specific evaluations, and therefore are not evidence of biological connectivity for purposes of this rule. The Agencies believe this change provides the necessary specificity in biological connectivity. See Agency Summary Response Essay 10.

Coachella Valley Water District, Riverside County, California (Doc. #19455)

4.170 The proposed rule lacks a scientific basis to protect the chemical, physical, and biological integrity of Waters of the U.S. "Bright line categories" that define what is, and is not, jurisdictional are not based on scientific rationale. The natural world is not black and white, but is instead created with gradations of connectivity. For a water to be considered jurisdictional it should meet significant scientific criteria, have a "significant nexus" to a Water of the U.S. Scientific rational would not determine all tributaries or all adjacent water bodies in the country to be in one category. The proposed rule is too broad, allows for a sweeping jurisdiction, creates additional ambiguities in terminology, and will result in additional unpredictability and confusion. (p. 2)

Agency Response: "Tributaries" ((a)(5)) and "adjacent" waters ((a)(6)), are jurisdictional by rule, as defined, not because they are "presumed" to have a significant nexus, but because the science confirms that as defined they have a significant nexus to traditional navigable waters, interstate waters, or territorial seas. See Technical Support Document, section XI.

Southern Environmental Law Center et al. (Doc. #13610)

4.171 … working with the Natural Resource Defense Council (NRDC), we solicited the help of a team of Masters of Ecology students from the University of Georgia to help us identify additional peer-reviewed scientific studies that demonstrate the connections that exist between certain types of "other waters" and jurisdictional waters. … In issuing the final rule, we urge the agencies to review the reports attached to these comments. It is our position that when this research is combined with the Connectivity Report, the agencies will have the scientific foundation necessary to establish that coastal depressional wetlands (such as Carolina and Delmarva Bays), vernal pools, and pocosins should be defined as waters of the United States by rule. This, of course, would obviate the need to perform case-by-case analyses of these waters. (p. 18)

Agency Response: 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 the specified subcategories – prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated by rule because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis within a single point of entry watershed.

4.172 In addition to the two reports, we offer the following additional discussion on "other waters" and how they should be regulated. It is our underlying position that the EPA and Corps should interpret existing law as broadly as possible. It is in the "other waters" category that the agencies appear to be treading the most cautiously. This is not surprising in light of the holding in SWANCC. In that case the Supreme Court squarely

faced the question of how geographically isolated wetlands should be treated. Although the decision has been read in an expansive way by many, at bottom it says that the presence or absence of migratory birds at such wetlands cannot be the only basis of establishing jurisdiction.

Certainly the Rapanos decision has also affected how the agencies regulate geographically isolated waters. With the Scalia test that requires a "surface connection" and the Kennedy test that requires a "significant nexus," it is not surprising that EPA and Corps initially approached "other water" cases with caution. However, scientific studies now reveal how biological, hydrological, and chemical connections exist between most types of geographically isolated waters and other jurisdictional waters. In this section we focus on the types of "other waters" found in the Southeast and describe some of the connections that would render these types of waters jurisdictional.

Although geographically isolated waters may appear to be separated from surface waters, many of these waters are directly linked hydrologically to other wetlands or streams by shallow subsurface flows[126] or by intermittent surface flows during rain events.[127] The term "isolated" implies that there are ecological barriers between these wetlands that prohibit seed dispersal, animal movements, and wildlife reproductive success[128], but this is also not so. Rather, many organisms travel from wetland to wetland and between wetlands and traditionally navigable waters while breeding, searching for food, or overwintering.[129]

Furthermore, these wetlands perform critical ecosystem services that, because of this connectivity, profoundly affect the chemical, physical, and biological integrity of downstream traditional navigable waters. The importance of wetlands cannot be understated. From their ecological richness to their ability to protect our communities from floods and filter drinking water, geographically isolated wetlands play a vital role in preserving ecosystem function in the United States. (p. 18-19)

Agency Response: **The agencies agree that 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. The final rule reflects this by allowing for a case-specific significant nexus evaluation for certain types of non-adjacent waters.**

4.173 When the Science Advisory Board (SAB) reviewed the EPA's Connectivity Report, it concluded that there was enough scientific literature to support a "more definitive statement about the functions of 'unidirectional' non-floodplain wetlands that sustain the physical, chemical and/or biological integrity of downstream waters."[130] The EPA

[126] Allen E. Plocher et al., *Importance of Small Isolated Wetlands* (2003), http://illinois.sierraclub.org/take_action/inhs.pdf (Last viewed Nov. 2014).
[127] Joel Snodgrass et al., *Relationships Among Isolated Wetland Size, Hydroperiod, and Amphibian Species Richness: Implications for Wetland Regulations*, 14 Conservation Biology 414, 414-19 (2000).
[128] Ralph W. Tiner, *In Search of Swampland: A Wetland Sourcebook and Field Guide*. Rutgers University Press, New Brunswick, NJ (1998).
[129] Douglas E. Gill, *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque)*, 48 Ecological Monographs 145, 145-46 (1978).
[130] SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review*

currently has sufficient evidence from the scientific literature it used in its Connectivity Report to make the case for extending protections to "other waters." In addition, the SAB provided the EPA with additional peer-reviewed literature to include in its Connectivity Report.[131] When combined with the scientific literature provided with these comments, the EPA has enough support to extend categorical protections to these waters. (p. 27)

Agency Response: The final rule does not assert jurisdiction by rule over "other waters". By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

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

4.174 *The Rule Should Categorically Protect Certain "Other Waters"*

EPA and the Corps propose to continue the current case-by-case "significant nexus" analysis for all "other waters, including wetlands" that do not fit the definitions of the other six categories of protected waters (and that are not explicitly exempted from regulation). The agencies propose this approach because they conclude that the connectivity of "'other waters'… varies within a watershed and over time, making it difficult to generalize about their connections to, or isolation from, traditional navigable waters, interstate waters, and the territorial seas."[132]

This proposed approach is not legally or scientifically justified. EPA and the Corps seem to recognize this fact, asking in the Federal Register notice that stakeholders provide "comment and information … on how the science could support other approaches that could provide greater regulatory certainty regarding the jurisdictional status of 'other waters,' including expanding the list of waters jurisdictional by rule …"[133] Furthermore, the agencies acknowledge that the Connectivity Report "indicates that there is evidence of *very strong connections* in some subcategories that are not included as jurisdictional by rule."[134]

We propose that certain additional categories of "other waters" should be jurisdictional by rule under two distinct rationales. First, some "other waters" have a significant nexus to navigable waters and thus must be protected under Justice Kennedy's Rapanos test. Second, as discussed above, the agencies can still rely on their Commerce Clause authority to exercise jurisdiction over "other waters" that affect interstate commerce, even if they do not pass the "significant nexus" test.

1. Some "Other" Waters Have a Significant Nexus to Navigable Waters and Should Be Categorically Protected Under Justice Kennedy's Test.

and Synthesis of the Scientific Evidence. October 17, 2014. EPA-SAB-15-001.
[131] SAB Review at p. 52.
[132] 79 Fed. Reg. at 22,197.
[133] Id. at 22,212.
[134] Id. at 22,198 (emphasis added).

The agencies correctly interpret the Clean Water Act and Supreme Court opinions as supporting jurisdiction over "other waters" (including so-called "isolated" waters) if they have a significant ecological nexus to navigable waters.[135] Scientific evidence shows that several types of "other waters" pass the "significant nexus" test as a class, and the agencies should extend categorical protections to those waters, while relying on case-by-case analysis only for the "other waters" whose categorical nexus cannot yet be established (and those which cannot be protected under alternative rationales as discussed below).

In the notice accompanying this proposed rule, the agencies stated that they were interested in feedback on the following alternative approach for "other waters": "Determine by rule that certain additional subcategories of waters would be jurisdictional rather than addressed with a case-specific analysis … The agencies could choose to determine that there is science available to determine by rule that certain additional subcategories of 'other waters' are similarly situated and have a significant nexus …."[136] Given that there is in fact science available to make such a determination for several subcategories of "other waters," this approach is completely appropriate, and we urge the agencies to adopt it. There is no legal impediment to EPA and the Corps categorically protecting "other waters," including so-called "isolated" waters (or those that the Connectivity Report refers to as "unidirectional wetlands," and that the SAB refers to as "waters in non-floodplain settings"), when they can be shown to pass the "significant nexus" test. In Rapanos, Justice Kennedy explicitly rejected the plurality's requirement that wetlands have a "continuous surface connection" to navigable waters,[137] and the dissent agreed with him.[138] Moreover, he noted that physical separation can provide the significant nexus that he deemed to be the crux of Clean Water Act jurisdiction, saying, "[g]iven the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system."[139]

From a scientific perspective, there are several mechanisms through which even seemingly "isolated" waters can have a significant nexus to navigable waters. The Connectivity Report states, "'geographic isolation' should not be confused with functional isolation, because geographically isolated wetlands can still have hydrological and biological connections to downstream waters."[140] The Report goes on to explain:

> Isolation is the opposite of connectivity; it is the degree to which system components are not joined. Both connectivity and isolation have important

[135] Although the plurality would deny jurisdiction to wetlands lacking a "continuous surface connection" to a "relatively permanent water," 547 U.S. at 742, only four Justices adopted this position, and therefore it is not binding.
[136] 79 Fed. Reg. at 22,216.
[137] Rapanos, 547 U.S. at 773-74.
[138] Id. at 804-05.
[139] Id. at 786.
[140] Connectivity Report at 1-12.

> effects on downstream waters. For example, … wetlands that lack output channels can reduce flooding and store excess sediment.[141]
>
> Wetlands in landscape settings that lack bidirectional hydrologic exchanges with downstream waters (e.g., many prairie potholes, vernal pools, and playa lakes) provide numerous functions that can benefit downstream water quality and integrity. These functions include storage of floodwater; retention, and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow. … [F]or certain functions (e.g., sediment removal and water storage), downstream effects arise from wetland isolation rather than connectivity.[142]
>
> Biological connectivity can occur between unidirectional wetlands and downstream waters through movement of amphibians, aquatic seeds, macroinvertebrates, reptiles, and mammals, including colonization by invasive species. Many species in those groups that use both stream and wetland habitats are capable of dispersal distances equal to or greater than distances between many unidirectional wetlands and river networks.[143]

However, while the Connectivity Report generally supports the idea of a significant nexus potentially existing between "isolated" or "unidirectional" waters and navigable waters, it gives short shrift to the evidence supporting a conclusive significant nexus finding for such waters, stating that it is too difficult to generalize about their effects.[144] Given the numerous ways documented in the Report that "unidirectional" waters affect the physical, chemical, and biological state of downstream waters, it is clear that they are significant components of the aquatic ecosystem.

The Science Advisory Board's review confirms that the Connectivity Report understates the agencies' ability to make categorical findings about the significant nexus between "unidirectional" waters and larger downstream waters. The SAB states:

> The SAB disagrees with the overall conclusion in Section 1.4.3 of the Report (Conclusion 3) indicating that, "The literature we reviewed does not provide sufficient information to evaluate or generalize about the degree of connectivity (absolute or relative) or the downstream effects of wetlands in 'unidirectional' landscape settings." This statement is inconsistent with the text immediately preceding it, which describes numerous scientifically established functions of non-floodplain wetlands that can benefit the physical, chemical, and biological integrity of downstream waters. Furthermore, the conclusion largely overlooks the effects of deep aquifer connections and non-hydrologic biological connections on downstream waters. The SAB finds that the scientific literature, including references cited in the EPA [Connectivity] Report, provides ample information to support a more definitive statement, and strongly recommends that the authors

[141] Id. at 1-5.
[142] Id. at 1-10.
[143] Id. at 1-12.
[144] Id. at 1-4.

> revise this conclusion to focus on what is supported by the scientific literature and then articulate the specific gaps in our knowledge that must be resolved…[145]

Furthermore, the SAB disagreed with the approach in the agencies' proposed rule of subjecting all "other waters" to case-by-case review. It stated:

> There is … adequate evidence to support a determination that certain subcategories and types of "other waters" 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, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States.[146] (p. 37-40)

Agency Response: **As the final rule notes, non-floodplain wetlands and open waters provide many functions that benefit downstream water quality and ecological integrity, but their effects on downstream waters are difficult to assess based solely on the available science. The final rule will not be asserting categorical jurisdiction over "other waters", but instead established case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). These changes coupled with additional exclusions, reflect the agencies' intent to cover waters with significant effect on an (a)(1) through (a)(3) water. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Waterkeeper Alliance et al. (Doc. #16413)

4.175 We fully support the proposal to provide jurisdictional coverage in the Proposed Definition to "other waters" on a case-specific basis, "where those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (1)(i) through (iii) of this definition."[147] However, as noted previously, we do oppose the removal of other jurisdictional bases for protecting such waters, and urge the agencies to retain the existing "other waters" language in the current definition. The rule should protect waters to the fullest extent permitted by the Commerce Clause and the basis for including waters pursuant to that authority must be included in the Preamble and Response to Comments. We also urge the agencies to include all "relatively permanent" waters, maintain the existing language and jurisdictional bases for tributaries in the current definition, and include all jurisdictional bases in the Preamble. Additionally, the agencies should categorically include all waters for which there is adequate scientific and legal basis to do so. According to a recent report from the Congressional Research Service, "[s]ince issuing [the 2003 and 2008] guidance documents, the agencies have not found

[145] SAB Connectivity Review at 58.
[146] SAB Rule Review at 3.
[147] 79 Fed.Reg. at 22272.

jurisdiction over any 'other water' based solely on significant nexus."[148] The agencies have only found other waters "jurisdictional because they meet another provision of the existing definition of 'waters of the United States,' such as a determination that the water as a traditional navigable water."[149] Because of this, it is essential that the agencies fully use the Connectivity Report, the SAB Report and the Member Comments to categorically include waters.

Additionally, in conducting its "significant nexus" analysis, the agencies need to fully consider all aspects of connectivity,[150] ensure that aggregate connections and functions are evaluated,[151] and evaluate groundwater connections.[152] Further, the agencies should make one-time determinations for similarly situated waters and apply the determinations to future decisions.[153] Lastly, the agencies should ensure that geographic proximity not be used in the analysis in a manner that inappropriately minimizes the nexus. (p. 41-42)

Agency Response: **Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

Determining which waters have a "significant nexus" – requires the integration of this science with policy judgment and legal interpretation. 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

[148] Congressional Research Service Report R43455, EPA and the Army Corps' Proposed Rule to Define "Waters of the United States" (June 10, 2014). (citing Personal communication, EPA Office of Water, May 23, 2014.) available at http://fas.org/sgp/crs/misc/R43455.pdf.
[149] Id.
[150] See e.g. Member Comments, supra note 72, Aldous at 4; Kolm at 33 ("The flowpath framework should highlight the four-dimensional nature of connectivity, because four-imensional connectivity scaled in a habitat-to-catchment context is a foundational aspect of freshwater ecology") and 34 (noting that "these flowpaths are inherently four-dimensional (i.e., longitudinal, lateral, vertical, and through time"); Rains at 73; Sullivan at 87.
[151] See Member Comments, supra note 72, Kolm at 49; Rosi-Marshall at 81-83; Sullivan at 84 and 88
[152] See Member Comments, supra note 72, Kolm generally, especially 41 and 43.
[153] See e.g., Member Comments, supra note 72, Rains, at 72 (springs in Western States); Connectivity Report, supra note 3 at 1-12 (depressional wetlands in Texas).

navigable waters, interstate waters or the territorial seas. The agencies interpret specific aspects of the significant nexus standard in light of the science, the law, and the agencies' technical expertise. The final rule defines "waters of the United States" to include eight categories of jurisdictional waters. The rule maintains existing exclusions for certain categories of waters (including groundwater), and adds additional categorical exclusions that are regularly applied in practice. The rule reflects the agencies' goal of providing simpler, clearer, and more consistent approaches for identifying the geographic scope of the CWA. The rule establishes jurisdiction in three basic categories: waters that are jurisdictional in all instances (traditional navigable waters, interstate waters, territorial seas, and impoundments of jurisdictional waters), waters that are jurisdictional but only if they meet specific definitions in the rule (tributaries and adjacent waters), and a narrowed category of waters subject to case-specific analysis ((a)(7) and (a)(8)).

The final rule also provides a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. When a significant nexus exists between a water(s) and (a)(1) through (a)(3) water, that nexus exists even in absence of a positive jurisdictional determination on the site. When a site specific jurisdictional determination has been done it serves to identify the boundaries of the "waters of the United States" and applies only the specified site.

National Wildlife Federation (Doc. #15020)

4.176 **The agencies have the legal authority to make a categorical determination for subcategories of "other waters" when a majority of those waters meet the significant nexus standard.**[154]

Agencies have the authority to determine that a subcategory of "other waters" is "waters of the United States" when a majority of the waters in that subcategory meet the significant nexus standard. In Rapanos, Justice Kennedy stated "through regulation or adjudication, the Corps may choose to identify categories of [waters] that are likely, in the majority of cases, to perform important functions for an aquatic ecosystem incorporating navigable waters."[155] In the proposed rule, the agencies stated "Justice Kennedy's significant nexus standard provides a framework for establishing categories of waters which are per se 'waters of the United States."[156]

In *Rapanos*, Justice Kennedy stated that the Court's reasoning in Riverside Bayview "could apply equally to wetlands adjacent to certain major tributaries."[157] Justice Kennedy therefore provided a direct example of how the agencies could make a

[154] This subsection is excerpted from, and incorporated here by reference to, the Southern Environmental Law Center's 2014 Rule Comments.
[155] 547 U.S. at 780.
[156] See 79 Fed. Reg. at 22209
[157] Id. at 780 citing Riverside Bayview Homes, 474 U.S. 121, 126, 134 (1985) (Supreme Court upheld the Corps' determination that wetlands adjacent to navigable waters were categorically "waters of the United States" based on the Corps' "reasonable inference of ecological interconnection" between the waters and the adjacent wetlands. The Court deferred to the Corps' judgment, stating that the Corps "provide[d] an adequate basis for a legal judgment [contained in 33 C.F.R. § 323.2(a)] that adjacent wetlands may be defined as waters under the Act."

categorical significant nexus determination, based on the Court's holding in Riverside Bayview. His statement in the next sentence – that agencies could make categorical significant nexus determinations – repeats and clarifies his original argument.

In addition, the agencies have a longstanding practice of creating categories of waters defined as "waters of the United States." After initially construing "waters of the United States" to cover only waters navigable in fact, in 1975 the Corps issued interim final regulations redefining "the waters of the United States" to include not only actually navigable waters but also tributaries of such waters, interstate waters and their tributaries, non-navigable interstate waters whose use or misuse could affect interstate commerce, and all "freshwater wetlands" that were adjacent to other covered waters.[158] In 1977, the Corps formally adopted this regulation in 33 C.F.R. § 323.2(a). The Corp's and the EPA's current definition of "waters of the United States" – located in 33 C.F.R. § 328.3(a) – includes the categories listed in the 1977 regulation, as well as an assortment of "other waters" including wetlands and intermittent streams, the use or destruction of which could affect interstate commerce. In United States v. Riverside Bayview Homes, Inc. the Court upheld the Corps' categorical determination that wetlands adjacent to navigable waters were "waters of the United States" because, inter alia, Congress had acquiesced to the Corps' categorical determination.[159]

Finally, the agencies have made such categorical determinations of significant nexus in sections (5) and (6) of the proposed rule. In section (5) of the proposed rule, the agencies created a category of "tributaries" that are jurisdictional per se. As stated by the agencies in the proposed rule, "[w]hile Justice Kennedy's opinion focused on adjacent wetlands in light of the facts of the cases before him, the agencies determined it was reasonable . . . to undertake a detailed examination of the scientific literature to determine whether tributaries, as a category . . . significantly affect . . . navigable waters, interstate waters, or territorial seas."[160] The agencies studied the physical, chemical and biological impact of tributaries and concluded tributaries "significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas."[161] Thus, the agencies concluded that "[t]ributaries . . . perform the requisite functions identified by Justice Kennedy for them to be considered, as a category, to be 'waters of the United States.'"[162]

The proposed rule clarifies that "small, intermittent, and ephemeral tributaries" meet Justice Kennedy's significant nexus standard because they are "essential components of the tributary network . . . when their functional contributions to the chemical, physical, and biological conditions of downstream waters are considered at a watershed scale."[163]

[158] 40 Fed. Reg. 31320 (July 25, 1975).
[159] 195474 U.S. 121, 136 (citing 123 Cong. Rec. 39209 (1977) (Congressional efforts to narrow the definition of "waters" were abandoned and, in the words of Senator Baker, the Corps "retain[ed] the comprehensive jurisdiction over the Nation's waters exercised in the 1972 Federal Water Pollution control Act")).
[160] 79 Fed. Reg. at 22259.
[161] Id. at 22201.
[162] Id. at 22204.
[163] 79 Fed. Reg. at 22206.

Therefore, the agencies concluded that all "tributaries," including intermittent and ephemeral tributaries, are categorically "waters of the United States."[164]

Similarly, in section (6), the agencies concluded that "waters adjacent" to waters in sections (1) through (5) also have a "significant nexus" to traditional navigable waters and are categorically "waters of the United States." In Rapanos, Justice Kennedy approved the Corp's previous determination that "wetlands adjacent to traditional navigable waters are presumed to be jurisdictional waters" because the Corps previously made a "reasonable inference of ecological connection."[165] In the proposed rule, the agencies further concluded that adjacent waters have a significant nexus with territorial seas, impoundments, and tributaries because they are "likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters."[166]

For all of the reasons stated above, the agencies have the legal authority to make a determination that certain subcategories of "other waters" have a significant nexus to traditional navigable waters, interstate waters, and territorial seas. (p. 64-66)

Agency Response: **The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. "Tributaries" ((a)(5)) and "adjacent" waters ((a)(6)), are jurisdictional by rule, as defined, not because they are "presumed" to have a significant nexus, but because the science confirms that as defined they have a significant nexus to traditional navigable waters, interstate waters, or territorial seas. See Technical Support Document, section VII. The final rule will not be asserting categorical jurisdiction over "other waters", but instead established case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). These changes coupled with additional exclusions, reflect the agencies' intent to cover waters with significant effect on an (a)(1) through (a)(3) water. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. See response 4.210 (Doc. #15221)**

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

4.177 The conservation groups agree with you that "other waters" can influence the chemical, physical or biological integrity of downstream waters, and appreciate your point that, as a matter of law, an action that compromises even one part of that "integrity" formulation – for example, degradation of the chemical integrity of a WOTUS – would contravene the Act's mandate to "restore and maintain . . . the Nation's waters." 79 Fed. Reg. 22261 (citing to 33 U.S.C. 1251(a)). (p. 8)

[164] Id. at 22201.
[165] 547 U.S. at 780.
[166] 79 Fed. Reg. at 22210.

Agency Response: **Comment noted.**

The Association of State Wetland Managers (Doc. #14131)

4.178 Both the Rapanos decision and the Science Report recognize that there may be a significant nexus between specific "other waters" and downstream navigable waters. This is true even where the strength of the connection and its significance varies greatly within a class or category of such waters – that is, jurisdiction may not extend to the entire category. In spite of the legal and scientific acceptance of the concept of protecting waters having a significant nexus, there has not been an established process to protect these individually important waters since the Rapanos decision. Therefore, ASWM strongly supports this provision in the proposed rule.

Protection of these waters may be of critical regional or local importance to provide flood storage and attenuation, filter pollutants from both urban and rural runoff prior to reaching navigable waters and drinking water supplies, and in protection of essential fish and wildlife habitat. We recognize that a regulation that is national in scope cannot reasonably define all instances in which other waters have a significant nexus with waters of the U.S., and in these instances, a case-by-case decision is appropriate. (p. 3)

Agency Response: **The Agencies believe the final rule reflects these comments.**

Southeastern Legal Foundation (Doc. #16592)

4.179 Before we discuss what the significant nexus test is, we must first recall what it is not. The significant nexus test is not found anywhere in the statutory language of the CWA, and it is not a test espoused by a majority of the Supreme Court. Instead, it is a test proposed by a single justice, Justice Kennedy. To understand Justice Kennedy's significant nexus test, we must understand the backdrop against which he articulated it. The term significant nexus was first used in *SWANCC* to describe the relationship between the wetlands and waters in Riverside. "It was the significant nexus between the wetlands and 'navigable waters' that informed our reading of the CWA in [*Riverside*]."[167] In Riverside, the significant nexus was "the close connection between waters and the wetlands that they gradually blend into."[168] "The difficulty of delineating the boundary between water and land was central to our reasoning in the case."[169] When originally contemplated, significant nexus described the relationship between a wetland and a physically-abutting Traditional Water. This is why in *Rapanos* Justice Kennedy stated

> jurisdiction over wetlands depends upon the existence of a significant nexus between the *wetlands* in question and [Traditional Waters]. ... 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 [Traditional Waters]. When, in contrast, wetlands'

[167] SWANCC, 531 U.S. at 167.
[168] Rapanos, 547 U.S. at 741.
[169] Id. at 740.

> effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters."[170]

The core of the significant nexus test has always been comparing the relationship between a wetland and Traditional Waters. In the Proposed Rule, the significant nexus test applies to not only wetlands, but also to "other waters" that fall outside the definition of "tributary" and "adjacent waters." Even if we believe the false premise that there could be waters or wetlands not swept up into either the definition of tributary or the definition of adjacent waters, the significant nexus test is not an appropriate one for such remote "other waters." As evidenced by its judicial creation, the "significant nexus" test was never meant to be stretched so far.

The Proposed Rule also impermissibly expands on Justice Kennedy's "significant nexus" test by changing a conjunctive requirement to a disjunctive one. Justice Kennedy's test finds a significant nexus when a wetland "significantly affect[s] the chemical, physical, and biological integrity of [Traditional Waters]."[171] In contrast, the Proposed Rule defines significant nexus as significantly affecting the "chemical, physical, or biological" integrity of Traditional Waters.[172] Under Justice Kennedy's test, a hypothetical wetland that affected the chemical and biological, but not the physical integrity of Traditional Waters would not be jurisdictional. Under the Proposed Rule, that same hypothetical wetland would be jurisdictional.

Compounding the wetlands-to-waters and and-to-or distortion to Justice Kennedy's "significant nexus" test, the Proposed Rule also expands the Agencies' current jurisdictional practices by evaluating the existence of a "significant nexus" on the basis of waters in a "region" instead of a "reach." Under current guidance, the Agencies evaluate whether a significant nexus exists based on a tributary reach in a system. A tributary reach is measured "from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point such tributary enters a higher order stream."[173] The Proposed Rule states that a region is "the watershed that drains to the nearest [Traditional Waters]."[174] While not a precise definition, a region (i.e., a watershed) covers a geographical area larger than a reach (i.e., a tributary segment). Because of this, the Proposed Rule's significant nexus test will include more jurisdictional area than (1) Justice Kennedy contemplated and (2) the Agencies' current interpretation covers. (p. 22-24)

Agency Response: **See Agency Summary Response Essays 13 and 17. See response 4.83 (Doc. #15544).**

[170] Id. at 779.
[171] Id. at 779. Presumably Justice Kennedy chose the use of the word "and" based on the CWA's statutory objective language of restoring and maintaining the 'chemical, physical and biological integrity of the nation's waters." 33 U.S.C. § 1251(a).
[172] 328.3(c)(7).
[173] 2008 Guidance at 10.
[174] 328.3(c)(7).

Albemarle Area QUWF Chapter, et al. (Doc. #4292)

4.180 Wetlands, even so-called isolated ones that are not adjacent to streams, are important for North Carolina's waterfowl hunters. Outside of the state, they are the factories that produce the ducks we hunt, and in-state, they are the habitat used by breeding, migrating, and resident ducks. Many of these wetlands also provide important habitat for a diversity of wildlife as well as providing important flood storage and other benefits to downstream waters. We applaud the Environmental Protection Agency and Army Corps of Engineers for seeking feedback on the scientific connections between these non-adjacent wetlands and downstream waters, and how best to address protections for these wetlands in the final rule. We ask that the final rule recognize the importance to these wetlands to waterfowl, as well as their importance to the health of downstream waters. (p. 1)

Agency Response: **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. As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3) of this section." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of effect on biological integrity 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 effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical *and biological* integrity of the Nation's waters and appellate cases interpreting the significant nexus standard.**

Protect Americans, Board of Directors (Doc. #12726)

4.181 The agencies state that "the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under the existing regulations." 79 Fed. Reg. 22,192. In support, they cite the deletion of the portion of the existing regulatory provision that

states "all other waters such as intrastate lakes, rivers, streams (including intermittent streams) mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use degradation or desertion of which could affect interstate or foreign commerce … " *Id*. Under the Proposed Rule, they argue, these waters would only fit into the EPA's or USACE's jurisdiction if a case-by-case determination finds a significant nexus to an (a)(1) through (a)(3) water.

This analysis is misleading. Even under the old rule, a case-by-case determination was utilized to find the potential impact to interstate or foreign commerce. Further, the Proposed Rule uses a slight-of-hand to move many of the above stated waters into another category of automatic jurisdiction – either by "tributary" or "adjacent waters." Now, no tie to interstate or foreign commerce is needed; instead, the agencies can simply state that its location in the floodplain of a tributary (even with an absence of *any* documented physical or hydrological connection) will render such water jurisdictional. The new rule is much, much broader in scope and interpretation. (p. 12-13)

Agency Response: Those commenters are incorrect that the final rule essentially amounts to the "any connection" theory that was rejected in *Rapanos*. The agencies' conclusions that certain categories of waters are jurisdictional are not based on an "any connection" theory; instead they are based on careful examinations of the science and the law to conclude that particular categories of waters significantly affect the chemical, physical, and biological integrity of a traditional navigable water, interstate water, or the territorial seas. The final rule provides explicit limitations on the agencies' authority to make case-specific determinations. Case-specific determinations of jurisdiction are only authorized for five specific types of waters under (a)(7) and waters located within the thresholds provided in (a)(8).

The agencies further disagree that the final rule provides for jurisdiction over waters "that lack any meaningful connection." To the contrary, the rule and its supporting documentation demonstrate that agencies are asserting jurisdiction over traditional navigable waters, interstate waters, the territorial seas, and those waters that have a significant nexus to them. Consistent with *SWANCC* and *Rapanos*, the agencies have narrowed the definition of "waters of the United States" compared to the longstanding, existing definition.

Idaho Conservation League (Doc. #15053)

4.182 ICL is concerned about EPA's deletion of the existing provision covering certain waters where "the use, degradation or destruction of" such waters "could affect interstate or foreign commerce." 79 Fed. Reg. at 22192. EPA includes very little discussion or explanation of this proposal other than the conclusory assertion that this change is needed "[t]o comport with the *SWANCC* and *Rapanos* decisions." Id. at 22212. This change is not compelled by either decision. In fact, as the proposed rule notes, the Court in *SWANCC* only held that the use of "isolated" nonnavigable intrastate ponds by migratory birds was not by itself a sufficient basis for the exercise of Federal regulatory authority. It did not discuss, much less rule out, the other facts upon which EPA might find that "the use, degradation or destruction of" certain waters "could affect interstate or foreign commerce," and that those waters are thus properly considered waters of the U.S. This basis for jurisdiction therefore remains a reasonable and permissible interpretation of the

scope of the Act. ICL asks EPA to retain rather than delete this provision, and in any event to clarify in the final rule that this deletion is not compelled by the Supreme Court's rulings. (p. 9)

Agency Response: **Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

Neuse Riverkeeper Foundation (Doc. #15095)

4.183 The new rule should not reduce protections for wetlands, tributaries and other waters which are wholly intrastate by removing the interstate commerce grounds for asserting jurisdiction. For example, removal of the commerce factors for protection of "other waters" could eliminate jurisdictional bases for protecting the Lost River Drainages in Idaho, which contain 73 streams and rivers in an areas that covers more than 5,500 square miles. (p. 3)

Agency Response: **See response 4.182 (Doc. #15053)**

Columbia Riverkeeper (Doc. #15210)

4.184 The "significant nexus" test is neither required by the U.S. Supreme Court's decisions nor grounded in science. Because the Clean Water Act was designed to protect the chemical and biological values of our nation's waters, the rule defining the reach of Clean Water Act jurisdiction should be tailored to those goals and thoroughly grounded in the best available science. (p. 2)

Agency Response: **As detailed in the preamble and Technical Support Document, the Agencies believe the final rule, including the use of significant nexus evaluations, reflects the goals of the Clean Water Act and is grounded in best available science.**

Wyoming Outdoor Council (Doc. #16528.1)

4.185 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 influent 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."

An overarching factor in assessing whether other waters are jurisdictional will be whether they can be evaluated as representing a "single landscape unit" with regard to impacts on chemical, physical, and biological integrity of (a)(1)-(3) waters. 79 Fed. Reg. at 22211. We believe the requirements that these waters be similarly situated, be located in the same region, represent a watershed that drains to the nearest (a)(1)-(3) water, and be a single point of entry watershed will ensure this need is met. This will also ensure the impacts are not speculative or insubstantial.

Finally, the agencies mention that "desk based" determinations of the jurisdictional status of "other waters" might be possible rather than relying strictly on field research. 79 Fed. Reg. at 22214. We encourage the agencies to take advantage of this approach as much as possible. It could be an important means to improve the efficiency of this process and to not unnecessarily waste agency time and resources. (p. 6)

Agency Response: **The agencies agree that 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. The final rule reflects this by allowing for a case-specific significant nexus evaluation for certain types of non-adjacent waters.**

The agencies support the use of remote sensing of information and mapping as tools to identify waters and in particular tributaries as discussed in the preamble and Technical Support Document. These tools are helpful when site visits are not possible or in enforcement cases when the resource has been disturbed or no longer exists.

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. 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* proposal Appendix A, Scientific Analysis, 79 FR 22246, Science Report, and Technical Support Document.

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

4.186 It is clear that the Agencies are considering making a jurisdictional determination, by rule, for some "other waters" once thought to be non-jurisdictional after SWANCC by the majority of federal courts.[175] However, these non-navigable, isolated, and intrastate waters are now being claimed as jurisdictional based on Justice Kennedy's opinion in Rapanos on "significant nexus": prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools, "and perhaps other categories of waters, either alone or in combination with 'other waters' of the same type in a single point of entry watershed…"[176]

They also highlight a phrase, "fill and spill," from a scientific study of prairie potholes describing "situations where wetlands or open waters fill to capacity during intense precipitation events or high cumulative precipitation over time and then spill to the downstream jurisdictional water."[177] Presumably, "fill and spill," coupled with the significant nexus analysis, would allow the Agencies to functionally approximate pre-SWANCC jurisdiction without need of the Migratory Bird Rule and despite their intrastate and non-navigable nature. (p. 5)

Agency Response: The final rule identifies: prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools as similarly situated by rule, but not jurisdictional by rule. These waters are similarly

[175] Robin Kundis Craig, Environmental Law In Context. Cases and Materials. Third Edition (West/Thompson Reuters 2012), p. 749
[176] 79 FR 22250-22252
[177] 79 FR 22208

situated by rule because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis within a single point of entry watershed. Based on the history of the existing regulations and the caselaw discussed above, the agencies disagree that all such waters were previously non-jurisdictional. The agencies further disagree that the final rule provides for jurisdiction over waters that lack any meaningful connection. To the contrary, the rule and its supporting documentation demonstrate that agencies are asserting jurisdiction over traditional navigable waters, interstate waters, the territorial seas, and those waters that have a significant nexus to them.

The rule definition of "tributary" is narrow and requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." To the extent the commenter refers to those portions of the rule that identify neighboring waters, the proposal defined "neighboring" to include, among other things, waters with a surface connection to jurisdictional waters, which included "fill-and-spill connections," and some commenters recommended eliminating surface hydrologic connectivity as a basis for adjacency. The definition of neighboring in the final rule does not include a provision defining "neighboring" based on a surface hydrologic connection, but instead provides specific distance thresholds. Similarly the only waters subject to case-specific significant nexus determinations are those that fall within the types identified in (a)(7) or the threshold in (a)(8).

In the final rule, the agencies provided clear and explicit exclusions for a variety of non-jurisdictional features, including erosional features, water treatment systems, puddles, certain types of ditches and water-filled depressions. See Preamble Section IV.I and the Features and Waters Not Jurisdictional.

Water Environment Federation (Doc. #16584)

4.187 Therefore, if the ultimate intent of the Proposed Rule under the various "Waters of the United States" classifications is to include and manage short-term stormwater flow condition events, then EPA must also logically address the corresponding frequency, duration, and risk factors under such short-term conditions to be applied to pollutant source ephemeral areas and appropriate "Other Waters" areas under the Proposed Rule. It is not sufficient to simply cite cases of technical evidence for "connectivity" involving

various physical, chemical, and biological factors without mentioning the underlying causative statistical stormwater flow boundary conditions for each of those cases. (p. 6-7)

Agency Response: **The agencies disagree that the intent of the rule is to manage short-term stormwater flow condition events. The intent of the rule is to clarify the scope of "waters of the United States" that are protected under the Clean Water Act (CWA), in order to make the process of identifying waters protected under the CWA easier to understand, more predictable, and consistent with the law and peer-reviewed science, while protecting the streams and wetlands that form the foundation of our nation's water resources. With respect to ephemeral waters, the rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."**

This rule will not affect the current implementation of the various CWA programs in regulating discharges of pollutants into waters of the United States, such as the development of water quality standards or sections 402 and 404.

O'Neil LLP (Doc. #16559)

4.188 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 a 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 malleable 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. 6-7)

Agency Response: **See response 4.180 (Doc. #4292), 4.203 (Doc. #14285)**

4.3. PROPOSED METHODS FOR DETERMINING JURISDICTION

State of Iowa (Doc. #8377)

4.189 To be effective, CWA jurisdiction should be clearly apparent to all including the landowners and stakeholders it impacts, rather than discovered only through case-by-case agency determinations. These types of determinations rely too much on site by site determinations and use of best professional judgment by administrative agencies, which given the vagueness of this rule are likely to be unclear and inconsistent. The categorical and significant nexus approaches are similarly undesirable, due to their vaguely-defined, all-inclusive means which provide no basis of clarity or consistency for making agency determinations. None of the approaches of this rule, whether case-by-case, categorical or significant nexus, will serve to increase clarity and consistency. That uncertainty will slow conservation projects from advancing across the State and thus have negative impacts on improving water quality. (p. 7)

Agency Response: **See Agency Summary Response Essays 1, 2, and 5.**

Sealaska Corporation (Doc. #15356)

4.190 The Agencies should clarify how they will use this watershed approach to determine that "other waters" located in a particular watershed will be jurisdictional. The proposed rule leaves un-answered a number of questions about how this "regional" approach would work in practice. For example, will the Agencies' approach require site-specific data regarding the specific waterbody in question, or can the agencies rely on data from other "similarly situated" waters? Will the Agencies apply any presumption to a particular water body if they have previously studied "similarly situated" waters? How will the Agencies provide meaningful opportunities for the public to comment before a jurisdictional determination is made in a particular watershed? As further discussed below, the proposal to regulate areas on the basis of "regional," "similarly situated" waters rule raises significant questions about due process. Also, the proposed rule uses the terms "in the region" and "watershed" interchangeably and does not indicate how the specific geographic boundaries of a watershed will be determined. (p. 18)

Agency Response: **The rule retained the single point of entry watershed provided in the preamble. Available mapping tools, such as those that are based on the NHD, topographic maps, and elevation data, can be used to demarcate boundaries of the single point of entry watershed to the traditional navigable water. As described in the preamble, for practical administrative purposes the rule does not require evaluation of all similarly situated waters under (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 a 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 an (a)(1) through (a)(3) water, 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 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 final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule.

Tennessee Department of Transportation (Doc. #16470)

4.191 TDOTs' 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.

To minimize administrative burdens, TDOT supports 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, TDOT supports 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. TDOT suggests 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. 6)

Agency Response: The final rule identifies under (a)(7): prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools as similarly situated by rule, but not jurisdictional by rule. These waters are similarly situated by rule because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. Case-specific determinations of jurisdiction are only authorized for five specific types of waters under (a)(7) and waters within the thresholds provided in (a)(8). While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis within a single point of entry

watershed. The agencies believe the narrowing of the "other waters" category from the proposed rule is a logical outgrowth of the proposed rule and the public comment.

State of South Dakota (Doc. #16925)

4.192 SDDOT fully supports the use of "significant nexus" standard for determining "other waters" jurisdictional status. However, analyzing other "similarly situated" waters that can be evaluated as a single landscape on a case-by-case basis may require geographic analysis on a scale that is potentially unduly burdensome and costly. SDDOT recommends the application of the "significant nexus" standard to specific categories of waters, per the preamble. Additionally, specificity is needed regarding determining that "other waters" are similarly situated only in certain ecoregions, not other areas with differing landscape components. (p. 5)

Agency Response: See Agency Summary Essay 1 and see response 4.160 (Doc. #16925). While the agencies considered identifying ecoregions as the appropriate spatial scale at which to consider similarly situated waters, 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.

Massachusetts Department of Environmental Protection (Doc. #19133)

4.193 The case by case test for determining which wetlands meet the significant nexus test is very complicated and the information required is too extensive or detailed to be practical in most cases. We urge EPA to develop a state or regional process for defining wetlands that do meet the significant nexus test. In Massachusetts we consider vernal pools to be important waters that should be protected as jurisdictional "adjacent waters" without a case-specific significant nexus analysis. Vernal pools are small wetland and/or water depressions that are topographically isolated from other surface water bodies, making them inaccessible to predatory aquatic organisms (e.g. fish) dependent on streams. As such, they provide critical habitat for breeding amphibians. Degradation of vernal pools can occur very quickly. It can be caused by changes in pH, dissolved oxygen, temperature, and turbidity or changes in groundwater resulting in decreased base flows. The importance of protecting vernal pools (and even their migration pathways) is widely recognized in the literature.[178] Thus, we support having a regional or state process for

[178] McGarigal, K., Compton, B. W., Gamble, L, 2008. Marbled Salamander (Ambystoma opacum) Conservation Plan for Massachusetts. September 1, 2008; Compton, Bradley, W., Cushman, S., McGarigal, K., 2003. A Model of Vernal Pool Connectivity for Amphibians in Western Massachusetts, Landscape Ecology Program, Department of Natural Resources Conservation, UMASS, Amherst. Presented at the 10th.Annual Meeting of The Wildlife Society, Burlington, Vermont, USA; September 6-10,2003; Gibbons J. W.,2003. Terrestrial Habitat: A vital Component for Herpetofauna of Isolated Wetlands. WETLANDS, Vol. 23, No.3, September 2003, pp. 630-635, University of Georgia, Savannah River Ecology Laboratory Aiken, South Carolina, USA29802, q 2003, The Society of Wetland Scientists.; Calhoun, A.J.K., Vasconcelos, D., 2004 Movement Patterns of Adult and Juvenile Ronasylvatica (LeConte) and Ambystoma maculatum (Shaw) In Three Restored Seasonal Pools in Maine. Department of Plant,

evaluation of waters that require a significant nexus finding. We also support the development of criteria that would make the significant nexus finding less onerous than the process currently proposed. (p. 3-4)

Agency Response: **Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. 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. Waters which are not considered similarly situated by rule, such as Massachusetts vernal pools, may still be found to be jurisdictional under (a)(8).**

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. The agencies do not anticipate changes to this rule. However, 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 formal rule-making, including public comment. In addition, nothing in this rule limits or impedes any existing or future state or tribal efforts to further protect their waters.

State of Alaska (Doc. #19465)

4.194 Under the proposed rule, non-navigable tributaries, isolated waters, and wetlands in Alaska with no significant nexus will be deemed jurisdictional. Application of the new factors set forth in the proposed rule allows broad assumptions rather than an actual case-by-case assessment by field staff to determine whether a water or wetland is jurisdictional. This means that more isolated waters and wetlands in Alaska will likely be determined jurisdictional, even if there is no meaningful, significant nexus of those waters and wetlands to a navigable waterbody. In fact, the proposed rule incorrectly applies Justice Kennedy's "significant nexus" concept to the formula for determining whether ***tributary or adjacent waters*** are jurisdictional, when Justice Kennedy limits this concept to ***wetlands*** jurisdictional determinations. (p. 30)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

Soil, and Environmental Sciences, University of Maine, Orono, Maine 04469, USA. Journal of Herpetology, Vol. 38, No.4, pp. 551-561, 2004.

Based on the statute, its goals and objectives, and the Supreme Court caselaw, the agencies conclude that the significant nexus standard applies to non-wetland waters and Justice Kennedy's explication of the significant nexus standard applies to non-wetlands waters as well. In *Rapanos*, Justice Kennedy reasoned that *Riverside Bayview* and *SWANCC* "establish the framework for" determining whether an assertion of regulatory jurisdiction constitutes a reasonable interpretation of "navigable waters" - "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;" and "[a]bsent a significant nexus, jurisdiction under the Act is lacking." 547 U.S. at 767. "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)." *Id.* at 779. Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. While Justice Kennedy's discussion of the application of the significant nexus standard 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." *Id*. at 767 (emphases added). Fundamentally, Justice Kennedy's significant nexus analysis is about the fact, long-acknowledged by Supreme Court caselaw, that protection of waters from pollution can only be achieved by controlling pollution of upstream waters. It would be inconsistent with Justice Kennedy's opinion as a whole, science, and common sense to apply Justice Kennedy's significant nexus standard to wetlands adjacent to tributaries and not to the tributaries themselves.

Washington Association of Conservation Districts (Doc. #3272.2)

4.195 The agency asks whether such a determination may be made by rule for specific types of waters or whether a case-specific determination of the significance of any nexus is required. In either case, the nature of such determinations under these vague and impractical terms will be neither clear nor understandable, nor will this reduce confusion or transaction costs. Also, which agency determines this connectivity? Washington State's landowners and producers (and conservation districts) have had chilling experience with similar subjective and unworkable (state) water quality standard terminology, and WACD recommends that the agency reconsider this approach, to provide greater definition and practicality. (p. 4)

Agency Response: See Agency Summary Response Essays 1 and 2. The final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule.

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

4.196 The agencies take it upon themselves to define "adjacent wetlands", which the Rapanos Court determined were within CWA jurisdiction as "adjacent waters", which is defined to be "neighboring" in the broadest sense to include any connection, even through groundwater, and further state that adjacency alone is enough to establish jurisdiction. See page 22209. The examples given of "shallow subsurface connections are clearly groundwater and included steeply sloping forested areas, which are uplands (in spite of the fact that the rule states that the definition does not include "uplands"). … The agencies ignore the plurality by deleting the requirement that "other water" be one [an adjacent wetland] the use, degradation or destruction of which could affect interstate or foreign commerce" and replace it with the agencies' broad definition of significant nexus. Page 22212. This has the effect of writing the concept of "other waters" out of the CWA. (p. 2-3)

Agency Response: See Agency Summary Response Essays 3, 13, 15. See response 4.102 (Doc. #14943), 4.112 (Doc. #17921.1), 4.140 (Doc. #13029). Neither shallow subsurface connections nor any type of groundwater are "waters of the United States".

Pennsylvania Chamber of Commerce and Industry (Doc. #14401)

4.197 The PA Chamber opposes another of the Scientific Advisory Boards recommendations: that the final rulemaking include "other waters" – beyond adjacent or those connected via a significant nexus – as opportunities for EPA to assert its regulatory authority on a case-by-case basis. Contrary to EPA's stated goal in publishing a final rulemaking that increases regulatory clarity, such authority would lead to considerable uncertainty for industry and state regulators and would raise even more questions about the EPA's appropriate jurisdiction. (p. 4)

Agency Response: See Agency Summary Response Essay 5.

Water Advocacy Coalition (Doc. #17921.1)

4.198 In addition to allowing for regulation of features that are beyond the scope of the CWA, the proposed approach to "other waters" is complex, confusing, and likely to lead to unpredictable results. The following ambiguities are of particular concern:

- **Water:** Again, the agencies' vague footnote explanation of "waters" that can be "waters of the United States" based on adjacency is essentially limitless. See 79 Fed. Reg. at 22,191 n.3. What is an "other water"? Any wet feature that the agencies could not assert jurisdiction over as a tributary or adjacent water?
- **In the region:** The rule proposes to interpret "in the region" to mean the watershed that drains to the nearest TNW, interstate water, or territorial sea. 79 Fed. Reg. at 22,212. But the preamble recognizes that use of the watershed may not be appropriate in the arid West where a single point of entry watershed is very large, and recommends a modified approach based on mapping catchments to be evaluated in combination. 79 Fed. Reg. at 22,212. If the watershed standard is not appropriate for a significant portion of the country, why use it? When is it appropriate to use the modified approach? Only in the arid West? Whenever

single entry watersheds are very large? What do the agencies view as a "very large" watershed?

- **Similarly situated:** The proposed rule provides 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 they can be evaluated as a single landscape unit." 79 Fed. Reg. at 22,263. This definition is anything but clear. What does it mean to "perform similar functions" or "function together"? If, for example, two features both provide habitat for birds, is that enough to determine they "perform similar functions"? How many functions must they have in common to meet those criteria? Must the features be "sufficiently close" to any water of the United States, or must they be "sufficiently close" to a TNW, interstate water, or territorial sea? How close is "sufficiently close"? What is a "single landscape unit"? These terms are undefined and ambiguous. And if all of these determinations are simply left to the judgment of the regulators, there will not be predictability or consistency in "other waters" jurisdictional determinations.

- **Aggregation:** The preamble states, "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." 79 Fed. Reg. at 22,211. Is there any limit to this? Precisely which waters and wetlands will be aggregated is unclear. Will all wet features that are not jurisdictional under categories (a)(1) through (a)(6) be aggregated together? Will wetlands be aggregated with non-wetland features? Will a prairie pothole be aggregated only with other prairie potholes in the watershed? The preamble states that if a water is not "similarly situated" with other waters, it will not be aggregated, but will be assessed individually. 79 Fed. Reg. at 22,213. In what circumstances would waters *not* be deemed similarly situated? In what circumstances would a water have to be assessed individually?

- **More than speculative or insubstantial:** The proposed rule states that "[f]or an effect to be significant, it must be more than speculative or insubstantial." 79 Fed. Reg. at 22,263. The agencies list types of evidence that could support conclusion that there are chemical, physical or biological effects. Id. at 22,214. Is there a significant nexus if any of these indicators are present? If three indicators are present? Ten? What is required for a "more than speculative or insubstantial" showing? Or is this determination simply left to the agencies' best professional judgment? Again, if that is the case, the "other waters" analysis will be inconsistent and unpredictable. (p. 68-69)

Agency Response: **Water: Compared to the proposal, the final rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation.**

In the region: See Agency Summary Response Essay 7 regarding the alternate catchment demarcation where the single point of entry watershed, such as in the arid West, may be very large.

Similarly situated: See Agency Summary Response Essays 1, 5 and 8.

Aggregation: See Agency Summary Response Essays 1, 5 and 8.

See Agency Summary Response Essay 6.

4.199 For all of the reasons discussed above, the proposed "other waters" standard will lead to broad assertions of jurisdiction over isolated features that may have no meaningful connection with TNWs. Yet many of the alternative options presented by the agencies would have similarly overreaching results and are likewise unsupported by the science.[179] The agencies request public comment on four alternative approaches for "other waters": (1) determine that "other waters" within particular "ecoregions" or "hydrologic-landscape regions" are similarly situated by rule and have a significant nexus; (2) determine by rule that certain additional subcategories of "other waters" (e.g., prairie potholes, western vernal pools) are jurisdictional; (3) determine that no "other waters" are similarly situated; and (4) determine that all other waters in a watershed are similarly situated. See 79 Fed. Reg. at 22,215-17.

The agencies state that they "might adopt any combination" of these "other waters" alternatives for the final rule. Id. at 22,215.[180] But alternatives (1), (2), and (4), which would each allow for categorical jurisdiction over "other waters" in some way, are just as, if not more, overreaching than the proposed rule's approach. And, as the SAB Panel has recognized, these alternative approaches are not supported by the science.[181] The GEI Report concludes that "the Ecoregion and hydrologic landscape-unit approaches both suffer from being too broad, and are not placed within a consistent framework of determining significance."[182] The ecoregion approach, for example, could render an entire watershed jurisdictional, thereby greatly increasing the need for Corps permits. The GEI Report estimates that "the extent of area proposed to be covered using the Ecoregion concept covers nearly a quarter of the country."[183] In addition, with the "ecoregions" or "hydrologic-landscape regions" approaches, the preamble provides that the agencies would consider all "other waters" within an ecoregion or hydrologic-landscape region as "similarly situated" and would determine by rule that they have a significant nexus. 79 Fed. Reg. at 22,215. As noted by the GEI Report, treatment of different categories of "other waters" features (e.g., prairie potholes, isolated wetlands) that do not perform similar functions as "similarly situated" is not supported by the science.[184] Nor does the science support the establishment of per se jurisdiction over subcategories of other waters (e.g., prairie potholes, vernal pools).[185]

[179] See GEI Report, Exhibit 6 and 7.
[180] As discussed in section V.D. below, the Administrative Procedure Act ("APA") requires that the final rule does not deviate too sharply from the proposal. The agencies cannot adopt any of these proposed alternatives without fully developing these options and their underlying scientific support so that the public can meaningfully comment.
[181] See, e.g., SAB Panel Comments on Proposed Rule, Exhibit 7 at 12 (comments of Dr. Genevieve Ali) (expressing concern about regulating subcategories of "other waters," noting "I . . . do not think that the currently available scientific literature supports that approach."); id. at 96 (comments of Dr. Mark Murphy) ("Stated briefly, a jurisdiction by rule of 'other waters' is intractable because science does not support such a distinction.").
[182] GEI Report, Exhibit 6 and 7.
[183] Id.
[184] Id.
[185] Id.

For all these reasons, it would be arbitrary and capricious for the agencies to adopt a proposal that allows for categorical jurisdiction over "other waters," even if it is limited to certain subcategories of "other waters." (p. 69-70)

Agency Response: **See Agency Summary Response Essays 1, 5 and 7.**

Home Builders Association of Mississippi (Doc. #19504)

4.200 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 responses 4.1 (Doc. #16386) and 4.3 (Doc. #14625)**

National Association of Home Builders (Doc. #19540)

4.201 The Agencies claim that the proposed rule is based on science, and the Agencies' reliance on Justice Kennedy's "significant nexus" standard to assert CWA jurisdiction over all "tributaries," all "adjacent waters," and many "other waters" is abundantly clear throughout the preamble, the proposed definition, and the Appendices. Yet, the Agencies assert that "significant nexus" is "not itself a scientific term,"[186] but rather "a determination of the agencies in light of the law and science."[187] This is contradictory and confuses the very basis of the proposed rule. What's more, by claiming "significant nexus" is not a scientific term, it appears the Agencies believe it is not necessary for them to describe any methods indicating how "significant nexus" is determined or thresholds indicating when the "significant nexus" test is satisfied. NAHB disagrees.

EPA's SAB has also raised concerns about the "significant nexus" definition and its scientific shortcomings. SAB member Dr. Allison Aldous, in reviewing the scientific support for the proposed rule, stated, "[s]pecific 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. In some cases methods and/or criteria are proposed, and often the agencies seek feedback on these approaches, implying that technical guidance will be issued after the Rule is complete. Nevertheless, evaluating the technical accuracy of the definition is difficult in the absence of clear criteria."[188]

Likewise, in comments on the adequacy of the scientific and technical basis of definitions in the proposed rule, SAB member Dr. Genevieve Ali stated, "The draft rule does include a definition for 'significant nexus'; however, I find it rather vague and subject to interpretation . . . The EPA [Connectivity Report] did not . . . explicitly discuss the notion of significance, and I find that the definition provided in the draft rule does not resolve the issue as it equates 'significant' with 'significantly affects the chemical, physical, or biological integrity' of a jurisdictional water, therefore never explaining what

[186] 79 Fed. Reg. at 22,193.
[187] Id. at 22,195, 22,196.
[188] 8/14/14 SAB Comments on the Proposed Rule at 2.

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. This 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 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. I understand that the phrase 'significant nexus' is a legal term: however, this concept needs to be quantified as objectively as possible in order to secure a consistent implementation of the proposed rule."[189]

By treating the term "significant nexus" as non-scientific, the Agencies have only further muddied the waters of CWA jurisdiction. NAHB submits that if the Agencies choose to use the "significant nexus" standard, they are obligated to provide a clear, science-based definition of "significant nexus" that can be applied consistently and predictably. (p. 39-40)

Agency Response: **All of the choices made in the final rule are fully supported by the best peer-reviewed science. As stated in the preamble, however, significant nexus is not a purely a scientific determination and neither is the agencies' interpretation of the scope of "waters of the United States." Further, the opinions of the Supreme Court have noted that as the agencies charged with interpreting the statute, EPA and the Corps must develop the outer bounds of the scope of the CWA, while science does not provide bright lines with respect to where "water ends" for purposes of the CWA. Therefore, the agencies' interpretation of the CWA is informed and fully supported by the Science Report and the review and comments of the SAB, but not dictated by them. The final rule contains an expanded discussion of the terms relevant to a significant nexus evaluation, as well as identifying the specific functions that provided can significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, and the territorial seas.**

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

4.202 The burden of proof and supporting documentation required to determine the presence/absence of "other waters" (i.e., significant nexus analysis) is solely the responsibility of the applicant and could be very time consuming and expensive. Based on ELM's experience, some projects/clients will not be able to afford this analysis despite the fact that their project may have no potential, or at most a *de minimis*, impact to the public's water resources. There should be some process (i.e., a flow chart or "if/then" scenario) in the significant nexus analysis that could be adjusted to fit the process depending on the project size, duration, location, etc. (p. 2)

Agency Response: **The federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The**

[189] Id. at 6.

final rule, promulgated under authority of Sectio 501 of the CWA, establishes a binding definition of "waters of the United States" and is consistent with the statue, the caselaw, and the Constitution. See Technical Support Document. The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htmThe Agencies believe the final rule will simplify the process of making jurisdictional determinations.

This rule only affects the definition of "waters of the United States." There are no changes in the implementing regulations to the process to conduct jurisdictional determinations and/or seek appeals remained in 33 CFR Parts 320-332 and as such are outside the scope of the rule.

The agencies have jointly developed Regional Delineation Manuals to identify waters and the ordinary high water mark respectively are located at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/reg_supp.aspx and http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

To assist in identification of potentially jurisdictional resources, the preamble cites a variety of publicly available resources which can be used to when making jurisdictional determinations.

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

4.203 The specific holding in SWANCC was that the agencies could not use the so-called migratory bird rule[190] as the basis for asserting jurisdiction over an isolated non-navigable water. See 531 U.S. at 174. In the preamble to the current proposal, the agencies outline what constitutes evidence of biological connectivity for purposes of a significant nexus analysis to determine the status of an "other water." In the course of that discussion, the agencies make a statement that is presumably intended to acknowledge the decision in SWANCC: "non-resident migratory birds that are not demonstrating a life cycle dependency on the identified aquatic resource, are not evidence of biological connectivity

[190] The "Migratory Bird Rule" actually refers to preamble language in which the agencies expressed the opinion that use of a feature by migratory birds constituted a sufficient interstate commerce effect to authorize regulation under the existing definition of the phrase "waters of the United States," specifically 33 C.F.R. § 328.3(a)(3). See 51 Fed. Reg. 41206, 41217 (November 13, 1986).

for the purposes of this rule." See 79 Fed. Reg. at 22214. In that same discussion, "life cycle dependency" is defined to include foraging and feeding, as well as more significant uses (e.g., nesting, spawning, etc.). Foraging and feeding are transient activities that non-resident migratory birds could engage in during brief stopovers in their migrations. Under the proposal, therefore, non-resident migratory birds that briefly use a feature for foraging or feeding presumably could be evidence of biological connectivity that may be sufficient to assert jurisdiction over an "other water." The fact that the agencies have included language in the proposal and accompanying preamble that could be interpreted to essentially resurrect the migratory bird rule demonstrates the significant regulatory over-reach associated with that proposal.

Recommendation: The agencies should clarify in any final rule that foraging and feeding by migratory birds is not sufficient evidence of biological connectivity to assert jurisdiction. (p. 36)

Agency Response: The final rule states that species such as non-resident migratory birds do not demonstrate a life cycle dependency on case-specific waters and are not evidence of biological connectivity for purposes of the rule. See Agency Summary Response Essay 10.

ERO Resources Corporation (Doc. #14914)

4.204 Include ephemeral and intermittent drainages in the list of "other waters" that are only jurisdictional provided they have a significant nexus to a water identified in paragraphs (a)(1) through (3).

This proposed modification provides the agencies a process to determine jurisdiction, and provides the regulated public an opportunity to provide information to the agencies to consider regarding the jurisdictional status of an ephemeral or intermittent drainage. This approach would allow the agencies and regulated public to use the current process for determining a significant nexus on a case-by-case basis as is currently done so this approach would not require substantial new policies and procedures.

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

Include ephemeral and intermittent drainages occurring within the Arid West Region in the list of "other waters" that are only jurisdictional provided they have a significant nexus to a water identified in paragraphs (a)(1) through (3). The "Arid West Region" is defined as the geographic area in which the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (Corps 2008) or its subsequent versions apply. (p. 17)

Agency Response: The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark"

and "tributary." To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. *See, e.g.*, SAB 2014b. These significant effects on traditional navigable waters, interstate waters, and the territorial seas occur even when the tributary is small, intermittent, or ephemeral.

It is important to note that many ephemeral waters listed are jurisdictional under current regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. The agencies have historically regulated of ephemeral waters is under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime.

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

4.205 In materials published since the proposed rule was released, EPA has made certain clarifying statements that should be included in any final rulemaking. For example, in the same question and answer document cited in the previous subsection of these comments, EPA provided the following clarification (p. 4): "A case specific significant nexus analysis for an 'other water' may only consider additional 'other waters' of the same type located in the same region, but the analysis would not combine 'other waters' with 'adjacent waters' even if they are of the same type and located in the same region."

Recommendation: The final rule should clarify that non-adjacent "other waters" are not to be evaluated in conjunction with adjacent waters of the same type when assessing the potential existence of a significant nexus. (p. 37-38)

Agency Response: The final rule has clarified that (a)(7) and (a)(8) waters shall not be combined with waters identified in paragraph (a)(6) when performing a significant nexus analysis.

Pennsylvania Aggregates and Concrete Association (Doc. #16353)

4.206 The proposed process for evaluating "other waters" is confusing and will result in inconsistent application. The "other waters" category is designed to capture any wet feature that cannot be found jurisdictional under the "tributary" or "adjacent water" categories. The agencies have proposed to assert jurisdiction over "other waters, including wetlands," that "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 (TNW), interstate water, or territorial sea.[191] However, there is no explanation as to exactly which waters may be considered "other waters." Several other phrases are used in the proposed rulemaking that need clarification including "in the region", "similarly situated", "aggregation", and "more than speculative or insubstantial." (p. 6)

Agency Response: **See response 4.1 (Doc. #16386) The final rule identifies two limited sets of waters that are not jurisdictional by rule but are subject to case-specific analysis to determine if a significant nexus exists. Section (a)(7) identifies five specific types of waters in specific regions considered "similarly situated" by rule in a single point of entry watershed, and Section (a)(8) provides that waters within the 100 year flood plain 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) are subject to case specific significant nexus determinations. The final rule also provides clarification on key phrases including "in the region" and "similarly situated".**

4.207 The preamble indicates that the agencies may adopt a brand new approach to regulating "other waters" that is different from the proposed rule. Although the agencies have proposed a "case-by-case" analysis, the preamble discusses several other options for regulating other waters, including determining that certain "other waters" are categorically jurisdictional based on ecoregions or other subcategories.[192] But the preamble does not provide enough information on or scientific support for these alternate approaches that would allow PACA to meaningfully comment. (p. 6)

Agency Response: **While the agencies considered identifying ecoregions as the appropriate spatial scale at which to consider similarly situated waters, the final rule continues use of the single point of entry watershed as 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. Because the movement of water from**

[191] 79 FR 22263.
[192] 79 FR 22263.

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* proposal Appendix A, Scientific Analysis, 79 FR 22246, Science Report, and Technical Support Document. The agencies believe use of the single point of entry watershed is a logical outgrowth of the proposal and the public comment.

4.208 Furthermore, this category of "other waters" violates SWANCC by allowing for jurisdiction over isolated waters, such as industrial ponds, that have little or no connection to TNWs. The science does not support the proposed assertion of jurisdiction over these "other waters." Publishing a final rule that adopts an "other waters" approach is contrary to APA requirements. "Other waters" should not be regulated under this proposal. (p. 6)

Agency Response: The final rule does not assert jurisdiction by rule over "other waters." By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Peltzer & Richardson, LC (Doc. #16360)

4.209 The USACE and EPA also seek comments on various additional topics related to "other waters" determinations under the "significant nexus" definition. For example, the agencies suggest that alternative processes could be considered for grouping or aggregating waters for simplicity in determination of jurisdictional extent. (Federal Register, Vol. 79 No. 76, April 21, 2014, pp. 22217-22219) The Kaweah and Tule Commenters do not support any of the alternative processes, such as aggregating "other waters" on a regional basis, and instead would support a process that simply defines "other waters as excluded from the definition of Waters of the U.S. absent an affirmative showing of significant nexus. This would essentially reverse the burden of proof. It should be kept in mind that these waters are not navigable themselves, are not tributary to navigable waters, are not wetlands adjacent to navigable waters, and are isolated and intrastate. The connection to a federal interest is therefore already minimal, at best. Federal jurisdiction over these waters should not be asserted unless and until an affirmative showing has been made that significant nexus (as defined above) exists. Any other attempt to aggregate waterways into groups, some of which may be assumed

jurisdictional and others non-jurisdictional, simply makes this analysis more complicated than it needs to be. (p. 4-5)

Agency Response: **The federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The final rule, promulgated under authority of Sectio 501 of the CWA, establishes a binding definition of "waters of the United States" and is consistent with the statue, the caselaw, and the Constitution. See Technical Support Document.**

The SAB has noted that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction based solely on geography or ecoregion. Additionally, the agencies disagree that aggregating waters complicates the significant nexus analysis. The final rule identifies five specific types of waters in specific regions considered "similarly situated" by rule in a single point of entry watershed, which should ensure more consistent determinations and reduce the complexity of conducting jurisdictional determinations. The final rule makes clear that the agencies do not assert jurisdiction unless a water alone, or in combination with similarly situated waters (as defined in (a)(7) or (a)(8)) have a significant nexus (as defined in (c)(5)) with a traditional navigable water, interstate water, or territorial sea.

Albuquerque Metropolitan Arroyo Flood Control Authority (Doc. #15221)

4.210 The conclusion that all MS4 tributaries are jurisdictional per se is counter to the principles established in the Rapanos decision. As the Court noted in its decision, for an effect to be significant it must be more than speculative or insubstantial. However, MS4 systems have extremely limited effect on TNWs because they flow only when it rains. Nevertheless, the proposed rule concludes that streams – regardless of their size or frequency of flow – strongly influence how downstream waters function, whether it be by supplying most of the water, transporting sediment or organic matter, providing habitat, or changing nutrients. Yet none of these apply to the AMAFCA MS4 system. The Rio Grande is impacted by the Albuquerque MS4 only during the strongest events during the rainy season, usually consisting of a matter of hours or days of water contribution. The stormwater does not affect downstream water function, such as by providing organic matter, habitat, or taking up nutrients. Unlike other tributaries, the primary function of the MS4 system is not to transport sediment downstream, but to capture stormwaters to prevent flooding. The stormwater does not provide flow to downstream rivers to support navigation. Instead, the primary claim to jurisdiction has been on the ability of the MS4 system to deposit pollutants in the river.

However, for a significant nexus to exist, there must be more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of the river. Without evaluating the individual MS4 systems, including the capacity of each to carry pollutants, and the multitude of data collected under the NPDES permit regarding water quality at the time of conveyance, it is impossible to determine whether a significant nexus does in fact exist.

Furthermore, as AMAFCA is aware of the debris and floatable pollutants which enter the MS4 systems from various point sources, AMAFCA has implemented water quality

treatment measures throughout the system. AMAFCA conducts extensive maintenance on these facilities throughout the year to remove pollutants and ensure the water quality features work as designed. To date, there is no data to support any contention that either chemical or floatable pollutants from the MS4 system are impacting the river, especially in quantities greater than those authorized under the existing NPDES discharge permit. More importantly, the potential to impact chemical integrity is unlike that of other tributaries. While most tributaries affect the TNW by trapping chemicals or transporting suspended sediments, the waters from the MS4 serve no such function.

Instead, jurisdiction based on the system's ability to affect the chemical consistency of the river would be based merely on the presence of pollutants in the system upstream of the installed BMP's. Concluding that the system affects the chemical integrity of the river because of the presence of pollutants upstream of installed BMPs requires speculation as to the effectiveness of those BMPs. As Rapanos has made clear that speculation is impermissible in asserting jurisdiction, such a conclusion is prohibited. Instead, in order to assert jurisdiction, a case-specific evaluation must be made to determine whether the AMAFCA MS4 system is actually having an impact on the Rio Grande River. (p. 5-6)

Agency Response: **The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary."**

The final rule also expressly excludes stormwater control features created in dry land and certain wastewater recycling structures created in dry land. Waters and features that are excluded under paragraph (b) of the rule cannot be determined to be jurisdictional under any of the categories in the rule under paragraph (a). See Features and Waters Not Jurisdictional compendium

NRG Energy, Inc. (Doc. #13995)

4.211 Based on the contradictory descriptions provided in the proposed rule, it is quite possible that most waters would be subject to the CWA. In lieu of clear definitions, case-by-case determinations could potentially always result in WOTUS determinations by regulatory personnel, and this outcome is contradictory to the intent of the rule, as stated in the preamble: "waters in a watershed in which there is no connection to a traditional navigable water, interstate water or the territorial seas would not be waters of the United States" (Id. at 22 192). (p. 4-5)

Agency Response: **The final rule limits significant nexus analysis of "other waters" to two specific sets of waters. See Agency Summary Response Essay 1. In order to improve understanding of waters not jurisdictional, the final expands the discussion of excluded waters and other features not regulated. When a water is**

excluded by rule, it is not a "water of the United States" even where it meets the definition of a paragraph in (a)(1) through (a)(6).

Southern Company (Doc. #14134)

4.212 Central to the confusion is the proposal's abject failure to offer greater clarity on the features that distinguish between jurisdictional waters and non-jurisdictional waters or uplands. The discretion left to field personnel to make that determination is unfettered. This is particularly problematic in the case of adjacent and non-adjacent wetlands and "other waters," such as ditches, that may exhibit wetland-like features that may be deemed jurisdictional under the proposal. EPA's Connectivity Report, for example, adopted the Cowardin classification of wetlands – a much more expansive non-regulatory approach – where the proposal suggests the regulatory definition of wetlands will remain based on the Corps' 1987 Guidance Manual. This confusion was also raised by the SAB panelists and needs to be clarified so that only the regulatory definition of wetlands will be applied as the proper basis for asserting jurisdiction over wetlands, regardless of whether they fit within the classification of "adjacent water" or "other water." *See Id. at* 10, 38. (p. 28)

Agency Response: The agencies continue to use the 1987 Corps Wetland Delineation Manual, and Regional Supplements, for identifying wetlands and their boundaries for purposes of the CWA section 404 regulatory program. The definition of wetlands in the final rule is unchanged from the existing regulations.

EcoSynthesis Scientific & Regulatory Services (Doc. #14586)

4.213 Either way, the geographic applicability and description of the other waters needs to be very detailed, analogously to the manner in which critical habitat is defined. The range of hydrologic, vegetational, and soils conditions of the other waters needs to be specifically defined and the rationale for finding that they have a significant (not just any) nexus to downstream water quality stated, not just with a scientific reference to one subset of the other waters, but to the whole of the category. Sometimes, that would mean that the initial proposition of a particular set of other waters is quite narrow, and is then expanded as additional science is done. For example, some vernal pools occur on soil landscapes with a distinct impermeable horizon (e.g. duripan) within the solum. If an "other waters" definition is made based upon science from a duripan landscape (a limited amount of which does exist already), it should be clearly circumscribed to be applicable to such wetland and soil types only. When additional science becomes available from a landscape where soils simply have generally low permeability, or for wetland types (e.g., mesic facultative grasslands), even on duripan landscapes, that do not experience the prolonged ponding that is diagnostic for vernal pools, then the other waters definition would correctly be expanded later. (p. 7)

Agency Response: The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations.

The comment responds to the portion of the proposed rule that included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over

the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. The rationale for the agencies' determination to consider these waters similarly situated by rule is set forth in the preamble and in the Technical Support Document. Second, at paragraph (a)(8), the final rule identifies 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). The agencies establish a limit on case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that the threshold described in (a)(8) reasonably identifies the areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. As set forth in the Preamble to the final rule, 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.

The agencies do not anticipate changes to this rule. However, 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 formal rule-making, including public comment.

The Wildlife Society (Doc. #14899)

4.214 We support the use of wetland-dependent wildlife as indicators of biological connectivity for determining jurisdictional status of other waters. Semi-aquatic and wetland-dependent species often depend on multiple wetland and deepwater habitats and presence or absence of these organisms can be used to indicate ecological adjacency and functional relationships between "other waters" and jurisdictional waters. (p. 4)

Agency Response: The case specific analysis uses the modified definition of "significant nexus" in the rule includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those

functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3) of this section." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of effect on biological integrity 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 effect on biological integrity 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.

American Electric Power, Inc. (Doc. #15079)

4.215 The finding of "significant nexus" for the newly defined waters is too broad-brushed and over-reaching. The agencies failed to elucidate the parameters of hydraulic connectivity frequency, magnitude, and duration that, considered together, could be used to make an objective, unbiased determination of the importance of a water body or wetland on a downstream TNW. (p. 4-5)

Agency Response: See Agency Summary Response Essays 1, and 6 See response 4.61 (Doc. #7930) and 4.146 (Doc. #14637)

JEA (Doc. #15194)

4.216 The proposed definition does not specify an inundation return period for deeming a waterbody jurisdictional based on floodplain considerations; instead, the proposal states that precise outcomes will be determined based on "best professional judgment." How is a member of the regulated community to know if a seemingly isolated water is jurisdictional based on such a nebulous test? (p. 4)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The agencies believe that the final rule provides clarity that will allow a landowner to assess whether a particular local water is likely covered. The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

April Snell, Executive Director, Oregon Water Resources Congress (Doc. #15488)

4.217 While the proposed rule creates additional categorical determinations to provide certainty as to what types of waters are always jurisdictional, the rule does not provide an equivalent level of certainty that other waters are never jurisdictional. Instead, our members who have waters in their districts that are not categorically jurisdictional will still be left wondering the outcome of the agencies' case-by-case "significant nexus" determination. Regardless of the determination, it is likely that litigation will ensue (either from the project proponent or project opponent disagreeing with the decision), at the detriment of farmers and other water users who are essential contributors to our nation's economy and our global food supply. (p. 2)

Agency Response: Recognizing the vital role of farmers in providing the nation with food and fiber, the Clean Water Act in Section 404(f)(1) (33 U.S.C. § 1344(f)(1)) exempts many normal farming activities such as seeding, harvesting, cultivating, planting, soil and water conservation practices, and other activities from the Section 404 permitting requirements. Paragraph (b) of the final rule specifies features that

are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(1) through (8) of the section. Additionally, paragraph (a)(8) provides thresholds for waters for which a case specific significant nexus determination may be performed.

Orleans Audubon Society (Doc. #2113)

4.218 Many other waters such as tributaries and ephemeral and intermittent streams and wetlands are extremely important to maintaining the biological integrity of all waters in their proximity. Many wildlife species, including certain ducks, gulls, freshwater turtles, fish, and amphibians regularly move between permanent and temporary waters during their life cycle – they need both in order to survive. If the inland wetlands, streams and tributaries wildlife depend on are not afforded protection under the CWA, they may adversely impacted and disrupt the biological integrity of the entire landscape. (p. 1-2)

Agency Response: The agencies believe the final rule reflects these comments.

Ducks Unlimited (Doc. #11014)

4.219 The draft rule currently proposes that the required significant nexus of an "other water" (assume that our use of this phrase considers that to also include "in the aggregate" and in most cases not simply a single wetland) must be demonstrated with and (a)(1) through (a)(3) water, i.e., a traditionally navigable water, interstate water, or territorial sea. However, we believe that the science supports our recommendation that this should include (a)(4) and (a)(5) waters (i.e., tributaries and impoundments of such waters), as well. Under the proposed rule, and as strongly supported by the available science, the entire tributary system is considered to be a "water of the U.S." Thus, it is not clear to us, and seems to defy a science-based rationale, as to why a significant nexus between "other waters" and a tributary that is a "water of the U.S." by rule due to its direct impact on a traditionally navigable water, is any less significant than that of an "other water" that is demonstrated to have a significant nexus directly with the navigable water. If such a significant nexus exists, whether it is with the traditionally navigable water or with its tributary, the net effect is the same in both cases – the significant nexus affects the integrity of the navigable water.

We therefore recommend that when case-specific analyses of "other waters" are conducted, the required significant nexus should be able to be applied to any categorically designated "water of the U.S." This would include not only (a)(1) through (a)(3) waters, but also include at least (a)(4) and (a)(5) waters. As the situation with regard to waters that will be "waters of the U.S." by virtue of their adjacency is further clarified, the final class of (a)(6) waters should likely also be included as a potential avenue of demonstrating significant nexus. (p. 22-23)

Agency Response: Justice Kennedy concluded that the term "waters of the United States" encompasses wetlands and other waters that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id.* at 759. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other

categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).

Southern Environmental Law Center et al. (Doc. #13610)

4.220 The agencies must clarify how the traditional navigable waters test should be performed. Unless guidance is provided, traditional navigable waters will not be evaluated in a consistent and reliable manner. Significant nexus tests, in turn, will also not be performed in a consistent manner. (p. 17)

Agency Response: The agencies disagree with the term "test" when referring to the identification of traditional navigable waters. EPA and the Corps' existing regulations (e.g. 33 CFR 328.3(a)(1); 40 CFR 230.3(s)(1); 40 CFR 122.2) include within the definition of "waters of the United States" the definition of traditional navigable waters. For the purposes of CWA jurisdiction, the preamble lists waters that will be considered traditional navigable waters under (a)(1) of the rule.

Mike Leahy, Conservation Director, and Paul Lepisto, Regional Conservation Coordinator, Missouri River Initiative, Izaak Walton League of America (Doc. #15503)

4.221 We join with the over whelming majority of Americans in our support of clean water and whole heartily support the rule proposed by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers to restore protections under the CWA to our nation's headwater streams and wetlands. We also strongly urge you to strengthen the rule by restoring protections to non-adjacent waters, which are also "waters of the United States".

Upstream waters are the source of the nation's rivers, lakes, and our drinking water. Headwater streams and wetlands filter pollutants from surface water, reduce flooding, recharge ground water, and provide critically important habitat for fish and wildlife. They provide drinking water to 117 million Americans. These waters support world class fishing, hunting, boating and other recreation. This greatly adds to many Americans quality of life and provides $200 billion annually to our national economy supporting 1.5 million jobs.

Longstanding protections for upstream wetlands and streams were wrongly revoked in response to two Supreme Court decisions in 2001 and 2006 (Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159

(2001) and Rapanos v. United States, 547 U.S. 715 (2006)). Since those rulings and subsequent agency guidance misapplying them, the U.S. has seen a 140% increase in the rate of wetlands loss. We respectfully ask you to issue a final rule that reestablishes protections for all of our headwater streams and wetlands. The proposed rule would restore some of the former protections for headwaters, and clarify which wetlands and streams are protected and which require a case-by-case evaluation. All tributaries and wetlands adjacent to them should be protected. Non-adjacent wetlands and water bodies should also be once again recognized as "waters of the United States" consistent with Supreme Court case law and once again protected under the Clean Water Act. These other waters of the U.S. that warrant protection include prairie potholes, playa lakes, vernal pools. They are not only part of our nation's network of waters, they provide vital habitat for waterfowl and other wildlife, benefiting hunters and the businesses that depend on waterfowl hunting in particular. (p. 1-2)

Agency Response: The agencies do not believe that the decisions of the Supreme Court are correctly interpreted as removing upstream headwaters from coverage under the Clean Water Act. See the Technical Support Document for the agencies' interpretation of the legal precedent.

In the final rule, "tributaries" and "adjacent" waters meeting the criteria contained in the definition are defined as jurisdictional by rule, unless otherwise excluded. The final rule recognizes that there are waters other than tributaries and adjacent waters as defined where the science may demonstrate through a case-specific analysis that there exists a significant nexus to a downstream (a)(1) through (a)(3) water. Additionally, in the final rule, the agencies have identified by rule that prairie potholes and western vernal pools are two of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule. While playa lakes and non-western vernal pools have not currently been identified, these subcategories of waters are jurisdictional where they fall within any one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The final rule does recognize that not all waters have the requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional.

Tip of the Mitt Watershed Council (Doc. #12855)

4.222 We also recommend that the case-specific significant nexus analysis for "other waters" apply not only to traditional navigable waters, interstate waters, and the territorial seas, but also to the impoundments and tributaries of these waters. These impoundments and tributaries are jurisdictional by rule because they have a scientifically proven significant nexus to traditional navigable waters, interstate waters, and the territorial seas. If an "other water" is able to affect the chemical, physical, or biological integrity of an impoundment or tributary of regulated waters, than that adverse effect will also impact the traditional navigable waters, interstate waters, and the territorial seas. The case-by-case basis to evaluate significant nexus to a jurisdictional water should subsequently apply to all jurisdictional waters, including impoundments and tributaries to traditional navigable waters, interstate waters, and the territorial seas. (p. 3-4)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

The Wildlife Society (Doc. #14899)

4.223 We support the idea that categories of wetlands and other waters should, in advance, be defined as jurisdictional, thereby offering protection to wetlands and other waters in the aggregate. The aggregate evaluation of 'similarly situated' wetlands within an ecoregion is likely appropriate and will provide clarity and certainty in an efficient process of determining jurisdictional status. We urge caution in consideration of the time-scale at which wetlands within an ecoregion are evaluated. For example, even if normally present, a significant nexus for wetlands in the Central California Valley ecoregions may not be readily identifiable or quantifiable if evaluated during an ongoing drought in western states, for example.

We also suggest that Level III ecoregions are an appropriate scale at which to establish jurisdiction classifications of similarly situated wetlands in the aggregate and that a finer-scale designation would not offer increased precision or clarity in determining jurisdictional status. We support existing Level III ecoregions listed on page 22215 of the Federal Register, however we urge agencies to consider inclusion of additional ecoregions containing different wetland ecotypes, such as playa wetlands (within ecoregions 24, 25 and 26; Chihuahuan Deserts, High Plains and Southwestern Tablelands)) (79 FR 22215). Therefore, we encourage the EPA to include "Level III ecoregions" specifically in the proposed rule language to recognize the value of this unit of measure as an appropriate level for analysis of similarly situated "other waters".

Additionally, we suggest a clear process be outlined whereby the presumptions of the aggregate regulation could be controverted if there is significant supporting science. For example, if an aggregated group of other waters is considered to not have a nexus (e.g., playas), but a wetland of the group can be shown to have a nexus, there should be a clear process for establishing jurisdictional status of individual or subcategories of other waters. (p. 4-5)

Agency Response: **The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis.**

The agencies have determined that categories of waters beyond those identified in (a)(1) – (a)(6) will not be defined as jurisdictional by rule, thereby recognizing that a gradient of connectivity exists and asserting jurisdiction only when the connection and the downstream effects are significant and more than speculative and

insubstantial. The agencies have also determined that the single point of entry watershed is a more reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard than ecoregions.

Flathead Lakers (Doc. #15076)

4.224 We encourage additional efforts to simplify the rules and definitions to clarify language such as "similarly situated," and "within a single landscape unit," and to more clearly define when a water body is considered a "ditch" vs. a "tributary." An ecosystem (or ecoregion as described in the rule) approach to defining which "other" waters are jurisdictional/nonjurisdictional under the rule may be more appropriate and more practical than requiring a site-specific scientific analysis. Using language and definitions that are both scientifically defensible and clear to the public should simplify complying with and enforcing the rules, and reduce litigation. (p. 2)

Agency Response: The final rule clarifies "similarly situated" to describe waters that perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters, as well as expands the sections of the preamble relating to tributaries and ditches. The agencies have also determined that the single point of entry watershed is a more reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard than ecoregions. Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the rule only if they both meet the definition of "tributary" and are not are not excluded under paragraph (b)(3) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction.

Western Pennsylvania Conservancy (Doc. #15202)

4.225 Due to widely varying geographies and geology across the U.S., it is imperative that regional or ecoregional differences be considered. While it may seem reasonable to break out "other waters" based on U.S. ecoregion type, in some geographies hydrologic regions may work better than ecoregions. For example, here in Pennsylvania, certain vernal pools may fail to meet the significant nexus test when considered individually, but when grouped with other vernal pools, may deserve inclusion. Thus, a "one-size-fits-all" approach may do a disservice to some hydrologic systems. Whatever method is ultimately selected, it is important that hydrologic function in different areas of the country be considered differently when making determinations using the similarly situated analysis. (p. 2)

Agency Response: The Agencies agree that some flexibility is needed to account for regional differences in aquatic resources. The final rule provides more clarity regarding definitions and categories of waters jurisdictional by rule, while also retaining flexibility to for the Agencies (or State, under 404(g)) to make case-specific determinations of jurisdiction in (a)(7) and (a)(8), based on the significant nexus factors. The agencies have determined that the single point of entry watershed is a more reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard than ecoregions.

Hackensack Riverkeeper, Hudson Riverkeeper, Milwaukee Riverkeeper, NY/NJ Baykeeper and Raritan Riverkeeper (Doc. #15360)

4.226 The rule should explicitly acknowledge that not every water of the United States flows to the ocean. The SAB Report shows that waters can have significant impact on Waters of the United States based on their disconnection from a greater watershed. For example, "reducing wetland water storage capacity by connecting formerly isolated potholes through ditching or drainage to the Devils Lake and Red River basins could enhance stormflow and contribute to downstream flooding." Additionally, a unidirectional wetland may still affect interstate commerce, as could a prairie pothole, an isolated basin, a playa lake or a vernal pool – particularly if these features are hydrologically connected to each other.

It's also important to note that "other wetlands" (e.g., those not adjacent to traditional navigable waters and tributaries) often have a significant cumulative effect on the health of downstream waters, and thus impacts to a wetland area should be considered in aggregate. This conclusion is well and thoroughly supported by the contents of the SAB Report. Where appropriate, the Agencies should apply generally accepted principles of wetland and watershed science to determine when the connectivity and cumulative effects of "other waters" meet the threshold for Clean Water Act protection. Further, the Agencies should apply generally accepted economic principles to determine whether "other waters" meet the threshold for Clean Water Act protection as commercial waters.

Because, as per the SAB Report, broad conclusions about unidirectional or disconnected waterbodies are impossible to draw, the definition of Waters of the United States should include,

> 7. Such other waters the disruption of which may impact above listed waters, or interstate commerce. (p. 10-11)

Agency Response: In developing the final rule, the agencies have taken into consideration conclusions from the Science Report. Specifically, Conclusion 5 of the Science Report. The identification of subcategories under paragraph (a)(7), which are identified as similarly situated by rule, and (a)(8) waters, which can be determined on a case-specific basis to be similarly situated, acknowledges the aggregate effects of certain waters.

Wisconsin Wetlands Association (Doc. #15629)

4.227 To uphold the intent of the Clean Water Act to protect the chemical, physical, and biological integrity of the nation's waters, requires starting with the premise that all areas where water is known to pool, discharge, recharge, or flow – above or below ground – are part of the hydrologic system. The science on this is undisputed. How to measure the relative contributions or "significance" of the portions of these systems that are functionally, if not visibly, connected to these systems, is the question at hand.

It is unrealistic to think that one single approach would be sufficient for completing these evaluations across the entire continental U.S., particularly given our diverse landscape and the uneven distribution of available science. For this reason, we recommend employing a combination of approaches and offer the following observations about the benefits, limitations, and potential applications for each:

a. The case-specific analysis established in the proposed rule is a necessary component of the rule, but is too cumbersome to apply broadly.

The proposed rule provides that "on a case-specific basis, other waters, including wetlands, are waters of the United States 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 water identified in paragraphs (s)(1) through (3).

We agree that the rule must provide an opportunity for case-specific analyses to determine when a significant nexus with downstream waters is present. They are most appropriate in areas or regions that have not been well-studied or subject to prior regional review. Maintaining the option for case-specific analysis provides flexibility to conduct analyses at various scales and to incorporate new science as it becomes available. The rule should provide the discretion for agencies to conduct or consider new research to support significant nexus determinations and should provide a mechanism for designating additional waters without requiring amendments to the rule.

We also strongly support the proposed language related to "similarly situated waters in the region" as it acknowledges the need to consider the aggregate effects of some classes of waters. This is extremely important in northern Wisconsin, where small ephemeral wetlands are abundant on the landscape and significantly regulate the timing and velocity of water moving from upper to lower portions of watersheds.

Despite the benefits and need, strict reliance on case-specific analyses is a flawed approach. Among other things, it is administratively cumbersome. Consideration of similarly situated waters in aggregate is also unlikely to be triggered under typical permitting scenarios where site-specific, rather than landscape scale, jurisdictional determinations are the norm. We recommend employing case-specific analyses in combination with the additional approaches described in (b) and (c) below.

b. The scientific literature summarized in the draft SAB Connectivity Report provides sufficient evidence to categorically include wetlands in certain regions or watersheds under the definition of Waters of the U.S.

We strongly support the inclusion of such waters where sufficient peer-reviewed literature exists to evaluate and generalize about the connectivity and downstream effects of these wetlands on a regional or watershed basis. As noted by Justice Kennedy, science used to support a jurisdictional determination need not apply to just the specific waters studied, but can be generalized and applied to similar landscapes in some cases. We strongly agree and encourage the agencies to acknowledge that basic principles of watershed science can be applied broadly across similar landscapes.

Because research dollars are scarce and research projects are not distributed uniformly across the country, relying solely on peer-reviewed, site-specific studies will not adequately address all situations where the aggregate effects of other waters are likely to be significant. A priori designation of similarly situated waters, and case-specific analyses using landscape-level tools are also needed.

c. Determining by rule that other waters are similarly situated in certain areas of the country is an efficient, and scientifically defensible approach to protecting classes of other waters based on landscape-level data and dynamics.

We agree that Level III ecoregions are the appropriate scale for advanced identification of areas where the aggregate effects of similarly situated waters can be presumed to have a significant nexus and be classified as Waters of the U.S. We also generally support the list of 25 ecoregions identified in the preamble to the rule.

Based on our knowledge of Wisconsin's landscape we concur that wetlands in ecoregions 50 and 51 (Northern Lakes and Forests, and North Central Hardwood Forests, respectively) should be considered similarly situated. Broadly speaking, these areas of the state have a high abundance of small, upper watershed wetlands that process significant annual snowfall, and are subject to significant surface and sub-surface exchange with other waters.

Wisconsin ecoregions 52 and 53 also warrant additional evaluation. Region 52, known as the Driftless Area because it was not affected by glaciers, is home to an extremely dense network of trout streams (see figure in Wisconsin-Specific Considerations below), the majority of which have small source-water wetlands at their origins. Both regions 52 and 53 have substantial areas of karst topography where there is presumed to be a high degree of exchange between wetlands, groundwater, and other surface waters.

The ecoregional approach to identifying "other waters" of the U.S. provides a framework for applying relevant science and information across similar landscapes. We suggest encouraging the use of remote sensing and landscape level assessment tools to generate evidence in support of significant nexus determinations at an ecoregional scale.

d. All approaches for identifying "other waters" must consider both current and historic landscape context.

Many of the other waters to be evaluated reside in highly altered landscapes where drainage, development, forestry, and other land uses have degraded wetland and watershed function, including small and large-scale disruptions in where and how surface and groundwater interact.

The rule should acknowledge that jurisdictional determinations for other waters may consider evidence of current and historic connectivity. This approach is consistent with the intent of the Clean Water Act to *restore* and maintain the nation's waters. It is also consistent with the administration of the Act which designates waters based on past and potential use and prohibits further degradation of impaired waters.

The rule should also recognize cumulative, historic impacts to wetlands and waterways as a factor that must be considered when evaluating the relative influence of similarly situated other waters in a region. As proposed, the rule seems likely to classify other wetlands as Waters of the U.S. when they are regionally abundant and high functioning. It may not be as readily interpreted to classify other waters in areas where wetlands and waterways have been highly degraded or disturbed. (p. 3-5)

Agency Response: **In the final rule, the agencies have identified six categories of waters that are jurisdictional by rule and two categories ((a)(7) and (a)(8)) that may be subject to case-specific determinations. In the final rule, the agencies in (a)(7) identified five specific types of waters-- prairie potholes, Carolina and Delmarva Bays, Pocosins, western vernal pools in California, and Texas coastal prairie wetlands -- the agencies determined are "similarly situated" by rule in a single point**

of entry watershed in a single point of entry watershed. The agencies agree that determining that these waters are similarly situated is an efficient, scientifically defensible approach that is more practical than site-specific analyses.

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 analyses may be undertaken. The rule establishes that case-specific determinations may be made for waters located within the thresholds provided by (a)(8).

The agencies have determined that the single point of entry watershed is a more reasonable and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard than ecoregions. The final rule allows for some limited consideration of historic connectivity as evidence in the jurisdictional determination, such as in determining traditional navigable waters or where physical characteristics of bed and bank are absent in the field, but does not anticipate it being a regular part of the record.

Connecticut River Watershed Council (Doc. #16456)

4.228 We appreciate the Agency's interest in soliciting comment as to additional ways other than on a case-by-case basis to specify which "other waters" meet the "similarly situated" or "significant nexus" tests. We believe there is sufficient scientific information for the Agency to stipulate waterbodies within ecoregions or landscapes as being jurisdictional "other waters." We would encourage such an approach to continue providing more certainty to the public as well as appropriate protection to these waters. We are not specifically endorsing any of the three alternative approaches, but consider the idea of reducing the amount of case-by-case analysis to be a good one. We can see merit in further considering alternatives 1 or 2, both of which have strengths. However as others have noted we think with either such approach it would be necessary to allow for the introduction of additional science to ensure that "other waters" were not categorically excluded or included permanently (or until the next rulemaking happens to be undertaken). (p. 1)

Agency Response: **See Agency Summary Response Essay 7.**

WaterLegacy (Doc. #18017)

4.229 WaterLegacy believes that the concept of waters of the United States does not support the idea of hierarchy among interconnected and adjacent waters. Reduction in flow of a tributary stream or excavation of adjacent wetland can result in pollution, diminished use for water transport or a significant flood risk in downstream waters. Thus, we believe that the case-by-case consideration of waters with a significant nexus to other waters should apply equally to all waters of the United States. We request a clarification in EPA's proposed Rule 40 C.F.R. § 230.3(s) as follows:

(s) For purposes of all sections of the Clean Water Act, 33 U.S.C. 1251 et seq. and its implementing regulations, subject to the exclusions in paragraph (t) of this section, the term "waters of the United States" means . . . (7) 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 water identified in paragraphs (s)(1) through (3) (6) of this section. (p. 2)

Agency Response: **The agencies agree that the concept of waters of the United States does not support the idea of a hierarchy of waters, but the available scientific record recognizes that there exists a gradient of connectivity between waters, and will therefore assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. The final rule defines "waters of the United States" to include eight categories of jurisdictional waters. The rule maintains existing exclusions for certain categories of waters (including groundwater), and adds additional categorical exclusions that are regularly applied in practice. The rule reflects the agencies' goal of providing simpler, clearer, and more consistent approaches for identifying the geographic scope of the CWA. The rule establishes jurisdiction in three basic categories: waters that are jurisdictional in all instances (traditional navigable waters, interstate waters, territorial seas, and impoundments of jurisdictional waters), waters that are jurisdictional but only if they meet specific definitions in the rule (tributaries and adjacent waters), and a narrowed category of waters subject to case-specific analysis ((a)(7) and (a)(8)).**

Society for Freshwater Science (Doc. #11783)

4.230 Lastly, under the "other waters" theme, SFS requests that the Agency clarify the burden for demonstrating the connectivity of "other waters". Must it be proven that "other waters" either alone or in aggregate have a significant connection to a (a)(1) to (a)(3) water or to a(1) to (a)(6) water? The language suggests the former, but the science would suggest the latter. By an associative principal, it would seem only defensible scientifically, that contribution to the quality of a water deemed jurisdictional by rule under (a)(4) to (a)(6) would mean contribution to the water quality of waters defined as (a)(1) to (a)(3). If tributaries, for example, are known to clearly contribute to the water quality of downstream navigable waters, then anything that affects their quality should do so as well, simply by definition, especially since tributaries are, by definition, similarly situated. This appears unclear in the rule content, although it may be clear in the proposed language. This conflict should be resolved, in our scientific opinion, by changing this language to include that (a)(7) waters can demonstrate a nexus with the full list of (a)(1) to (a)(6) waters to be considered jurisdictional. (p. 4)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

4.3.1 Proposed Rule Method of Similarly Situated in the Region

Florida Department of Environmental Protection (Doc. #15080)

4.231 The Department asks that the federal agencies clarify whether unique geographic and hydrologic conditions of individual watersheds are relevant where the agencies aggregate water bodies in a watershed for the purpose of asserting federal jurisdiction over categories of waters. If so, is there opportunity to refine the jurisdictional categories to account for regional differences in watersheds? (p. 4)

Agency Response: The Agencies agree that some flexibility is needed to account for regional differences in aquatic resources. The final rule provides more clarity regarding definitions and categories of waters jurisdictional by rule, while also retaining flexibility to for the Agencies (or State, under 404(g)) to make case-specific determinations of jurisdiction in (a)(7) and (a)(8), based on the significant nexus factors. The rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). The agencies also have clarified 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 definition of significant nexus in (c)(5) identifies specific functions that can be analyzed. See Agency Summary Response Essay 8.

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

4.232 To the extent EPA and the Corps are relying on the aggregation of either effects and/or connectivity to determine the legal requirement for a significant nexus, the agencies should explain whether that aggregation included effects and/or connectivity provided by waters that Congress did not authorize the agencies to regulate, such as groundwater systems, and why they believe the use is appropriate in the legal context. (p. 11)

Agency Response: For (a)(7) waters determined to be "similarly situated" by rule in a single point of entry watershed, the preamble contains an evaluation of the relevant factors used in making those determinations for each category of waters, including hydrological connectivity. With respect to consideration of non-jurisdictional features as part of a case-specific significant nexus determination, See response 4.112 (Doc. #17921.1). Neither shallow subsurface connections nor any type of groundwater are "waters of the United States".

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

4.233 The rule should address what is meant by the cumulative effects of tributaries, neighboring waters, or other waters are on downstream waters and how is to be measured. It should also address the issue of what proportion of the waters whose effects have been aggregated would need to be adversely impacted (or eliminated) to create a significant negative impact on larger downstream waters. Finally, the rule should discuss the spatial and temporal scales at which functional aggregation should be evaluated. (p. 11)

Agency Response: The preamble to the final rule, supported by the Science Report, details the specific basis for the categories of waters found to be jurisdictional in all cases. For waters requiring a case-specific analysis, the preamble and final rule list the specific factors that should be used to conduct a significant nexus evaluation.

State of Alaska (Doc. #19465)

4.234 The EPA and Corps staff did not explain how the agency will ensure consistent implementation of the proposed rule on the ground, especially with respect to consistency in the application of the "significant nexus" test. But, that could be based on the Corps and EPA's assumption (which they say is already assumed today under existing guidance) that most of the non-navigable waters and wetlands throughout the country are jurisdictional, unless they qualify for one of the handful of specific exceptions set out in the proposed rule. This expansive and automatic affirmative jurisdictional view regarding Alaska waters and wetlands certainly ignores the "case-by-case" determinations that Justice Kennedy stated was required for the Corps to impose its authority. (p. 13-14)

Agency Response: 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. In the final rule, the agencies have identified six categories of waters that are jurisdictional by rule and two categories ((a)(7) and (a)(8)) that are not jurisdictional by rule but may be subject to case-specific determinations. To the extent the commenter asserts the agencies may not establish that categories of waters have a significant nexus to downstream traditional navigable waters, interstate waters, or territorial seas, the agencies disagree. Justice Kennedy stated that the significant nexus analysis must be applied on a case-by-case basis "absent more specific regulations." 547 U.S. at 780-81 (Kennedy, J., concurring). Justice Kennedy invited the agencies to establish categories of covered waters. ***Id.*** **at 780—81.**

4.235 This proposed change lacks sufficient definition and clarity for the applicant, and regulators. Case specific analysis is very resource intensive and since the burden to prove a water or wetland is not jurisdictional lies with an applicant this could become very cost prohibitive. The State recommends that the federal agencies provide clarification and define terms such as "region" and "sufficiently close" to reduce confusion. Without this clarification, one could interpret the language as stated in the proposed rule to mean that significant nexus analyses would be required on large-scale

watersheds. In some cases applicants may simply treat geographically separated waters as jurisdictional in order to avoid the burden of proving that these waters do not in fact have a significant nexus to a downstream water.

Moreover, until the federal agencies prove otherwise, "other waters" should be deemed nonjurisdictional. Notably, with this approach, the "other waters" are still regulated by states, so there is no absence of regulation.

Since geographically separated "other waters" do not have readily discernible characteristics that would demonstrate significant nexus, the default status should be non-jurisdictional unless and until a case-specific significant nexus analysis shows otherwise. If a case-specific significant nexus analysis demonstrates jurisdiction, that jurisdictional status should apply from that point in time forward unless and until material circumstances change (i.e., fill was permitted under a CWA Section 404 permit including any compensatory mitigation requirements of such a permit).

Further, as a legal matter, the State notes that EPA and the Corps inappropriately expand the significant nexus test to cover "waters," rather than just "wetlands" as Justice Kennedy opined in Rapanos. This will result in an unlawful and significant expansion of federal jurisdiction over waters that would, under Justice Kennedy's test, not be covered. (p. 23-24)

Agency Response: **See response 4.3 (Doc. #14625) and 4.100 (Doc. #9615)**

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

4.236 The Proposed Rule recognizes that the watersheds may be very large in arid areas of the West, like southeastern California, and it may be resource intensive to demarcate watershed boundaries and all relevant waters in the watershed. The Agencies offer an NHD mapping tool as a method to demarcate catchments surrounding the water to be evaluated that, in combination, are roughly the size of the typical nearby 10-digit hydrologic unit code (HUC-10) watershed. Marking all the relevant waters in the region would be a daunting task. The Agencies should propose a better description of the method for the public to evaluate; as it is described in the Proposed Rule, marking all the waters in a region would be very burdensome and costly. (p. 7)

Agency Response: **The final rule has been clarified to include a variety of available mapping tools, such as those based on the NHD, topographic maps, and elevation data, that can be used to demarcate boundaries of the single-point of entry watershed or arid West catchments. For practical administrative purposes, the rule does not require evaluation of all similarly situated waters under (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. 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.**

Lea Soil and Conservation District Board of Supervisors (Doc. #15144)

4.237 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).

The Parties stress that if the rule stays in place, then "region" needs to be further refined in scope. Some watersheds are entirely too large an area for reasonable and practical application of the rule.

The rule should stress that the "other water" in question must itself maintain a connection with (a)(1) or (a)(3) water. It should not qualify simply because similarly situated waters provide a requisite nexus.

The rule should stress that the two components of "similarly situated," proximity and functionality, are conjunctive factors that must both be met. (p. 4-5)

Agency Response: **See Agency Summary Response Essays 1 and 9. 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. In the final rule, the agencies have identified six categories of waters that are jurisdictional by rule and two categories ((a)(7) and (a)(8)) that are not jurisdictional by rule but may be subject to case-specific determinations. The opt out provision suggested by the commenter is unnecessary because the final rule is fundamentally grounded in the premise that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

I**dentification of (a)(5) (tributaries) and (a)(6) (adjacent) waters as jurisdictional by rule is based upon the best available peer-reviewed science as well the text of the statute, Supreme Court decisions, public input, ,and the agencies' technical expertise and experience. See Tributaries Compendium and Adjacent Waters Compendium.** Previous **definitions of "waters of the United States" regulated all tributaries without qualification. This final rule more precisely defines "tributaries" as waters that are characterized by the presence of physical indicators of flow – bed and banks and ordinary high water mark – and concludes that such tributaries are "waters of the United States." The physical indicators of bed and banks and ordinary high water mark demonstrate that there is sufficient volume, frequency and flow in such tributaries to a traditional navigable water, interstate water, or the territorial seas to establish a significant nexus.**

The rule covers as adjacent waters only those waters that currently available science demonstrates possess the requisite connection to downstream waters and function as a system to protect the chemical, physical and biological integrity of those waters. Regarding adjacent waters and wetlands, the SAB stated, "[t]he available science supports the EPA's proposal to include adjacent waters and wetlands as a waters of the United States. …because [they] have a strong influence on the physical, chemical, and biological integrity of navigable waters." *Id.* In particular, the SAB noted, "the available science supports defining adjacency or determination of adjacency on the basis of functional relationships," rather than "solely on the basis of geographical proximity or distance to jurisdictional waters." *Id.* at 2-3. 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 distances limitations to ensure that the waters are providing similar functions to downstream waters and that the waters are located comparably in the landscape such that the agencies' reasonably judged them to be similarly situated.

With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. See Agency Summary Response Essays 1 and 8. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble and for reasons stated in the previous paragraph believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters.

Similarly situated waters are jurisdictional when in combination they have a significant nexus to an (a)(1) through (a)(3) water. A case-specific significant nexus determination to be a "water of the United States" applies to all waters that were considered "similarly situated" in that specific analysis. See Agency Summary Response Essay 9. The agencies note that this aspect of the final rule does not depart from and is a product Justice Kennedy's opinion.

Palm Beach County, Florida (Doc. #16647)

4.238 The agencies should clarify the individual functions that a 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 between water bodies in order for waters to be considered "similarly situated." The agencies should also limit the allowable distance 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 will 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. 8)

Agency Response: The agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal and by providing a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed.

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." In order for waters to be considered "similarly situated," they function alike and are sufficiently close to function together in affecting downstream waters. In the final rule, the agencies in (a)(7) identified five specific types of waters-- prairie potholes, Carolina and Delmarva Bays, Pocosins, western vernal pools in California, and Texas coastal prairie wetlands -- the agencies determined are "similarly situated" by rule in a single point of entry watershed. For other types of waters, the agencies in (a)(8) identified a specific threshold – waters located within the 100 year flood plain 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), whichever is broader, -- for case-specific analysis of significant nexus.

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. The science available today does not establish that waters beyond those defined as "adjacent" are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the 100 year floodplain of (a)(1) to (a)(3) waters or located out to 4000 feet of the ordinary high water mark or high tide line of (a)(1) to (a)(5) waters where the science demonstrates that they often have a significant effect on downstream waters. To identify waters in the single point of entry watershed that should be evaluated as are similarly situated to waters meeting the threshold described in (a)(8), it must be first demonstrated that these waters perform similar functions and

are located sufficiently close to each other to affect the integrity of the downstream waters.

As set forth in the Preamble to the final rule, similarly situated waters can be identified as sufficiently close together for purposes of this paragraph of the regulation when they are within a contiguous area of land with relatively homogeneous soils, vegetation, and landform (e.g., plain, 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.

Colfax Soil & Water Conservation District, New Mexico (Doc. #16890)

4.239 The Parties stress that if the rule stays in place, then region needs to be further refined in scope. Some watersheds are entirely too large an area for reasonable and practical application of the rule.

The rule should stress that the other water in question must itself maintain a connection with (a)(1) or (a)(3) water. It should not qualify simply because similarly situated waters provide a requisite nexus.

The rule should stress that the two components of similarly situated, proximity and functionality, are conjunctive factors that must both be met. (p. 1)

Agency Response: See Agency Summary Response Essay 1 and 8.

Board of Supervisors, Sutter County, California (Doc. #19657)

4.240 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. 9)

Agency Response: **See Agency Summary Response Essay 1 and 8. See response 4.136 (Doc. #15018.1). The agencies disagree that the analysis is fraught with uncertainty and subjective decision-making. The SAB stated that "[t]here is adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular region 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)." Waters analyzed under (a)(8) must perform similar functions, be located sufficiently close to function together in affecting downstream waters, meet the regulatory threshold (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), whichever is broader), and be located in the same single point of entry watershed. For a discussion of the concept of "fill and spill," See response 4.136 (Doc. #15018.1).**

County Commissioners Association of Pennsylvania (Doc. #14579)

4.241 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." (p. 5)

Agency Response: **The final rule in (c)(5) defines "in the region" as "the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section." The same phrase is used to describe the region in (a)(7). Those are the only uses of the term "watershed" in the final rule.**

4.242 It is also not clear what level of watershed the agencies intend to use to determine a significant nexus. For instance, Pennsylvania has six major watersheds – the Ohio, the Genesee, the Susquehanna, the Delaware, the Erie and the Potomac. The Chesapeake Bay watershed is also demarcated within commonwealth borders, and more than 50 percent of the state's land drains to the Bay. Yet within each of these watersheds, the individual watersheds of smaller creeks and rivers have also been determined and are outlined in the Pennsylvania State Water Plan. By way of example, the State Plan designates four watersheds within York County (a county in south central Pennsylvania bordering the Susquehanna River), which have been further divided into nine sub-watersheds for storm water management and Rivers Conservation Plan purposes. Which level of watershed, or region, is purported to be the one that will determine the relationship or significant nexus to the nearest traditional navigable water, interstate water or territorial sea? (p. 5)

Agency Response: **The final rule defines "in the region" as the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section," also referred to as the "single point of entry watershed" for purposes of the significant nexus standard. 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. 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 proposal Appendix A, Scientific Analysis, 79 FR 22246, Science Report, and Technical Support Document.

Western Urban Water Coalition (Doc. #15178.1)

4.243 It makes sense for the agencies to evaluate effects on waters and wetlands on a watershed basis and to consider cumulative effects; however, the appropriate time to perform the assessment of these effects is the permitting process, not when determining the jurisdictional status of "other waters." Otherwise, one has the problem of assuming that all of the waters will be impacted at some point in time, rather than evaluating the reasonably foreseeable future actions as part of the permitting or NEPA process. As part of the permitting process, the agencies have site-specific information on the water and/or wetland to be affected, the type of action and its potential effects, and knowledge of past, present, and future actions in the watershed to determine cumulative effects in the watershed. The proposed rule puts the "cart before the horse" by performing the effects analysis (combined effects of similarly situated "other waters" on (a)(1) through (a)(3) waters) to determine jurisdiction before determining the effects of a specific proposed action as part of the permit application process. (p. 32-33)

Preferred Solution

Define "similarly-situated as: wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit may be considered together when determining if there is a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section.

Alternative Solution

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

When determining the jurisdictional status of "other waters" in the arid and semi-arid West, **eliminate** the single-entry watershed as the appropriate scale for consideration of "similarly situated" when performing the SNA. Other wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit may be considered together for the SNA.

Discussion

To determine the jurisdictional status of "other waters," it is not necessary to assess the combined effects of similarly situated waters over an entire watershed. As discussed above, this is particularly problematic in the arid West. When determining the jurisdictional status of a specific water or wetland, it makes sense to consider other wetlands and waters that are neighboring, adjacent, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit for the SNA. The agencies can draw upon existing guidance on determining functional units and appropriate functional unit scale when assessing wetland functions (Berglund and McEldowny 2008; Johnson et al. 2013; and Smith and Ammann 1995). The proposed rule should focus on how to determine the jurisdictional status of an individual "other water" and not try to determine the jurisdictional status of all "similarly situated" waters or wetlands in the region. As explained above, assuming that all "similarly situated" waters or wetlands in a region are jurisdictional, or nonjurisdictional, is an oversimplification. While the approach stated in the proposed rule may be expedient from the agencies' perspective, it is not supported by the connectivity report and other literature, is arbitrary, and is likely to have unintended consequences that will have the opposite effect of simplifying or expediting the JD process. (p. 33-34)

Agency Response: **See Agency Summary Response Essays 1 and 2. The commenter appears to confuse the effects of a particular discharge with the effects of a water, alone or in combination with similarly situated waters in the region, on downstream waters. While it may often be the case that the jurisdictional status of a water will be determined in the course of processing a permit application, the agencies disagree that only appropriate time to evaluate the effect of "similarly situated" waters is in connection with a proposed discharge during the permitting process. Determination of the jurisdictional status of a water and consideration of the impacts of a proposed discharge are two different analyses with two different purposes. The jurisdictional status of a water is not dependent upon the nature of the proposed discharge. The effect of a discharge depends upon the nature of the discharge. For example, the effect of a discharge of oil is likely to be different than the effect of a discharge of bacteria or sediment. Accordingly, the effect of a particular discharge is not dispositive of the jurisdictional status of the receiving**

water because the effect of any particular discharge is not the same thing as the effect that a water, alone or in combination with similarly situated waters, has on downstream waters. The purpose of the case-specific significant nexus evaluation is not to evaluate the impacts of a particular discharge, but to evaluate whether there is a significant nexus between a water, either alone or in combination with other similarly situated waters in the watershed, on downstream (a)(1)-(a)(3) waters.

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble and for reasons stated in the previous paragraph believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters. In the Preamble, the agencies gave the example 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 smaller 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 code (HUC-10) 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 situations.

Maine Municipal Association (Doc. #16630)

4.244 There has been uncertainty as to what degree "other waters" may be aggregated or combined for a significant nexus determination. In the proposed rule, the regulatory term "other waters" applies to wetlands and non-wetland waters that do not fall into the category of waters susceptible to interstate commerce (traditional navigable waters), interstate waters, the territorial seas, tributaries, or waters adjacent to waters in one of these four categories. The claim by the regulating agencies that non-adjacent "other waters" and wetlands will continue to require a case-by-case determination of significant nexus is called into question by the aforementioned lack of clarity regarding how far "adjacency" may be extended. EPA's definition of "adjacent", "neighboring", and "bordering" should therefore be defined without circularly referring to another definition. At a minimum, EPA and Army Corps definitions ought to agree with other federal agency definitions, for example the Federal Emergency Management Agency's definition of "floodplain", which differs from the definition proposed in this rule. (p. 2)

Agency Response: To the extent the comment refers to consideration of similarly situated waters within the watershed, see Agency Summary Response Essay s 1 and 8. The final rule has modified the definitions of "adjacent", "neighboring", and expanded the preamble discussion of "similarly situated" and "floodplain". The agencies believe the final rule provides the necessary clarity with regard to these terms and will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

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

4.245 This Proposed Rule allows the Agencies to "aggregate" the contributions of similar waters within an entire watershed, thus adding potentially hundreds of tributaries, including wetlands, and non-wetland waters to the significant nexus analysis, making it more likely to determine that there is a significant nexus. A revised rule should include a reasonable scientific method for jurisdictional determination. (p. 3)

Agency Response: See Agency Summary Response Essay 1, 2, 5.

National Farmers Union (Doc. #6249)

4.246 The agencies should also require "other waters" to have a confined surface connection to each other in order to be considered "similarly situated." This distinction would be helpful to the agencies and to the regulated community because "other waters" that are completely separate and distinct from a jurisdictional water will not be able to form a significant nexus with a jurisdictional water cumulatively unless they maintain such a nexus individually or with each other. The final rule should also strictly limit the distance allowed between separate waters that can be considered "similarly situated."

Otherwise, no "other waters" should be determined to be similarly situated, as the agencies put forth as an alternative in the preamble." The limited environmental benefit of bringing waters that would not trigger jurisdiction by themselves into jurisdiction as "similarly situated" does not justify the uncertainty and administrative burden that would be created for the agencies and the regulated community. The "significant nexus" evaluation ensures that waters of genuine concern are jurisdictional. (p. 7)

Agency Response: See Agency Summary Response Essay 1, 12, 8.

4.247 At the very least, the final rule should clarify that the term "similarly situated," for purposes of determining whether "other waters" maintain a "significant nexus" with jurisdictional waters, is not a simple geographic determination. The agencies should elaborate that "similarly situated" means both waters that are near to each other and sharing an identifiable hydrogeological feature in common. A water would not be considered "similarly situated" due to geographic proximity alone. (p. 7)

Agency Response: The agencies agree, and in (a)(7) of the final rule have identified five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered 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, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands. For other types of waters, the agencies in (a)(8) identified a specific threshold – waters located within the 100 year flood plain 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), whichever is broader, -- for case-specific analysis of significant nexus. See Agency Summary Response Essays 1 and 8.

Southern Company (Doc. #14134)

4.248 This latter concept of aggregating "other similarly situated waters" in the same region presents fundamental problems both procedurally and legally. The agencies must clarify the criteria they intend to apply for determining similarly situated and how big or small a region needs to be in order to be similarly situated. (p. 42)

Agency Response: **See Agency Summary Response Essay 1, 5, 8.**

American Electric Power, Inc. (Doc. #15079)

4.249 The agencies provide no practical guidance on how a water body is to be evaluated in conjunction with similarly situated waters in a watershed or provide any direction on the appropriate area within a watershed. A reading of the connectivity report indicates that an infrequent hydrological connection event (e.g., a flooding event once in 10 years) could be considered to have significant effects on downstream chemical, physical, or biological attributes. (p. 5)

Agency Response: **See Agency Summary Response Essay 1, 5, 8.**

Basin Electronic Power Cooperative (Doc. #16447)

4.250 The Agencies are further seeking comment on three options for determining if "other waters" are "similarly situated" for conducting significant nexus analysis. Option one would classify all wetlands within certain ecoregions (such as the Northern Glaciated Plains and the Lake Agassiz Plain) as WOTUS. Isolated wetlands within these areas have historically (and we believe correctly) been determined to be non-jurisdictional. Option two is somewhat similar, asserting jurisdiction based on named subcategory. As such, "prairie potholes" would be WOTUS. Again, these isolated wetlands have previously (and appropriately) been determined to be non-jurisdictional. (p. 3)

Agency Response: **The final rule does not establish waters other than those described in (a)(1)-(a)(6) as jurisdictional by rule. With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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).**

With respect specifically to prairie potholes, the agencies believe there is adequate scientific evidence to support a determination that Prairie Potholes 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 constitute similarly situated waters within the region. Historically, agency

records show these resources have been determined to be both covered and non-jurisdictional, depending the on case-specific analysis of the facts of the site. The final rule continues the case-specific analysis for these types of waters. the Preamble and the Connectivity Report discuss the connectivity of potholes to other potholes and the stream network.

With respect to "in the region," while the agencies considered the use of ecoregions in case specific analyses, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See Agency Summary Response Essay 7. See response 4.83 (Doc. #15544), 4.243 (Doc. #15178.1)

Potomac Riverkeeper, Inc. (Doc. #15013)

4.251 (…) [T]he Riverkeepers believe that the proposed rule can and should be fine-tuned to clarify jurisdiction over waters and activities that, left unregulated, would substantially affect the efficacy of the Act as a whole. Specifically, the Riverkeepers urge that the Agencies: (…)

Document other waters determined to be WOTUS on a case-by-case basis. The proposed rule anticipates that the Agencies will, on a case-specific basis, determine whether "other waters" are waters of the United States by looking at whether "those waters alone, or in combination with other similarly situated waters located in the same region, have a significant nexus" to waters in interstate commerce, interstate waters, or the territorial seas. This will inevitably give rise to costly and labor-intensive investigations for both the Agencies and potential citizen-suit plaintiffs seeking to enforce the Clean Water Act with respect to certain waters critical to protecting downstream water quality. If the Agencies feel that this process is necessary, we would urge them to maintain a database in which any decisions as to whether "other waters" are waters of the United States is documented, along with the reasoning therefore, so that such disputes need not be repeated, and the decisions can be used to reason by analogy as to whether other "other waters" are waters of the United States. (p. 3-5)

Agency Response: See Agency Summary Response Essay 1, 2, 5. 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 nexus 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 the 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.

The final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule. Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

National Wildlife Federation (Doc. #15020)

4.252 The agencies should not categorically exclude from aggregation or jurisdiction "other waters" that are not located in these identified ecoregions.

We disagree with the suggestion that wetlands not located in these identified ecoregions or areas would necessarily "be determined to not be similarly situated." Such a determination is not necessarily supported by the current science and it would unnecessarily constrain future case- specific analyses in a way that could potentially eliminate any role for emerging science. Some ecoregions could contain a wide diversity of relevant geologic and climatic attributes and include a range of wetland types that could not reasonably be considered to be "similarly situated." In such cases, the science may still support aggregation at the scale of a single point of entry watershed. Other ecoregions might simply contain a lower density of wetlands, but these wetlands may still be relatively similar in terms of their type, functions, and distribution across the landscape. The wetlands, in the aggregate, in some of these kinds of ecoregions might fail to rise to the level of being found jurisdictional by rule based on currently available scientific evidence. However, given that the relevant science continues to emerge, these wetlands could in the future be found to be jurisdictional as a result of a case-specific significant nexus analysis. Therefore, those wetlands should by no means "*be determined to be not similarly situated*" on the basis that they are not located in identified ecoregions or other specified areas.

We also disagree with the suggestion in alternative #2 that certain subcategories of waters would be determined to lack a significant nexus and therefore be permanently excluded from jurisdiction. As the SAB notes, "*the science does not support excluding groups of 'other waters' or subcategories thereof."* SAB Rule Letter at 3. The final rule and preamble must clearly distinguish between not finding a significant nexus on the one hand, and definitively determining that these waters "lack a significant nexus to an (a)(1) through (a)(3) water," on the other.

We agree with Ducks Unlimited that in most cases, not finding a significant nexus now simply means that the science currently available is insufficient to make such a designation. So, as science continues to emerge, areas in which a significant nexus could not now be found might indeed be later found to have a significant nexus based on the new science. For the final rule to be truly science-based, it must allow for this distinct and likely possibility. Clearly, for regulatory purposes, those waters for which a significant nexus could not be demonstrated at this time would need to be treated as being non-jurisdictional unless and until shown otherwise. (p. 68-69)

Agency Response: For practical administrative purposes, the rule does not require evaluation of all similarly situated waters under (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. 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.

For those waters not found to be similarly situated by category in (a)(7), the final rule specifies that it be evaluated on a case-by-case basis for significant nexus, where it located within the thresholds provided in (a)(8). These waters are not excluded from being similarly situated, but require case-specific analysis. The jurisdictional categories reflect the current state of the best available science, and are based upon the law and Supreme Court decisions. 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. With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water in combination with similarly situated waters in the region, the agencies note that approved jurisdictional determinations expire after five years. See RGL 08-02. An approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information. 33 C.F.R. § 331.5(b)(7).

Center for Rural Affairs (Doc. #15029)

4.253 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. We recommend limiting the designation of "similarly situated" other waters to 12-digit Hydrologic Unit Code (HUC) sub-watersheds draining directly to a(1) through a(3) waters.

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," limit this designation to a 12-digit Hydrologic Unit Code sub-watershed of an a(1) through a(3) water, and explicitly state that overland "fill-and-spill" events are not sufficient connections to warrant a designation of "similarly situated." (p. 6-7)

Agency Response: The final rule narrows the circumstances under which a case-specific significant nexus determination will be made. The final rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. The proposal did ask for several approaches on how to consider waters "in the region." The final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See Agency Summary Response Essay 7, See response 4.243 (Doc. #15178.1) and the Technical Support Document for a more detailed discussion of the agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court. The basis for this determination and the factors used to evaluate inclusion as similarly situated are included in the preamble. See Agency Summary Response Essay 8. With regard to surface hydrologic connections, See response 4.126 (Doc. #14130) With regard to "fill and spill" See response 4.136 (Doc. #15018.1)

Competitive Enterprise Institute et al (Doc. #15127)

4.254 This definition of "other waters" belies the claim that the Agencies intend to conduct case-specific analyses. But by how much is not clear until one considers how broad the category of "region" they propose is. "Region" is defined as "the watershed that drains to the nearest" currently or potentially navigable water, interstate water or wetland, or territorial sea. Id. Any place that is contained in the watershed of any of those waters falls into a CWA region. Needless to say, such regions can be enormous: the Chesapeake Bay Watershed, for instance, stretches north of Cooperstown and south of Richmond, covering all of Maryland and most of Pennsylvania and Virginia. Within these regions, the Agencies can conduct a single "significant nexus" analysis over all waters that "perform similar functions" and are "sufficiently close together . . . that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity" of the "water of the United States." Id. What, precisely, a "single landscape unit" is, and how broadly an "effect" is defined, is unclear. (p. 7-8)

Agency Response: See Agency Summary Response Essay 1. The final rule defines "in the region" as "the watershed that drains to the *nearest* water identified in paragraphs (a)(1) through (3) of this section." (emphasis added) The comment reflects some confusion because the term "watershed" in general usage loosely refers to the drainage area of a particular waterbody, regardless of the size of that waterbody. For example, one can speak of the Chesapeake Bay "watershed" or the "watershed" of a small local creek or stream. The final rule clarifies that the term

"watershed" as used in the final rule refers solely to the watershed in which the water in question is located as defined by the point at which flow enters the *nearest* water identified in (a)(1) to (a)(3). The agencies would expect as a general matter the watershed draining to the nearest (a)(1) through (a)(3) water would be considerably smaller than the entire Chesapeake Bay watershed. Taking the example of the Chesapeake Bay used by the commenter, for a water within the Chesapeake Bay watershed, the applicable "region" would not be the entire Chesapeake Bay drainage basin; it would be the single point of entry watershed containing the water that drains to the nearest (a)(1) through (a)(3) water.

Agency Response: In the Preamble, the agencies gave the example that in the arid West, 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 smaller 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 code (HUC-10) 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 situations. The basis for such an approach in very large single point of entry watersheds, such as in the arid West, should be documented in the jurisdictional determination.

Protect American, Board of Directors (Doc. #12726)

4.255 The Commenters stress that if the rule stays in place, then "region" needs to be further refined [as to] scope. Some watersheds are entirely too large an area for reasonable and practical application of the rule.

The rule should stress that the "other water" in question must itself maintain a connection with (a)(1) or (a)(3) water. It should not qualify simply because similarly situated waters provide a requisite nexus.

The rule should stress that the two components of "similarly situated," *proximity* and *functionality*, are conjunctive factors that must both be met. (p. 16)

Agency Response: See Agency Summary Response Essays 1, 7, 8 See response 4.243 (Doc. #15178.1), 4.217 (Doc. #16635). The agencies note that the concepts of proximity and functionality are incorporated into (a)(7) and (a)(8) and the relevant portions of the preamble. With respect to connection with an (a)(1) or (a)(3) water, See response 4.126 (Doc. #14130)

Anacostia Riverkeeper et al. (Doc. #15375)

4.256 (…) [A]s with EPA's definition of adjacency, EPA must ensure that its inclusion of "other," "similarly-situated" waters is adequately inclusive and based on sound hydrologic and biological principles, not just a physical proximity measure. See Member Comments, Aldous at 4, Kolm at 33 ("The flowpath framework should highlight the four dimensional nature of connectivity, because four-dimensional connectivity scaled in a habitat-to catchment context is a foundational aspect of freshwater ecology") and 34 (noting that "these flow paths are inherently four-dimensional (i.e., longitudinal, lateral, vertical, and through time"), Rains at 73, and Sullivan at 87. Moreover, EPA, in

providing that similarly-situated waters are properly included in the definition of waters of the U.S., must ensure consideration of aggregate function and effects and must consider connections and aggregate function and effects even if they are severed or altered by humans. See Member Comments Kolm at 49, Rosi-Marshall at 81-83, Sullivan at 84 and 88. Finally, as urged by the SAB members, Waterkeepers Chesapeake presses EPA to include connectivity of "other waters" that are similarly-situated through groundwater connections. Member Comments, Kolm generally, especially 41 and 43.

Relatedly, Waterkeepers Chesapeake also agrees with comments from SAB members that EPA should ensure that "similarly-situated" waters be identified once where they plainly meet these requirements and that the determination and inclusion of those waters as waters of the U.S. should encompass all such similarly-situated features in the same watershed, and that determination should then apply to future decisions. For example, SAB member Rains, at 72, points out that springs at the toe of slopes in a number of western states should be properly identified as other waters as a whole or in the aggregate, as they plainly are connected to the same aquifer, have a similar surface connection to a single water of the U.S. (e.g. a single river) and therefore, should all be identified as a water of the U.S. to be protected by the Clean Water Act in a single administrative decision. Similarly, the Connectivity report uses an example of depressional wetland complexes on that Texas coastal plain to point out that other waters similarly situated should be evaluated as a unit and defined as a unit. Connectivity Report at 112. It is neither cost effective nor scientifically supported to force citizens and the agency to make a decision on each and every spring or seep that is so connected on a the case by case basis described by EPA. Waterkeepers Chesapeake asks EPA to include in internal guidance and a recognition in the proposed rule that similarly-situated waters that are waters of the U.S. shall be identified as a group and as an ecological whole because to do so is dictated by the science and by administrative efficiency. (p. 7-8)

Agency Response: **In the final rule, the agencies have identified by rule, five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed 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, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands. 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 have a significant nexus to a traditional navigable water, interstate water, or territorial sea.**

Although the agencies evaluated additional subcategories of waters for consideration, such as playa lakes and kettle lakes, the agencies at this time are not able to determine that the available science supports additional subcategories of waters that are similarly situated as a rule. However, to be clear, other waters may be covered by the CWA where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. For a discussion of what (a)(8) waters may be considered similarly situated, see response 4.237 (Doc. # 15144).

Waters that are not jurisdictional by rule under (a)(1)-(a)(6) or similarly situated by rule under (a)(7) are jurisdictional if they meet the threshold in (a)(8) (within the 100 year floodplain of an (a)(1) – (a)(3) water or within 4000 feet of an ordinary high water mark or high tide line of an (a)(1) – (a)(5) water) and are determined, alone or in combination with similarly situated waters in the single point of entry watershed, to have a significant nexus to a downstream traditional navigable water, interstate water, or territorial sea. The Science Report concludes that wetlands and open waters located in "floodplains are physically, chemically and biologically integrated with rivers via functions that improve downstream water quality, including the temporary storage and deposition of channeling-forming sediment and woody debris, temporary storage of local ground water that supports baseflow in rivers, and transformation and transport of stored organic matter." Science Report at ES-2 to ES-3. Such waters act as the most effective buffer to protect downstream waters from nonpoint source pollution (such as nitrogen and phosphorus), provide habitat for breeding fish and aquatic insects that also live in streams, and retain floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters. Based on the science concerning the important functions provided by floodplain waters and wetlands, the agencies have established this provision to ensure that truly important waters may still be protected on a case-specific basis. By using the 100-year floodplain and limiting the provision to (a)(1) through (a)(3) waters, the agencies are reasonably balancing the protection of waters that may have a significant nexus with the goal of providing additional certainty. Further, should the riparian area on occasion extend beyond the 100-year floodplain, the agencies have the ability to perform a case-specific significant nexus analysis on a water out to 4,000 feet from the ordinary high water mark or high tide line of a traditional navigable water, interstate water, the territorial sea, impoundment, or tributary. The agencies have drawn these lines based on their technical expertise and experience in order to provide a rule that is practical to understand and implement and protects those waters that significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters or the territorial seas. Because science indicates that connectivity is on a gradient, the agencies have also identified limited circumstances in which waters that do not meet the definition of "neighboring" may be determined on a case-specific basis to have a significant nexus.

For practical administrative purposes, the rule does not require evaluation of all similarly situated waters under (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. 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.

4.257 As with adjacent waters, Waterkeepers Chesapeake also urges EPA to be cautious regarding its use of geographic limitations on identifying "other waters" particularly those that are similarly situated and that affect waters of the U.S. As pointed out by several SAB members, geography can be an accurate measure or proxy for waters affecting downstream waters, but caution must be observed because there can be "significant nexus" between waters that might not be considered geographically proximate. (p. 8)

Agency Response: **While the proposed rule did not set a distance threshold for case-specific waters to be evaluated for a significant nexus, the final rule does sets a threshold of waters located within the 100 year flood plain 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), whichever is broader, for waters that may be subject to a case-specific significant nexus analysis and are not identified as similarly situated by rule in (a)(7). 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. The agencies establish a limit on case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit and that the agencies have the authority, and responsibility, to determine the limits of CWA jurisdiction.. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that the threshold described in (a)(8) reasonably identifies the areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. This approach also supports the goal of providing greater clarity to the public. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends.**

4.258 Finally, Waterkeepers Chesapeake is concerned about EPA's deletion of the existing provision covering certain waters where "the use, degradation or destruction of" such waters "could affect interstate or foreign commerce." 79 Fed. Reg. at 22192. EPA includes very little discussion or explanation of this proposal other than the conclusory assertion that this changes is needed "[t]o comport with the SWANCC and Rapanos decision s." Id. at 22212. This change is not compelled by either decision. In fact, as the proposed rule notes, the Court in SWANCC only held that the use of "isolated" nonnavigable intrastate ponds by migratory birds was not by itself a sufficient basis for the exercise of Federal regulatory authority. It did not discuss much less rule out the other facts upon which EPA might find that "the use, degradation or destruction of "certain waters" could affect interstate or foreign commerce" and therefore be considered waters of the U.S. Waterkeepers Chesapeake asks EPA to clarify in the final rule that this deletion is not compelled by the Supreme Court's rulings but is instead a policy decision by EPA. (p. 8)

Agency Response: **Under the final rule, an interstate commerce connection absent a connection to a traditional navigable water, interstate water or territorial sea is not sufficient to meet the definition of "waters of the United States." Justice**

Kennedy's opinion in *Rapanos* stated that the critical factor in determining the CWA's coverage is whether a water has a "significant nexus" to downstream traditional navigable waters such that the water is important to protecting the chemical, physical, or biological integrity of the navigable water, referring back to the Court's decision in *SWANCC*. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Delaware Riverkeeper Network (Doc. #15383)

4.259 While the rule should prescribe methods for determining which waters are "similarly situated", because these methods are constantly improving and changing, the rule should require a regularly-scheduled evaluation of how "similarly situated" is determined, and whether new methods should be prescribed. Such re-evaluation should occur at a minimum of every five years. (p. 4)

Agency Response: See response 4.253 (Doc. #15029)

The River Alliance of Wisconsin (Doc. #16344)

4.260 RECOMMENDATION: River Alliance recommends the EPA adopt a process of determining "Other Waters" that incorporates the SAB's descriptions of quantitative methods for determining connectivity (ex: flowpath framework, predictive hydrological models) in lieu of physical proximity.

We echo our comments in the previous section again for this category of waters. We are generally supportive of the proposed revision to the definition of "Other Waters" and the process of determining jurisdiction using the concept of "significant nexus". However, the language currently proposed is heavily weighted towards proximity being a surrogate for connectedness. While the SAB agrees that this is often an adequate surrogate, it does not fully overlap with connectivity. Proximity is a scalable quality; it depends upon what landscape scale you are basing your analysis on. For that reason, it makes sense to rely on the use of quantitative tools and processes reviewed in the Connectivity Report, and reference in the SAB Review, such as the flowpath network and predictive hydrological models to establish significant nexus, beyond just proximity.

Use of such quantitative tolls can also provide a more robust answer to the question of whether the effect of "other waters" is significant on the chemical, physical and biological integrity of waters defined in (s)(1) through (s)(3) of 40 CFR §230.3 (79 Fed Reg at 22211)

Water similarly situated or "other" should include those connected through groundwater. (p. 4)

Agency Response: In identifying waters that are to be considered similarly situated by rule pursuant to (a)(7), the agencies considered whether waters within

the category function alike and are sufficiently close to function together in affecting downstream waters to be reasonably be evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While the proposed rule did not set a distance threshold for case-specific waters to be evaluated for a significant nexus, the final rule does set a threshold of waters located within the 100 year flood plain 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), whichever is broader, for waters that may be subject to a case-specific significant nexus analysis and are not identified as similarly situated by rule in (a)(7). 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. The agencies establish a threshold on case-specific significant nexus determinations because the Supreme Court has been clear that CWA jurisdiction is not without limit and that the agencies have the authority, and responsibility, to determine the limits of CWA jurisdiction.. Based on the agencies' extensive experience, and applying the best available science, the agencies conclude that waters located within the 100 year flood plain 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), reasonably identifies the areas in which waters have been determined to have a significant nexus and appropriately establishes the limits of CWA jurisdiction under this case-specific provision. This approach also supports the goal of providing greater clarity to the public. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends.

4.3.1.1 Supporting Approach

WA Department of Ecology (Doc. #13957)

4.261 Given the broad nature of the rule and the diversity of waters across the United States, Washington recommends that the Corps and EPA work regionally with the states in identifying classes of "other waters" that have a significant effect on downstream waters. Identifying classes that have a significant nexus with downstream waters would reduce the number of individual determinations needed. As part of this work, Washington recommends that the Corps and EPA work with the state to identify appropriate regions in our state that may contain classes of similarly situated waters that provide a significant nexus to a "water of the US."

Permit streamlining could result from identifying classes of "other waters" as jurisdictional by reducing the number of individual significant nexus determinations necessary and; reducing the time needed to process permits. When an individual determination is necessary, we recommend that the Corps strive to meet a ISO-day timeframe for a decision. A timeframe for individual determinations will provide a clear standard for regulatory staff and will help reassure applicants and the public that projects will be processed in a timely manner. (p. 3)

Agency Response: **See response 4.87 (Doc. #14636). The final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule.**

Western Urban Water Coalition (Doc. #15178.1)

4.262 Preferred Solution

Including ephemeral and intermittent drainages in the list of "other waters" in the proposed rule as presented below accounts for the differences in ephemeral and intermittent drainages and rivers and perennial drainages, fits within the structure of the proposed rule, and is consistent with the Rapanos opinions:

On a case-specific basis, other waters, including wetlands, ephemeral streams, and intermittent streams that are not relatively permanent waters, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, that are so inseparably bound up so as to function as a single hydrologic unit with located in the same region, have a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section. This proposed modification provides the agencies a process to determine jurisdiction, and provides the regulated public an opportunity to provide information to the agencies to consider regarding the jurisdictional status of an ephemeral or intermittent drainage. This approach would allow the agencies and regulated public to use the current process for determining a significant nexus on a case-by-case basis as is currently done so this approach would not require substantial new policies and procedures.

Alternative Solution

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

Include ephemeral and intermittent drainages occurring within the Arid and Semi-arid West Region in the list of "other waters" that are only jurisdictional provided they have a significant nexus to a water identified in paragraphs (a)(1) through (3).

Discussion

The information in these and other comments submitted on the proposed rule and connectivity report support the substantial differences between intermittent and ephemeral drainages in the arid West relative to wetter portions of the U.S. and provides a reasonable basis for the proposed modification. The proposed rule requests comments on how the agencies should categorize the remaining "other waters" using ecoregions and hydrologic-landscape regions (Page 22216). The above-proposed modification fits well with the agencies' request and uses an ecoregion already defined by the Corps for use in implementing Section 404 of the CWA. In commenting on the definition of "tributary," the EPA SAB Panel noted "… the need to allow for variation among regions (e.g., the arid west)" (EPA SAP Panel 2014). (p. 22-23)

Agency Response: **See response 4.205 (Doc. # 14285). The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not**

considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." 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. The great majority of covered tributaries are headwater streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream waters.

The rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

Outdoor Alliance and Outdoor Industry Association (Doc. #14415)

4.263 Outdoor Alliance and OIA encourage the Environmental Protection Agency and U.S. Army Corps of Engineers to continue to focus on the best available science as you consider feedback from the public and make decisions about implementing about the proposed rule. Specifically, we support:

- Using a watershed approach, recognizing the connection between and importance of an aggregation of waters within a basin;
- Following the best available science when considering whether "other waters" are connected to jurisdictional waters. These waters provide important functions, including filtering pollution and preventing flooding, and they deserve protection under the Act; and
- As our scientific understanding of our nation's waters continues to evolve, allowing new information to inform whether "other waters" are jurisdictional and have a "significant nexus" to waters covered by the Act. (p. 2)

Agency Response: The agencies believe the final rule reflects these comments.

Garden Club of America (Doc. #0874)

4.264 We support the notion of "assumed jurisdiction" for various categories based on sound science. This approach should result in more effective and efficient CWA permit evaluations, provide increased certainty to stakeholders, and lessen litigation. While we offer no specific language for defining the "other waters" category requiring a case-specific significant nexus determination, we urge the broadest possible coverage in the "other waters" category. (p. 2)

Agency Response: Comment noted

4.265 Although we strongly agree with and support evaluation of wetlands and other waters in the aggregate when conducting most case-specific analyses, we are concerned about the

landscape scale and type of aggregation proposed and described in the preamble. First, with respect to "similarly situated," we recognize the importance and benefits of hewing closely to Justice Kennedy's language, but we again caution that in this case his somewhat casual use of that phrase in the context of a Supreme Court opinion may be being given unintended weight in the context of developing the science-based processes that will be needed to administer a new rule.

For example, the preamble states that, "*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 (a)(3). This combination of functionality and proximity to each other or to a "water of the United States" meets the standard provided by Justice Kennedy. Examining both functionality and proximity also limits the "other waters" that can be aggregated for purposes of determining jurisdiction."* We suggest that Justice Kennedy, in the absence of additional clarification, more likely simply intended the phrase to mean something along the lines of "located in the same region," as opposed to having thought about the variety of functions that wetlands provide, and the variability among individual wetlands with respect to those functions that the proposed rule appears to seek to address. It seems to us, looking at Justice Kennedy's opinion more holistically, it is more likely the simplest interpretation is the most likely, i.e., that he simply meant "located in the same region" (leaving it to the agencies to define the appropriate science-based scale for "region").

Most wetlands in an appropriately sized and delimited "region" will generally perform many of the same functions to one level or another. We understand that lentic and lotic systems can differ substantially and that these kinds of waters would not be considered "similar." However, virtually everything encompassed by lotic will already be jurisdictional by rule. In cases, perhaps, it might be fully appropriate to separate deepwater habitats from wetlands within the lentic classification. Overall however, we believe that a scientifically valid and more efficient method of aggregating wetlands falling within the classification of "other waters" would be to evaluate them all in a simple, direct, comprehensive aggregation within the appropriate region.

Furthermore, we do not see the reason for injecting wetland density or proximity to a "water of the U.S." as criteria for qualifying as being "similarly situated" for purposes of being evaluated "in the aggregate" for a case-specific significant nexus evaluation. We certainly understand that functionality, proximity, and density would all be important factors in assessing whether or not the waters in question actually possess a significant nexus with "waters of the U.S." that is scientifically appropriate and necessary. However, those factors need not be introduced into the determination of which wetlands within a region qualify as being similarly situated, thereby qualifying for aggregation. We believe that what should be a more science-based element of the proposed rule, based on a subjective interpretation of Justice Kennedy's language by the agencies, goes well beyond what he intended, assuming that the appropriate sized and delimited "region" would be used to define the boundaries within which the wetlands would be considered "similarly situated." This kind of approach would be much clearer, simpler and efficient

to administer than the current more complex approach outlined in the proposed rule. (p. 27-28)

Agency Response: **See response 4.243 (Doc. #15178.1). 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.**

4.266 The delineation of the scale of the region to be used for case-specific analyses is one of the most far-reaching aspects of the rule relative to "other waters." This is critical to the scientific validity of the analyses, the appropriate scope for aggregating similarly situated wetlands, and the degree to which the integrity of the "waters of the U.S." is maintained and restored, among other things. Perhaps most important to many, and to the rule's ultimate success, is that the scale of "in the region" will in large part be responsible for determining the efficiency, clarity, and certainty of the administrative processes associated with the rule and the Clean Water Act more broadly.

We agree with aggregating wetlands for a significant nexus analysis at the scale of the single point of entry watershed to the nearest (a)(1) through (a)(3) watershed, at the minimum. The rationale articulated in the preamble for starting at this watershed level makes sense, and has a good scientific basis. And, as we stated above, it would be most efficient and supported by the science to consider all the waters, at least within the wetland class, in the aggregate. Again, given the range of functions provided across a variety of wetland types located within the same watershed or ecoregion, there will generally be more overlap and similarities among them than there will be differences. That being the case, and in light of the above discussion regarding Justice Kennedy's legal language applied to a more scientific context, we fail to see a good, science-based rationale for attempting to separate types of wetlands existing in the "other waters" class within a particular watershed when in fact most will exist at somewhere along a continuum relative to a number of functions. (p. 28-29)

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 (a)(1) through (a)(3) water 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.

Unlike waters evaluated under (a)(7), the waters specified at (a)(8) require a determination that they are similarly situated. Under this step, the agencies apply factors in the determination of when waters evaluated under (a)(8) should be considered either individually or in combination for purposes of a significant nexus analysis. A determination of "similarly situated" requires an evaluation of whether a group of waters in the region that meet the distance thresholds set out under (a)(8) 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.

Similarly situated waters can be identified as sufficiently close together for purposes of this paragraph of the regulation when they are within a contiguous area of land with relatively homogeneous soils, vegetation, and landform (e.g., plain, 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 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.

Agency Response: **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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. As described above, waters are similarly situated under (a)(8) where waters that meet the (a)(8) threshold 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. The agencies will consider the hydrologic, geomorphic, and ecological characteristics and circumstances of the waters 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.**

Surfrider Foundation (Doc. #6071.1)

4.267 Basic clean water protections for headwater streams and wetlands have been in question for too long. This rulemaking process is absolutely necessary to clarify which streams, wetlands, and other waters are protected under the Clean Water Act. Since the Supreme

Court's decisions in *SWANCC* in 2001[193] and *Rapanos* in 2006[194], application of the Clean Water Act has been confusing and costly. Circuit courts are split on what waters actually fall within the scope of the Act. Some argue Justice Kennedy's "significant nexus" test as articulated in *Rapanos* applies. This test is applied on a case-by-case basis, costing the government, industry, and the environmental community precious time and money. Other Circuit courts however have accepted Justice Scalia's plurality opinion that requires a continuous surface connection between wetlands and "Waters of the United States" for application. This approach diminishes protection for important waters that may appear isolated but in fact are part of a complex natural water cycle. The proposed rule clarifies that the "significant nexus" test may apply on case-by-case basis to "other waters" but also covers wetlands that are adjacent other "Waters of the United States". By defining "significant nexus" and declining to adopt Scalia's surface connection requirement, this rule provides some of the clarity environmental groups such as Surfrider have long sought following *SWANCC* and *Rapanos*.

The proposed rule is an important step towards restoring protections for the small streams and wetlands that perform invaluable ecosystem services of recharging our drinking water supplies, filtering out pollutants, and providing flood protection. (p. 2)

Agency Response: Comment noted.

Ducks Unlimited (Doc. #11014)

4.268 In light of Justice Kennedy's opinion and other related judicial decisions, we understand and acknowledge the requirement that only those waters that either alone or in the aggregate have a significant relationship with downstream navigable waters can be considered to be "waters of the U.S." and therefore be included within the jurisdiction of the CWA. Thus, we understand that waters not falling within the (a)(1) through (a)(6) categories will, at some point or another, need to be subjected to a case-specific significant nexus analysis.

However, one of the most important recommendations contained within these comments, to which we have alluded previously, is that a priori case-specific analyses should be conducted by the agencies for major subcategories of "other waters" as a part of finalizing the rule. Then, in cases where a significant nexus is either demonstrated or found to be a reasonable presumption based on the weight of the scientific evidence, the wetlands and other waters within these landscapes (e.g., ecoregions), would be determined to be jurisdictional by rule. Because of (1) the work that has already been done with respect to compiling a massive amount of the literature in conjunction with the drafting of the Connectivity Report, (2) the multiple levels of reviews to which the Report has been subjected, (3) the additional science that has been contributed by the special SAB panelists and the public during the review periods, (4) the science and analyses that will be provided to the agencies as a part of this comment period on the proposed rule, and (5) the increased attention being paid to the related emerging literature, the agencies are uniquely situated to move ahead right now, as a part of

[193] Solid Waste Agency of N. Cook Cnty. (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001).
[194] Rapanos v. United States, 547 U.S. 715 (2006).

finalizing this rule, with these significant nexus analyses as a part of the rulemaking process. Such an approach offers a number of advantages and we believe contributes significantly to helping advance several of key objectives articulated by the agencies:

- By conducting these analyses of "other waters" that exist across broad landscapes, the designation of these waters as "waters of the U.S." by rule, where supported by the science, would provide much greater clarity and certainty for all landowners and regulators within those regions.
- Those regions for which a finding of significant nexus was warranted and its waters declared jurisdictional by rule would not have to be subjected to future case-specific analyses, thereby reducing the future administrative burdens associated with the rule. The reliance on time and resource-intensive, case-specific analyses could therefore be significantly reduced.
- The description of these regional significant nexus analyses and the associated findings would provide a tangible demonstration of the agencies' view of how these analyses should be conducted, and the sufficiency of science required to support a finding of significant nexus. They would therefore serve as model for the agencies' districts and regions, for the regulated community, and for scientists interested in conducting the research necessary to provide information key to future analyses and/or re-analyses.
- This approach acknowledges the diversity among categories of "other waters" across the U.S., and the fact that the body of science that currently exists clearly supports findings of significant nexus in some regions, but may not currently support such findings in other regions.
- The nature of science is that it builds upon itself over time, and this approach would begin the process of building a science-based "case law," so to speak, relative to the science and practice of assessing significant nexus as it relates to "waters of the U.S." Determinations of significant nexus could be documented and accumulated within a database and on maps that would significantly contribute to the efficiency of CWA administration and compliance, and increase clarity and certainty across the nation over time. (p. 23-24)

Agency Response: **The final rule does not identify additional categories of waters as jurisdictional by rule. Based on the body of scientific literature regarding the subcategories of waters specified in paragraph (a)(7) and their functions, however, the agencies determined that waters of the specified subcategories – prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated by rule because they function alike and are sufficiently close to function together in affecting downstream waters to be reasonably be evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis.**

By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

Southern Environmental Law Center et al. (Doc. #13610)

4.269 It is essential that case-specific analyses for individual waters continue. Although such analyses are resource intensive they are essential if we are to properly protect all waters of the United States. The primary goal, however, should be to move such waters into categories or classes that can be defined by rule to be waters of the United States as science continues to reveal the connections between such waters and jurisdictional waters. (p. 28)

Agency Response: See response 4.227 (Doc. # 14637).

4.270 For those "other waters" that are not otherwise found to be waters of the United State by rule, they should be considered similarly situated with all other waters in their watershed that serve the same functions and provide the same values. The origin or type of the water should not matter in this inquiry, only the functions and values of the waters. Whether a depressional wetland, for example, is a limesink or a bay should not matter in the similarly situated inquiry as long as these wetlands are providing the same services to the ecosystem and are having the same effect on downstream waters.

We also suggest that agencies maintain careful records of similarly situated waters. The agencies should maintain a complete data base of all watersheds that have gone through a similarly situated analysis so that such an analysis does not have to be repeated each time an application is filed to fill an "other water" in that watershed. (p. 38-39)

Agency Response: See response 4.227 (Doc. # 14637). 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 nexus 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 the 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.

As stated in the preamble, 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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. As described above, waters are similarly situated under (a)(8) where they meet the thresholds set out under (a)(8) 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.

The Corps and EPA will utilize existing data and mapping tools as necessary to augment its capabilities and enable it to fulfill its responsibilities of implementation under the Rule. Staff will continue to use their best professional judgment and all available information provided to make consistent jurisdictional calls. The Corps and EPA will utilize existing data and mapping tools as necessary to augment its capabilities and enable it to fulfill its responsibilities of implementation under the Rule. Staff will continue to use their best professional judgment and all available information provided to make consistent jurisdictional calls.

National Wildlife Federation (Doc. #15020)

4.271 There exist numerous categories of non-adjacent "other waters" that are "similarly situated," satisfy the significant nexus test, and warrant inclusion in the list of waters that are jurisdictional by rule.[195] And there is no basis in law or science for categorically excluding some or all "other waters" from CWA jurisdiction absent proof that such other waters lack any more than a speculative or insubstantial effect on TNWs, IWs, or territorial seas. (p. 56-57)

Agency Response: The agencies agree that non-adjacent waters should not be excluded from jurisdiction as a catergory. Instead, waters which meet the parameters of (a)(7) or (a)(8) may undergo a case-specific significant nexus analysis, thereby recognizing that a gradient of connectivity exists and asserting jurisdiction only when the connection and the downstream effects are significant and more than speculative and insubstantial.

4.272 In categorizing waters as "similarly situated" the final rule should focus on the similar functions of non-adjacent water bodies in the region and less on proximity to TNWs, IWs, and territorial seas.

The agencies' proposed definition of "significant nexus" states that other waters, including wetlands:

[195] Most so-called isolated waters are currently regulated under the provision of Corps and EPA regulations that protect "other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce." See, e.g., 33 C.F.R. § 328.3(a)(3). Many waters, such as prairie potholes, covered under this provision have enormous impacts on the chemical, physical, and biological integrity of traditionally navigable waters and, when viewed collectively, clearly have a "significant nexus" to traditionally navigable waters. See, e.g., United States Geological Survey, Northern Prairie Wildlife Research Center, Prairie Basin Wetlands in the Dakotas: A Community Profile, available at http://www.npwrc.usgs.gov/resource/wetlands/basinwet/ (last modified Aug. 24, 2006) (describing the various important functions prairie potholes provide).

> … 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. 33 CRF 328.3 (c)(7).

We strongly agree with the agencies rationale for aggregation of similarly situated waters, based on Justice Kennedy's standard:

> Since the focus of the significant nexus standard is on protecting the chemical physical, and biological integrity of the nation's waters, the agencies propose to interpret the phrase 'similarly situated' in terms of whether the functions provided by the particular 'other waters' are similar and, therefore, whether such 'other waters' are collectively influencing the chemical, physical, or biological integrity of downstream waters. There are many functions of waters that might demonstrate a significant nexus, such as sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat. See 547 US at 775, 779-80. This approach is consistent not only with the significant nexus standard, but with the science of aquatic systems. 79 Fed. Reg. at 22261.

We question, however, the agencies' imposition of functional similarity and proximity requirements that seem more complicated, confusing, and more stringent than called for by Justice Kennedy's use of the term "similarly situated." We agree with Ducks Unlimited that most wetlands in an appropriately sized and delimited 'region' will generally perform many of the same functions and overall, a scientifically valid and more efficient method of aggregating wetlands falling within the classification of 'other waters' would be to evaluate them all in a simple direct, comprehensive aggregation within the appropriate region. Ducks Unlimited 2014 Rule Comments at 27-28.[196]

We also join Ducks Unlimited in objecting to the agencies' proposal to inject wetland density or proximity to a water of the U.S. as criteria for finding other waters to be "similarly situated" and therefore able to be considered in the aggregate for a case-specific significant nexus evaluation. Id. at 28. While function, proximity, and density are important factors for assessing the ultimate significant nexus with waters of the U.S., these factors are not central to the determination of which wetlands in a region qualify as being "similarly situated" and therefore eligible for aggregation. "Similarly situated" wetlands and waters should be categorized based on their ecological function, and not their physical proximity. Indeed, Justice Kennedy acknowledged as much: "Given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system." 547 U.S. at 786.[197]

While the science reflects some correlation between aquatic function and distance, the degree and direction of that correlation is highly variable and not a reliable surrogate for

[196] *Note: Ducks Unlimited comments may be found within Doc.# 11014.*

[197] See also, 547 U.S. at 775 ("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.")

a functional analysis. The SAB's Connectivity Peer Review Report recognizes as much in its critique of the draft Connectivity Report's limited analysis of the scientific evidence of connectivity with respect to non-floodplain wetlands and waters. SAB Connectivity Peer Review Report at 6. The SAB concludes that: "[t]he scientific literature provides ample information to support a more definitive statement (i.e., *numerous functions of non-floodplain waters and wetlands have been shown to benefit the physical, chemical, and biological integrity of downgradient waters*)." (*emphasis added*). Id. The SAB recommends that the EPA revise the conclusion to focus on what is supported by the scientific literature and articulate the specific knowledge gaps that must be resolved (e.g., degree of connectivity, *analyses of temporal or spatial variability*). Id. And the SAB recommends that the Final Connectivity Report's key findings concerning non-floodplain waters and wetlands should address: *the biological functions and biological connectivity of non-floodplain wetlands*; differences between natural and manmade wetlands; *the importance and temporal dynamics of spatial proximity as a determinant of connectivity; and the importance of cumulative or aggregate impacts of non-floodplain wetlands."* (*emphasis added*) Id.

As our summary of scientific evidence below and comments elsewhere in the administrative record document, we believe that there is a compelling scientific basis for treating as a group of "similarly situated" wetlands those wetlands and other waters that have similar characteristics and serve similar aquatic ecosystem functions in the same region. (p. 59-60)

Agency Response: **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 nexus 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 the 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.**

As stated in the preamble, 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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. As described above, waters are similarly situated under (a)(8) where they perform similar functions or are located sufficiently close to each other, regardless of type.

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

4.273 The conservation groups agree that the science supports your proposed treatment of certain subcategories of "other waters" as jurisdictional by rule without respect to their region of the country. 79 Fed. Reg. 22216. Second, the conservation groups generally agree with your regional approach to the evaluation of categories of certain "other waters" that may be deemed "similarly situated," and so, jurisdictional WOTUS. 79 Fed. Reg. 22215. (p. 9)

Agency Response: The agencies agree that non-adjacent waters should not be excluded from jurisdiction as a category. The final rule, however, does not identify any non-adjacent waters as jurisdictional by rule. Waters that meet the parameters set out in (a)(7) or (a)(8) may undergo a case-specific significant nexus analysis. This approach recognizes that a gradient of connectivity exists and asserting jurisdiction only when the connection and the downstream effects are significant and more than speculative and insubstantial.

American Rivers (Doc. #15372)

4.274 We support the Agencies' determination to allow "other waters" to be jurisdictional if they have a significant nexus to a traditionally navigable water, an interstate water including wetlands, or the territorial seas.[198] "Other waters" are those water bodies that do not meet the criteria of any of the categories of waters deemed jurisdictional in the proposed rule and are also not one of the waters specifically excluded from the definition of 'waters of the United States' under the proposed rule. We believe that any water body not specifically included or excluded from the rule should be given a significant nexus test. There are some specific types of waters that are not listed as jurisdictional in the proposed rule which should be given categorical jurisdiction in the Final Rule.

We agree that these "other waters" should be evaluated for significance either individually or in the aggregate if that is more appropriate for the situation.[199] Aggregation of "other waters" is appropriate if they are determined to be similarly situated in the region which is when they perform similar functions and are located close together or close to the jurisdictional water.[200] In order to have a significant nexus, waters must significantly affect the chemical, physical, or biological integrity of the jurisdictional water.[201] The effect the "other water" has on the jurisdictional water must be more than speculative or insubstantial in order to be significant.[202]

The legislative as well as legal history of the CWA supports "other waters" being subject to a significant nexus test for jurisdiction as well as finding specific "other waters" categorically jurisdictional. In Rapanos, Justice Kennedy concluded that, "to constitute 'navigable waters' under the Act, a water or wetland must possess a 'significant nexus' to

[198] Id. at 22211.
[199] Id.
[200] Id. See also, SAB review of the proposed rule, supra note 89, at 3.
[201] Definition of WOTUS, 79 Fed. Reg. at 22211.
[202] Id.

waters that are or were navigable in fact or that could reasonably be so made."[203] Justice Kennedy also referenced the holding of SWANCC which supports looking at "other waters" in the aggregate if that is appropriate for their situation, "if the wetlands, either alone or in combination with similarly situated lands [wetlands] in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable'"[204] they too would be jurisdictional.

The Agencies use 'similarly situated' to aggregate "other waters" to determine if they collectively influence downstream waters. This approach is consistent with CWA, legal precedent, and science. Justice Kennedy recognized that sometimes a hydrologic connection is not necessary to establish a significant nexus, instead "wetlands perform these filtering and runoff-control functions."[205] When wetlands are able to capture precipitation or runoff before it reaches a jurisdictional water, it is the lack of a hydraulic connection that is contributing to the quality of downstream jurisdictional waters. (p. 24-25)

Agency Response: **Comment noted.**

Western Resource Advocates (Doc. #16460)

4.275 WRA supports the extent to which the proposed rule allows for aggregation of similarly situated wetlands and waters to determine if they have a significant nexus to the larger jurisdictional waters, as Justice Kennedy suggested. Many wetlands features are actually "mosaics," that experts treat as a single system for purposes of evaluation. As one Corps guidebook in the region states, "It cannot be overemphasized … that the wetlands and the ecological functions they provide are inextricably embedded within the context of the floodplain mosaic."[206] These mosaics of wetlands seem to exemplify the situation Justice Kennedy described.

State agencies routinely protect groups of wetlands. Thus, for example, Colorado Parks and Wildlife designated and protects the 1100 acre South Boulder Creek Natural Area for its mosaic of wetlands and wet meadows.[207]

Wetlands

Wetlands are a rare, but important part of our nation's waters, especially in the southwest. In Utah, wetlands are 0.2% of the land area and are "declining in both their abundance and their condition."[208] Yet, the Utah Division of Wildlife has identified 36 native species that rely on wetlands habitat and are declining, in their words, "on the edge,"

[203] Rapanos, 547 U.S. at 759.
[204] Id. at 780; SWANCC, 531 U.S. at 167, 172.
[205] Rapanos, 547 U.S. at 775.
[206] F. Richard Hauer et al., *A Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetlands Functions of Riverine Floodplains in the Northern Rocky Mountains, ERDC/EL TR-02-21 p.11 (US Army Corps of Eng'rs, Eng'r Research & Dev. Ctr. 2002), available at* http://el.erdc.usace.army.mil/elpubs/pdf/trel02-7.pdf.
[207] Colorado Parks & Wildlife: CNAP Listing, http://cpw.state.co.us/aboutus/Pages/CNAP-List.aspx (last visited Oct. 6, 2014).
[208] Utah Division of Wildlife Resources, Wetlands, available at https://wildlife.utah.gov/cwcs/02.pdf.

because of the loss of wetlands.[209] Development historically has caused wetlands losses in Utah, and not just in the distant past. Completed in 2008, Utah's Legacy Parkway destroyed 131 acres of wetlands outright and adversely affected another 500, including by fragmenting them in ways that may "hinder the ability of certain organisms to . . . maintain healthy populations."[210]

While wetlands are distinct from rivers, many aquatic species, including those in the southwest, move between wetlands and rivers during their different life-stages. One such species with this pattern is the federally endangered razorback sucker of the Colorado River Basin.

To complete its life cycle, the razorback sucker moves between adult, spawning, and nursery habitats. Spawning occurs during high spring flows when razorback sucker migrate to cobble bars to lay their eggs. Larvae drift from the spawning areas and enter backwaters or floodplain wetlands that provide a nursery environment with quiet, warm, and shallow water. . . .[Y]oung razorback sucker can remain in floodplain wetlands where they grow to adult size. As they mature, razorback sucker leave the wetlands in search of deep eddies and backwaters[.][211]

That fish migrate between a wetland and the river demonstrates not only that the wetland is "adjacent" to the river physically, but also that the wetland is "waters of the US." The wetland is providing the water necessary for fish to survive, since fish only breathe through water.[212] (p. 18-19)

Agency Response: **Comment noted.**

4.276 Some "isolated" waters are not connected to traditionally navigable waters because they constitute closed systems; yet, their import to commerce and the nation's aquatic systems is not in doubt. Some so-called isolated waters are not connected to traditionally navigable or interstate waters on the surface, but are connected via groundwater. Finally, some "other waters" perform similar functions across large landscapes that demand aggregation and, considered together demonstrate a significant nexus to traditionally navigable or interstate waters because of the important ecological functions they play at the watershed level.

None-the-less, many isolated wetlands, e.g., along the eastern plains of the Rocky Mountains, perform all usual wetlands functions, but are even more critical to the functioning of the region's ecosystems, with their "water-rich environments" that are some of the region's "most highly productive systems, . . . unique in their hydrology, plant communities and soils.[213] Moreover, it is again relevant to remember that the states

[209] Id.
[210] Nate Dorsey, et al., Legacy Parkway: Evaluating the Effects of Construction On Wetland Patterns (Brigham Young Univ. 2010), available at http://contentdm.lib.byu.edu/cdm/ref/collection/IR/id/855.
[211] Upper Colorado River Endangered Fish Recovery Program, Razorback Sucker, http://www.coloradoriverrecovery.org/general-information/the-fish/razorback-sucker.html (last visited Oct. 8, 2014). "Juvenile razorback suckers have been collected in recent years from Old Charley Wash, a wetland adjacent to the Green River." U.S. Fish & Wildlife Service, Final Programmatic Biological Opinion on the Management Plan for the Endangered Fishes in the Yampa River Basin 30 (2005) (internal citation omitted) (hereinafter "Yampa PBO").
[212] See, e.g., Aquarium: An Ecosystem, http://reptools.rutgers.edu/Functpage34.html (last visited Nov. 12, 2014).
[213] EPA.gov, Wetlands in Region 8, http://www2.epa.gov/region8/wetlands-region-8 (last visited Oct. 7, 2014).

in which one finds these features have all set their own jurisdictions to cover them, reflecting the importance that the states attribute to these waters.

Closed Basins

The arid and semi-arid West have numerous closed "basin and range" systems:

> The Basin and Range Region is a physiographic province of the U.S. and northern Mexico that covers parts of Arizona, Texas, New Mexico, Utah, Idaho, Oregon, California, and most of Nevada. Topography is characterized by linear, north and south trending valleys and normal fault-block mountain ranges resulting from extension of the Earth's crust. Although the Colorado River dissects the area, **many of the rivers have no outlet to the sea and form large lakes and playas**, such as the Great Salt Lake. The climate is typically semi-arid and deserts form in the rain shadows of linear mountain ranges (e.g. Death Valley).[214]

By definition, these waters do not connect to traditionally navigable waters that flow to the sea. The Great Salt Lake, the largest natural lake in the Rockies, sits within a closed basin. While the Corps has designated the Great Salt Lake navigable in fact[215] (and many of its tributaries, notably the Bear River, are interstate waters), Clean Water Act jurisdiction regarding similar waters is by no means assured. For example, the Humboldt River in Nevada, shown on the map below, is not a TNW, even though it is the 5th largest river in a closed basin and even though Rye Patch Reservoir, along its lower reach, is a TNW.[216] The river is fed by snowmelt and ultimately empties into the Humboldt Sink. Many native species are unique to the Great Basin and use its "isolated" waters to persist. Not surprisingly, 75% of the region's species are "strongly associated" with its riparian vegetation, and while the terminal lakes, marshes and playas are mostly "small and only seasonally filled with water, these wetlands are surprisingly numerous and critically important to the biological diversity and ecology of the region."[217]

Groundwater Discharge Systems

Another common type of "other waters" in the arid and semi-arid West are those waters that connect to navigable and interstate waters through a groundwater rather than a surface water connection. Some of these systems are large enough that the Corps has previously recognized rivers within them as navigable, for example in the northwest, the Big Lost River in Idaho which is one of 73 rivers and streams within the 5,500 square mile Lost River drainage[218] that empties into the Eastern Snake Plain Aquifer, an

[214] USGS.gov, Basin & Range Region (emphasis added), http://energy.cr.usgs.gov/regional_studies/basin_range/ (last visited Oct. 7, 2014).
[215] Utah v. United States, 403 U.S. 9, 10 (1971).
[216] U.S. Army Corps of Eng'rs, Sacramento District Jurisdictional Determination for the Turquoise Ridge Mine 1 (2012), available at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/jd/2012/December/SPK-2012-00175JD3Jurisdicationalwaters.pdf.
[217] Broussard, et al., *Status and Trends of the Nation's Biologic Resources*, Vol. 2 p. 509 (USGS 1998) (Great Basin Mojave Desert Region), available at http://www.nwrc.usgs.gov/sandt/Great-bn.pdf
[218] Earthjustice, Nat'l Wildlife Fed'n, Natural Res. Def. Councel and Sierra Club, Reckless Abandon: How The Bush Administration Is Exposing America's Waters To Harm 12 (2004).

underground water the same size as Lake Erie, which eventually connects to the Snake River itself a navigable water, but also a major tributary to the Columbia River.[219]

Playas

Playas are round, ephemeral lakes hollowed into the ground of the southern High Plains, in eastern New Mexico and Colorado (and are also plentiful in Oklahoma, Kansas and Texas). The source of their water is precipitation, and while their waters do not flow into surface streams, they are hydrologically connected to groundwater, often replenishing aquifers. EPA has noted that early European explorers described the region as "a land of millions of small lakes."[220] Consistent with this historical observation, a Colorado survey suggests that state alone boasts 14,000-23,000 playas.[221]

EPA described the importance of playas for water storage given that they lie "in a part of the country that receives as little as twenty inches of rain a year and where there are no permanent rivers or streams."[222] Yet, they support "an astounding array of wildlife" including millions of waterfowl during the winter, as well as Bald Eagles, endangered and Whooping Cranes.[223] Without playas, EPA contends the region would be devoid of amphibians.[224]

As important as they are to the biodiversity and native species of the High Plains, playas also help sustain agriculture in the region, both because they store water seasonally (in some cases providing as much as 25% of a county's annual irrigation water) and because they recharge the underlying aquifer.[225] Playas provide an important recharge function,[226] which replenishes the Ogallala, or High Plains Aquifer, a critical source of water for the nation's breadbasket. Thus, playas make a key contribution to interstate commerce in this rural area.

Despite EPA's case for the importance of playas, the Corps has routinely found playas non-jurisdictional since the SWANCC opinion. For example, the Corps found an 8 acre playa in Colorado's Washington County non-jurisdictional because it was "isolated, . . . surrounded by uplands, . . . 4000-5800 feet from any potentially jurisdictional tributary" and [prior to SWANCC, likely] regulated solely based upon the presence of migratory birds.[227] The Corps made no effort, even though its determination was made in 2007,

[219] Idaho National Laboratory Oversight Program, State of Idaho, The Eastern Snake Plain Aquifer 2-3 (May 2005), available at https://www.deq.idaho.gov/media/552772-newsletter_0505.pdf.
[220] EPA.gov, Playa Lakes & Wetlands (hereinafter EPA Wetlands), http://water.epa.gov/type/wetlands/playa.cfm (last visited Oct. 7, 2014).
[221] Alison Banks Cariveau & David Pavlacky, Assessment and Conservation of Playas in Eastern Colorado, iii (2008) (prepared for Colo. Div. of Wildlife, EPA & USFWS), available at http://rmbo.org/v3/Portals/0/RMBOColoradoPlayaFinalReport2008.pdf.
[222] EPA Wetlands, supra.
[223] Id.
[224] Id.
[225] Id.
[226] Jason J. Gurdak & Cassia D. Roe, Recharge Rates and Chemistry Beneath Playas of the High Plains Aquifer – A Literature Review and Synthesis USGS Circular 1333 (2009), available at http://pubs.usgs.gov/circ/1333/.
[227] Dennis Buechler, Five Case Studies on the Effects of the SWANCC And Rapanos Supreme Court Rulings on Colorado Wetlands and Streams 15 (2010) (a report for Ducks Unlimited, National Wildlife Federation and Trout Unlimited) (internal quotations omitted).

after Rapanos, to look at whether the playa, alone or aggregated with similarly situated wetlands, had a significant nexus to other waters of the US.

In the proposed rule, the agencies ask whether the importance of certain classes of isolated waters should be aggregated and found to have a significant nexus to traditionally navigable waters, despite their isolation. WRA urges the agencies to aggregate this multitude of small, biologically and commercially important playas to find that they have a significant nexus, and are thus jurisdictional by rule. Doing so would also be consistent with both Colorado and New Mexico definitions of state waters. (p. 21-24)

Agency Response: **Although some commenters suggested additional subcategories of waters for consideration, such as playa lakes and kettle lakes, the agencies at this time are not able to determine that the available science supports that the suggested additional subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, to be clear, under the rule, individual waters of the suggested additional subcategories are jurisdictional where they fall within any one of the (a)(1) through (a)(6) or (a)(8) categories (e.g., a playa lake that is an interstate water, a kettle lake that is an adjacent water, or a woodland vernal pool that is 2,000 feet from a jurisdictional tributary and is determined on a case-specific basis to have a significant nexus to a traditional navigable water, interstate water, or the territorial seas) and are not excluded by rule. Nothing in this rule limits or impedes any existing or future state or tribal efforts to further protect their waters.**

Earthjustice (Doc. #14564)

4.277 Earthjustice generally supports EPA's proposed rule with respect to the inclusion of "other waters" as consistent with the law and with science.[228] See, e.g., Connectivity Report at 1-13. As recognized and discussed by individual members of the SAB, EPA's approach is important for the protection of clean water overall in the U.S. and in its recognition of the importance of similarly situated waters within regional ecosystems. Connectivity Report 1-11 to 1-12 ("[I]n some cases, wetland types such as vernal pools and coastal depressional wetlands are …incorrectly [] referred to as geographically isolated…[f]urthermore, 'geographic isolation' should not be confused with functional isolation, because geographically isolated wetlands can still have hydrological and biological connections to downstream waters"), 1-13 ("Absence of channels does not, however, mean that a wetland or open-water is isolated or only infrequently connected to downstream waters…[s]uch wetlands and open-waters also can reduce flood peaks by storing flood waters, filter large amounts of sediment and nutrients from upland areas, influence stream geomorphology by providing woody debris and sediment, and regulate stream temperature.")

[228] Again, as noted by almost every member of the SAB, the term "significant nexus" is not a scientific term and should therefore be used with the utmost care to ensure it does not result in waters being damaged and/or left unprotected contrary to the intent and purpose of the Clean Water Act. See, e.g., Member Comments, Josselyn at 28.

However, again, as with EPA's definition of adjacency, EPA must ensure that its inclusion of "other," "similarly-situated" waters is adequately inclusive and based on sound hydrologic and biological principles, not just a physical proximity measure. See Member Comments, Aldous at 4, Kolm at 33 ("The flowpath framework should highlight the four-dimensional nature of connectivity, because four-dimensional connectivity scaled in a habitat-to-catchment context is a foundational aspect of freshwater ecology") and 34 (noting that "these flowpaths are inherently four-dimensional (i.e., longitudinal, lateral, vertical, and through time"), Rains at 73, and Sullivan at 87. Moreover, EPA, in providing that similarly-situated waters are properly included in the definition of waters of the U.S., must ensure consideration of aggregate function, connections, and effects, even if they are severed or altered by humans. See Member Comments Kolm at 49, Rosi-Marshall at 81-83, Sullivan at 84 and 88. Finally, as urged by the SAB members, Earthjustice presses EPA to include connectivity of "other waters" that are similarly-situated through groundwater connections. Member Comments, Kolm generally, especially 41 and 43.

Relatedly, Earthjustice also agrees with comments from SAB members that EPA should ensure that "similarly-situated" waters be identified once where they plainly meet these requirements and that the determination and inclusion of those waters as waters of the U.S. should encompass all such similarly-situated features in the same watershed, and that determination should then apply to future decisions. For example, SAB member Rains, at 72, points out that springs at the toe of slopes in a number of western states should be properly identified as other waters as a whole or in the aggregate, as they plainly are connected to the same aquifer, have a similar surface connection to a single water of the U.S. (e.g. a single river) and therefore should all be identified as a water of the U.S. to be protected by the Clean Water Act in a single administrative decision. Similarly, the Connectivity report uses an example of depressional wetland complexes on the Texas coastal plain to point out that other waters similarly situated should be evaluated as a unit and defined as a unit. Connectivity Report at 1- 12. It is neither cost-effective nor scientifically supported to force citizens and the agency to make a decision on each and every spring or seep that is so connected on the case-by-case basis described by EPA. Earthjustice asks EPA to provide in the rule that similarly-situated waters that are waters of the U.S. shall be identified as a group and as an ecological whole because to do so is dictated by the science and by administrative efficiency. As appropriate, EPA should follow up with guidance further clarifying how that requirement applies in particular regions and areas.

As with adjacent waters, Earthjustice also urges EPA to be cautious regarding its use of geographic limitations on identifying "other waters," particularly those that are similarly situated and that affect waters of the U.S. As pointed out by several SAB members, geography can be an accurate measure or proxy for waters affecting downstream waters, but caution must be observed because there can be "significant nexus" between waters that might not be considered geographically proximate. (p. 8-9)

Agency Response: **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 nexus 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 the 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.

As stated in the preamble, 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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. As described above, waters are similarly situated under (a)(8) where they meet the thresholds set out under (a)(8) 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.

The Wildlife Society (Doc. #14899)

4.278 We are particularly pleased to see the explicit recognition in the proposed rule that "other waters" can either "alone, or in combination with other similarly situated waters" be considered jurisdictional under the CWA. Extensive scientific evidence illustrates that while one small reach of a headwater stream or small wetland, for example, may not have a demonstrably significant effect on large, downstream rivers, the cumulative effect of losing many similar reaches of headwater streams or small wetlands can indeed have a significant impact on downstream waters such as the Mississippi River or even the Gulf of Mexico… (…)

Thus, to appropriately assess the types and degrees of connectivity among wetlands in a watershed and the integrity of the downstream waters within it, it is important that various classes of wetlands and waters be assessed in context with each other and their collective effect on downstream waters. Evaluating systems in the aggregate will provide clarity to both regulators and the public while reducing the volume of waters to be evaluated on a case-specific basis.

For similarly situated other waters not covered by a Level III ecoregion designation, it should be understood that studies are and always will be lacking which would indicate every exact grouping of individual wetlands that could be categorized as similarly situated. Therefore, we recommend the EPA consider language emphasizing the need to be scientifically pragmatic in assessing what constitutes evidence for aggregation and to be considerate of science that continues to develop in this field. Although there might not be a study conducted on every single wetland in existence, broad scientific themes of ecological and hydrological connectivity can be applied with confidence while also considering regional to site-specific data.

There will inevitably be situations where wetlands will not be covered by an ecoregion or aggregate of similarly situated waters, leading to a need for case-specific evaluation. However, The Wildlife Society recommends caution in depending too heavily on making case-specific decisions for "other waters" not fitting a category of jurisdictional waters. We encourage the EPA to consider applying case-specific evaluation only in unique situations, as it will be extremely resource intensive for all parties involved to determine every individual water's potential nexus to jurisdictional waters. In these cases, we again encourage application of broadly accepted principles of connectivity and rigorous scientific analyses in future decision-making. (p. 5)

Agency Response: See Agency Summary Response Essay 7. See response 4.193 (Doc. #19133), 4.224 (Doc. #15076), 4.226 (Doc. #15360)

Caloosahatchee River Citizen's Association (Doc. #4711.2)

4.279 It is not clear within the proposed Rule to what extent a tributary network might run. If indeed the tributary network of the Missouri-Mississippi River system can be interpreted as beginning in Montana and extending through Louisiana, then it is also logical that the tributary network of the Caloosahatchee and St Lucie Rivers extends to the headwaters of their major tributary, the Kissimmee River, encompassing the flows into Lake Okeechobee. We agree with the proposal to interpret the phrase "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. (p. 2)

Agency Response: The agencies believe the comment reflects the rule. 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.

Wyoming Outdoor Council (Doc. #16528.1)

4.280 We appreciate that the law applicable to the definition of "waters of the Unites States" has changed as a result of these decisions, and therefore we generally support the agencies proposed case-by-case approach to defining "other waters."

The case-by-case determination of whether an "other water" is jurisdictional would be done at the watershed scale, on a regional level. This is an appropriate means to ensure aggregation of similarly situated waters is accomplished. As we have indicated, aggregation is a vital approach to ensuring that the underlying ecological principal inherent in the CWA "chemical, physical, and biological integrity" mandate is fulfilled. (p. 5)

Agency Response: Comment noted.

4.281 Aggregation of waters is an important and scientifically justified means for determining whether tributaries, adjacent waters, and other waters have significant impacts on the chemical, physical, and biological integrity of downstream waters. We therefore believe the agencies should ensure that aggregation is widely used and applied. Waters should

not be separated and isolated, they should be aggregated if the underlying ecological objectives of the CWA – and the scientific realities of these waters – are to be achieved and recognized.

Numerous statements in the Federal Register Notice show that aggregation is scientifically warranted. See, e.g., 79 Fed. Reg. at 22195-97, 22201, 22205-06, and 22226. The "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" report, which is referred to repeatedly in the Federal Register notice concludes that "to understand the health, behavior, and sustainability of downstream waters, the effects of small water bodies in a watershed need to be considered in aggregate." Id. at 22196. These waters are similarly situated almost by definition. Therefore, the agencies should ensure that aggregation is maximized in the implementation of this rule. (p. 11)

Agency Response: **Comment noted.**

Society for Freshwater Science (Doc. #11783)

4.282 We support the recognition that "other waters", including wetlands, should be considered in aggregate regionally. Case-by-case analysis alone is scientifically indefensible, in our opinion, and not supported by science, which indicates that the totality of hydrologic and ecological connectivity among similarly situated waters to each other and to river networks is critical for protecting these landscapes and their receiving waters. A case-by-case analysis would likely not properly value the sum effect of these interactions and by ignoring the landscape context of interacting aquatic ecosystems would result in the death by a thousand cuts. (p. 2)

Agency Response: **Comment noted.**

4.283 We are very concerned that there is even an option that similarly situated regional waters not be considered in aggregate. We strongly encourage the Agency to explore ecoregional and hydrologic landscape regional approaches for grouping similarly situated waters. Again, landscape wetland mosaics have important ecological connections with streams, lakes, and downstream waters beyond simple one-by-one consideration. It is integral to the functioning in ecologically relevant spatial and temporal scales of the basins within which these mosaics (e.g., Prairie Pothole Region, Carolina Bays) exist, that they be protected. (p. 2)

Agency Response: **Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. 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. 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 the specified subcategories are similarly situated because they function alike and are sufficiently close to function together in affecting downstream waters to be**

reasonably be evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas.

The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See Agency Summary Response Essay 7. See response 4.193 (Doc. #19133), 4.224 (Doc. #15076), 4.226 (Doc. #15360)

4.284 SFS supports expanding the list of jurisdictional waters that can be specifically defined in the rule as much as possible, including as many similarly situated regional water bodies as possible, given that there is sufficient science to identify and define many of these aggregate "other" water groupings as jurisdictional waters. Furthermore, a case-by-case process would be slow and resource intensive. We do not support, however, eliminating the case-by-case process for the determination of jurisdiction for whatever remaining waters exist, since the science is continually developing. (p. 3)

Agency Response: The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water for purposes of a case-specific significant nexus analysis.

4.285 SFS believes the watershed scale, since it is highly variable, is inappropriately constrained for identifying the spatial dimensions of "in the region" and encourages the Agency to consider expanding this to the Hydrologic Unit Code (HUC) 6 or HUC 8 scale. Watersheds vary in size and the effect of "other waters" that are similarly situated within a larger basin likely often represents a water quality importance that may not be observed within a small watershed, therefore a larger scale is necessary.SFS would support the Agency developing a scientifically defensible set of indicators for defining connectivity of "other waters" using a mixture of evidence that includes wetland/water-body size, distance, hydrologic connection (using large scale models), geochemistry, and biology (including movement of individuals as well as genes/propagules). (p. 3-4)

Agency Response: The proposal did ask for several approaches on how to consider waters "in the region." The final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See Technical Support Document for a more detailed discussion of the agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court. In the arid West, the agencies gave the example in the Preamble that 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 smaller 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 code (HUC-10) 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 situations.

4.286 SFS would support the Agency pursuing determination by rule that "other waters" are similarly situated in areas of the country. We believe it is scientifically possible and defensible to do so, and that there is substantial evidence that a priori determinations can be made for regions such as the Prairie Pothole and Carolina Bay regions, and that attempts should be made to identify as many of these regions as possible as jurisdictional a priori. However, as stated above, we believe the Agency should still include provisions for case-by-case or similarly situated significant nexus tests in other regions not included in the final rule and not de facto conclude that "other waters" in any region not identified by the final rule do not have a significant connection, because the science is continuing to evolve and improve. (p. 4)

Agency Response: **The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7), including prairie potholes and Carolina Bays, are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Additionally, for waters for which the agencies have made no conclusions with respect to which waters are "similarly situated", case-specific significant nexus analyses may be undertaken for waters located within the thresholds provided in (a)(8) to determine if those waters, alone or in combination with similarly situated waters in the region, have a significant nexus to a downstream traditional navigable water, interstate water, or territorial sea.

4.287 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 and an ecological basis, and would greatly reduce the resources and time required to make such a demonstration.

SFS supports the use of ecoregions for defining similarly situated waters, as this is a defensible and proven ecological framework for classifying waters and is consistent with the factors used in the proposed rule to define such regions as scientifically defensible

For similar reasons, SFS supports the use of hydrologic landscapes and encourages their use as a scientifically defensible complement to ecoregions. (p. 4)

Agency Response: See Agency Summary Response Essay 7. See response 4.193 (Doc. #19133), 4.224 (Doc. #15076), 4.226 (Doc. #15360)

4.288 SFS supports the Agency developing a process in rule to make future determinations as scientifically defensible and more practical than additional rulemaking and would be willing to support the technical needs to develop such a process. Again, SFS believes that case-specific determinations need to be retained for remaining waters because the science is continually improving.

SFS believes that determining no "other waters" to be similarly situated as simply indefensible based on the Agency's own scientific report (USEPA 2013) and the vast weight of scientific evidence. In our opinion, it is far more likely that the Agency will find that similarly situated "other waters" exist and contribute as an aggregate to downstream water quality as the rule, rather than the exception. (p. 4)

Agency Response: The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. As set forth in the Preamble to the final rule, 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. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

Society of Wetland Scientists (Doc. #12846)

4.289 The system of connected streams and wetlands includes wetlands that perform in aggregate within watersheds and/or landscapes (the latter being a more appropriate concept for flat topography, as in the prairie pothole region). Materials added to small streams and/or small wetlands, in aggregate, have cumulative effects downstream. The

concept of performing in aggregate pertains to spatial and temporal frameworks. Small amounts of material added to many waters upstream adds up to a large loading downstream, as do small amounts of material added frequently over time. The early understanding of cumulative impacts and functioning in aggregate has withstood the test of rigorous research.

- Wetlands in aggregate can function synergistically (i.e., the whole is greater than the sum of the parts). For example, vernal pools support "meta-populations" of plants and animals. Meta-populations are sustained even if one [or] more sub-portions decreases; the probability of at least one sub-population persisting is greater where propagules can easily move from one pool to another. Several pools in close proximity can sustain populations (e.g., an annual plant or amphibian) better than fewer pools located at greater distances from one another.
- The concept that wetlands perform in aggregate over space and time was embodied in early predictions that the effects of losing multiple wetlands or that degradation across many wetlands would need to be considered in a cumulative impact assessment (Brinson 1988, Hemon and Benoit 1988, O'Brien 1988, Preston and Bedford 1988, Siegel 1988, and Winter 1988). Their advice 25 years ago still holds: functions of wetlands should not be viewed independently; the cumulative function of all wetlands in a watershed may differ from simply adding the functions of individual wetlands.

Quotes from Johnston et al. 1990:

- "The relationship between basin storage (as percentage of basin area in wetlands and lakes) and relative flood flow is non-linear in the empirical models developed by Jacques & Lorenz (1988), so that our data yielded a critical threshold at about 10%. Small wetland losses in watersheds with <10% wetlands could have a major effect on flood flows. A similar threshold was found for wetlands in Wisconsin watersheds by Novitzki (1979).
- "Cumulative impact assessment differs substantially from the approach used by existing wetland evaluation systems (Reppert et al. 1979; U.S. Army Corps of Engineers 1980; USFWS 1980; Adamus 1983) because it evaluates the collective function of a group of wetlands, rather than the contribution of an individual wetland.
- "Our results indicate the importance of considering wetland position in the landscape when evaluating cumulative function. All wetlands in a watershed do not behave alike with regard to water quality function, which may explain why previous attempts to relate percent wetland to drainage basin water quality have generally been unsuccessful (Whigham & Chitterling 1988).
- "Therefore, the position of wetlands in the watershed appears to have a substantial effect on water quality, particularly with regard to sediment and nutrients." (p. 2-3)

Agency Response: See Conclusion 5 of the Science Report. The agencies believe the final rule reflect these comments.

4.3.1.2 Opposing Approach

State of Iowa (Doc. #8377)

4.290 The proposed rule allows the aggregation of many "similarly situated" small water bodies which individually do not have a significant nexus with traditionally navigable waters until the insignificant connections add up to some unknown minimal level of significance. Because the number of waters, geographic span to be aggregated, and level of similarity needed are undefined, it would appear that small water bodies could be aggregated with a sufficient number of other water bodies to become jurisdictional. In fact, they do not have to be water bodies at all. Because tributaries are defined as having a bank and bed and ordinary high water mark, there is no requirement under the rule for the existence of water in a tributary. This is much broader than the interpretation EPA has actually enforced up to now, and we cannot support the concept of "similarly situated waters" in performing significant nexus analyses if that results in an expansion of jurisdiction. (p. 6)

Agency Response: The final rule identifies eight categories of jurisdictional waters. The first three categories of jurisdictional waters ((a)(1)-(a)(3)), traditional navigable waters, interstate waters, and the territorial seas, are jurisdictional by rule in all cases. Impoundments of jurisdictional waters ((a)(4)) are also jurisdictional by rule in all cases. The waters in the next two categories, "tributaries" ((a)(5)) and "adjacent" waters ((a)(6)), are jurisdictional by rule, as defined, because the science confirms that as defined they have a significant nexus to traditional navigable waters, interstate waters, or territorial seas. The final two categories of jurisdictional waters ((a)(7) – (a)(8)) are those waters subject to case-specific analysis to determine whether they have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas, either alone or in combination with similarly situated waters in the region.

The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule.

With respect to waters that are not tributaries as defined in (a)(5) or adjacent waters as defined in (a)(6), the agencies believe the limited use of case specific determinations in (a)(7) and (a)(8) are necessary to restore and maintain the chemical, physical, and biological integrity of our Nation's waters, is not overly broad and is consistent with judicial holdings. The final rule provides more regulatory certainty by narrowing the scope of waters that can be assessed under a case-specific significant nexus evaluation as compared to the proposal and by providing a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. This is a change from the proposal, which would have allowed for a significant nexus determination for any water, anywhere in the landscape.

The agencies did not define "water" because the agencies concluded that in light of the variability of terms and aquatic systems a definition would create more uncertainty. The agencies have provided clarification of the term in the preamble to the rule, stating: "The agencies use the term "water" and "waters" in categorical reference to rivers, streams, ditches, wetlands, ponds, lakes, oxbows, and other types of natural or man-made aquatic systems, identifiable by the water contained in these aquatic systems or by their chemical, physical, and biological indicators. The agencies use the terms "waters" and "water bodies" interchangeably in this preamble."

West Virginia Attorney General, et al. (Doc. #7988)

4.291 This ad hoc approach clearly violates the test adopted by the Rapanos plurality, as it includes innumerable waters without a "continuous surface connection" to core waters. And while the Agencies have attempted to tether themselves to Justice Kennedy's Rapanos opinion, their approach is far broader than Justice Kennedy would permit. While Justice Kennedy would require a water to "significantly affect the chemical, physical, and biological integrity of other covered waters," the Proposed Rule only requires a water to "significantly affect[] the chemical, physical, or biological integrity" of a core water. In addition, the Agencies' conclusion that the "combination with other similarly situated waters" can take place across any "region" – combined with the unbounded discretion in EPA's description of the inquiry – threatens to swallow any remaining waters. The Proposed Rule defines "region" as "the watershed that drains to the nearest traditional navigable water, interstate water, or the territorial seas through a single point of entry," which can be extremely broad areas. 79 Fed. Reg. 22, 199, n.6. This case-by-case analysis allows waters in entire watersheds and large regions to be assessed in the aggregate, thus diminishing the significance of the "nexus" any individual feature must have with a core water.

In addition and critically, the Proposed Rule's inclusion of this catch-all category defeats the claimed purpose of the Rule of bringing "transparency, predictability, and consistency" to the scope of CWA jurisdiction, such that farmers, land developers and homeowners can know where the Agencies' assertion of authority ends. 79 Fed. Reg. at 22, 190. The inclusion of this vague catch-all category will leave these parties in just as much uncertainty as before the Proposed Rule regarding whether their isolated creeks, ponds, and occasional wet lands are subject to the Agencies' reach, such that a federal permit is mandatory. Accordingly, we urge in the strongest possible terms that the Agencies eliminate the catch-all from any final rule. (p. 10)

Agency Response: The rule is appropriately premised on the significant nexus standard as articulated by Justice Kennedy. 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." As set forth in greater detail in the Technical Support Document, all U.S. Courts of Appeal and

virtually all U.S. District Courts that have applied *Rapanos* have held that Justice Kennedy's standard may be applied to identify jurisdictional waters.

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 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 a traditional navigable water, interstate water, or the territorial sea.

The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The agencies believe that the final rule provides clarity that will allow a landowner to assess whether a particular local water is likely covered. The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm. See Agency Summary Response Essays 1 and 5.

Texas Commission on Environmental Quality (Doc. #14279.1)

4.292 The proposed rule should not allow for aggregation of similarly situated other waters — each water body should be subject to its own jurisdictional test. TCEQ is concerned with the provision that provides that other waters are jurisdictional if there is a significant nexus to (a)(1)-(3) waters of the United States, either alone or in combination with other similarly situated waters 183 CFR §328.3(a)(7)]. This provision leads to uncertainty as to the types of water bodies that might ultimately be defined as jurisdictional, and the definition proposed for "significant nexus" in 33 CFR §328.3(c)(7) does little to reduce this uncertainty. In addition, the aggregation of similarly situated other waters greatly

increases the potential to capture waters that Congress never intended to be regulated under the CWA. The EPA/USACE acknowledge the uncertainty raised by the provision by soliciting comments on a variety of alternative approaches for addressing other waters (pages 22214-22217). The ambiguity involved in trying to determine what are other waters is highlighted in the definition of "significant nexus," which states that for a nexus to be significant, the effect on a jurisdictional water must be "more than speculative or insubstantial' 133 CFR §328.3(c)(7)]. The definition of "significant nexus" remains too vague to effectively implement. (p. 7-8)

Agency Response: **See Agency Summary Response Essays 1 and 5. The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.**

Western Urban Water Coalition (Doc. #15178.1)

4.293 The inclusion of ephemeral and intermittent drainages in the "other waters" category is not compatible with the proposed "similarly situated" approach to combining waters over a large single-entry watershed. As discussed below in the section Similarly Situated, there is simply too much variability within waters in the arid West, particularly ephemeral and intermittent drainages, to make such a sweeping generalization on which to base the jurisdictional status of the waters. (p. 23)

Agency Response: **Ephemeral and intermittent drainages have not been listed as a specific subcategory of water determined to be similarly situated for purposes of significant nexus analyses. In order for a water to be considered a jurisdictional tributary in the final rule, two physical indicators of flow are required: there must be a bed and banks and an additional indicator of ordinary high water mark. This definition of "tributary" includes only those waters the agencies have concluded are the type of waters that the CWA was intended to protect and which either individually or in combination with other covered tributaries in the watershed have a significant nexus to a traditional navigable water, interstate water, or the territorial seas. Thus, the agencies are not defining "waters of the United States" to**

include all streams that might be considered "tributaries" in the general scientific literature. The rule places both geographic and functional limits on which waters could be subject to case-specific significant nexus determinations, including the limited number of subcategories of waters determined by rule to be similarly situated for a significant nexus analysis. The rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States."

In the arid West, the agencies gave the example in the Preamble that 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 smaller 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 code (HUC-10) 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 situations.

Wyoming Department of Environmental Quality (Doc. #16393)

4.294 In most circumstances, individual ephemeral stream channels in arid regions have insubstantial chemical, physical, and biological effects on distant navigable waters. They simply do not influence the chemical, physical or biological integrity of downstream waters. The proposed rule attempts to overcome that fact by considering all such channels collectively rather than individually. But aggregation cannot create significance by fiat – individual water bodies must be jurisdictional in their own right. Either they are significantly connected to navigable waters through chemical, physical or biological processes or they are not. Insubstantial connectivity under Justice Kennedy's significant nexus test is not enough, and aggregation cannot establish that connectivity where none exists. (p. 3)

Agency Response: See response 4.45 (Doc. #12756). See Tributaries Compendium

State of Michigan, Attorney General (Doc. #16469)

4.295 Of particular concern to Farm Bureau is that these case-specific determinations can be based on aggregating water bodies "in the same region" to find that because the whole may have a significant nexus, each individual water is also deemed to have a significant nexus. Farm Bureau questions the scientific basis for such an aggregation, and it is equally unclear under what legal authority your agencies can determine that an individual landowner is regulated under the Clean Water Act based on the determination that his property is part of a "collective nexus" with an otherwise regulated water. (p. 6)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.

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 have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed by rule in a single point of entry watershed for purposes of a significant nexus determination. See Technical Support Document XI. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. See Preamble Section IV.H and Technical Support Document XI.

City of Phoenix, Arizona, Office of Environmental Programs (Doc. #7986)

4.296 Phoenix is located in one of the ecoregions under consideration: #81 Sonoran Basin and Range. Based on our in-depth knowledge of local conditions, we feel it is inappropriate to consider all "other waters" in this ecoregion in aggregate. It is more appropriate and scientifically justifiable to evaluate them on a case-by-case basis. (p. 3)

Agency Response: The final rule did not determine the Sonoran Basin and Range to be one of the categories "similarly situated" by rule in a single point of entry watershed. The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. See Technical Support Document XI. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis.

Franconia Township (Doc. #8661)[229]

4.297 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. 4)

Agency Response: See Agency Summary Response Essay 1, 9, 5, 8. See responses 4.136 (Doc. #15018.1), 4.241 or 4.242 (Doc. #14579)

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

4.298 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 … 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". … On page 22194, it is clear that EPA and USACE ('the agencies") are trying to "clarify" jurisdiction by reducing their burden of proof to show that jurisdiction applies on a case by case basis when any water has chemical, physical or biological effects on traditional navigable waters, interstate waters and inland seas, based upon general conclusions from scientific literature. In essence, because scientific articles say this happens, we must assume that it

[229] *Near verbatim comments were submitted within the following other comment letters that were otherwise identified as unique letters: Doc. #15071.1, p. 5; Doc. #16480, p. 4; Doc. #16647, p. 8; and Doc. #19593, p. 6-7. These comments have not been repeated within this compendium.*

applies to all situations, and the agencies are relieved of any duty to prove a nexus and the significance of that nexus. This has significant constitutional due process violation implications.

This is further reinforced on page 22195, where the stated goal is to be able to look up a site on a computer and determine from that alone that the regulator has jurisdiction. The agencies state, on page 22214, that "information derived from field observation is not required in cases where a 'desktop' analysis can provide sufficient information to make requisite findings", and further that "for more complex or difficult jurisdictional determination, it might be helpful to supplement such information with field observation". …The only time the case by case evaluation is acknowledged is in the case of "other waters". Given the broad reach of the definition of tributaries, however, it is unlikely that "other waters" even exist given this definition. See, pages 22197 and 22198. (p. 3-4)

Agency Response: **The agencies do not agree with the commenter's assertion that the *SWANCC* and *Rapanos* decisions require that the coverage of the CWA must be determined case-by-case. In his concurring opinion in *Rapanos,* Chief Justice Roberts expressed his view that the agencies should be making exactly these types of determinations in a rulemaking. 547 U.S. at 190 (Roberts, C.J., concurring) ("Agencies delegated rulemaking authority under a statute such as the Clean Water Act are afforded generous leeway by the courts in interpreting the statute they are entrusted to administer. See *Chevron U.S.A. Inc. v. NRDC, 467 U.S. 837, 842-845, 104 S. Ct. 2778, 81 L. Ed. 2d 694 (1984)*. Given the broad, somewhat ambiguous, but nonetheless clearly limiting terms Congress employed in the Clean Water Act, the Corps and the EPA would have enjoyed plenty of room to operate in developing *some* notion of an outer bound to the reach of their authority"). The agencies further disagree with the commenter's assertion the agencies may not establish that categories of waters have a significant nexus to downstream traditional navigable waters, interstate waters, or territorial seas. Quite the opposite, Justice Kennedy stated that the significant nexus analysis must be applied on a case-by-case basis "absent more specific regulations." 547 U.S. at 780-81 (Kennedy, J., concurring). Justice Kennedy invited the agencies to establish categories of covered waters.** *Id.* **at 780—81. The agencies also disagree that the final rule asserts jurisdiction over tributaries as defined and adjacent waters as defined based on a presumption of significant nexus. To the contrary, identification of (a)(5) and (a)(6) waters as jurisdictional by rule is based upon the best available peer-reviewed science as well the text of the statute, Supreme Court decisions, public input, ,and the agencies' technical expertise and experience. The agencies further disagree to the extent the commenter infers that consideration of generally accepted geographic information system and other data from reliable sources cannot constitute a case-specific analysis. The agencies support the use of remote sensing of information and mapping as tools to identify waters and in particular tributaries as discussed in the preamble. These tools are helpful when site visits are not possible or in enforcement cases when the resource has been disturbed or no longer exists**

Cochise County Board of Supervisors (Doc. #14541)

4.299 The County concurs with the proposed rule requirement that other waters "would only be jurisdictional upon a case-specific determination that they have a significant nexus as defined by the proposed rule". However, these case-specific determinations should start with the presumption on non-connectivity and scientifically prove that there is both connectivity and that the contribution to the a(1) to a(3) waters is a significant portion of the sum of the contribution of all tributaries to those waters.

The agencies are further considering alternative ways to "lump" other waters into a category labeled "in the region" by "similarly situated" or ecoregion rationales. The County does not concur with this approach. This lumping efforts leads to a presumption of connectivity and again requires US citizens to do the impossible by scientifically proving a negative. The agencies are using this lumping effort in an effort to get around the significant nexus argument when it is clear that the regions and ecoregions may have highly different characteristics in geology, geomorphology, chemistry, biological, vegetation, flow rates and regimes, etc. and the nexus for specific parts of these regions or ecoregion may indeed be insubstantial and thus insignificant. The County very specifically does not concur with lumping the County within in Sonoran Basin and Range ecoregion due to the high variability of the subregions within these ecoregions. Altitude differences alone preclude this approach as some mountain range/valley systems may have 6 or more habitat zones within a few miles. In fact, the Sulphur Springs Valley in eastern Cochise County is a closed drainage and does not externally drain to any a(1) to a(3) waters. (p. 2)

Agency Response: **See response 4.297 (Doc. #8661). 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, establishes a binding definition of "waters of the United States" and is consistent with the statute, the caselaw, and the Constitution. Technical Support Document, I.A. and C.**

Painesville Township, Ohio (Doc. #15183)

4.300 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 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. (p. 2)

Agency Response: **See response 4.136 (Doc. #15018.1), 4.241 or 4.242 (Doc. #14579).**

San Bernadino County, California (Doc. #16489)

4.301 The proposed Rule asserts that "other waters" and "adjacent waters" should be assessed in the aggregate as "similarly situated waters". There is no clear standard or metric for such a determination. It is also unclear how permitees will gather all such information on similarly situated waters within a watershed. (p. 3)

Agency Response: See Agency Summary Response Essays 6 and 8. See response 4.292 (Doc. #14279.1), 4.44 (Doc. #12757), 4.262? (Doc. #15178.1)

4.302 Conceptually, the "similarly situated" concept makes some sense, but as a practical matter, the DPW does not believe that this is a workable standard. Within any landscape, "other waters" may be found in a fractured landscape of rural and urban development. It is unclear how a permittee will identify all such "similarly situated" resources to make such a collective assessment. It is also unclear what metrics should be applied, or how this information will be coordinated and efficiently communicated between the USACE (and EPA) and all prospective permittees.

Regional soils may involve very complex consociations of pedons/soil types, including pedons that are both similar and very different. These soil types may be distributed within narrow or substantially different elevation gradients. Also, vegetation including hydrophytic (FAC, FACW, and OBL) and upland (FACU, UP) plants may also be found at various elevations, and in landforms such as ditches, temporarily excavated pits and other such resources that may not be jurisdictional. Other than providing a loose scientific rationale, the proposed Rule does not offer any means for establishing how such assessments will be practically implemented.

One of the alternative approaches cited in the Federal Register, would "determine that no 'other waters' are similarly situated."[230] This would mean that all "other waters" (Type II) or "adjacent waters" (outside the floodplain) would be "assessed individually" on a case-by-case basis.

Because many "other waters" have very limited function and value, and because their ability to affect downstream navigable resources is highly speculative, this alternative approach will likely result in more "non-jurisdictional" determinations. However, the Agencies should be reminded that "other waters" are resources on the outer fringe of federal constitutional commerce authority which is at the core of the ruling in both SWANCC and Rapanos. It should also be emphasized that these resources are typically covered and protected under respective state law (See discussion below: Federalism and State Response to Regulatory Gaps).

Another alternative option considered, was to assume that all "other waters" located within a "single point entry watershed" be considered "similarly situated."[231] This would be a simpler approach, but the DPW agrees that determining all "other waters" in a single-point entry watershed to be "similarly situated" will lead to a greater finding of CWA jurisdiction, and asserts that such a finding is not supported by either science or by

[230] Federal Register, at 22217(1)(f)(3).
[231] Federal Register, at 22217(1)(f)(3).

the rationale behind the "significant nexus" approach in Justice Kennedy's Rapanos opinion.[232]

The DPW would agree with the "individual assessment alternative approach" because it is practicable. Similarly, resources that will, as a result, be excluded from federal jurisdiction will in most cases still be regulated under state law. (p. 8-9)

Agency Response: **The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. See response 4.3 (Doc. # 14625) and Technical Support Document, section XI.**

The final rule defines "in the region" as the single point of entry watershed. 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 final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional. 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 and more than speculative and insubstantial. See Technical Support Document for a further discussion of the agencies' interpretation of the significant nexus standard and when a nexus is neither speculative nor insubstantial.

See Conclusion 5 of the Science Report.

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

4.303 The concept of considering a water "in combination with other similarly situated waters … in the same region" is rife with uncertainties. In many instances, this would be a vast geographic area. The extraordinarily broad scope of the required evaluation immediately

[232] Federal Register, at 22217(1)(f)(3).

inhibits the ability of a land owner to make any reasonable judgment concerning the jurisdictional status of a single, local water.

Moreover, by considering a particular water "in combination with" other waters located in such a broad region, the Agencies would examine the cumulative impacts of multiple waters, ranging from large to very small, in order to determine the jurisdictional status of a particular water in question. If that cumulative impact is deemed to be "significant," then individual waters that might be thought to be contributing in some fashion to that cumulative impact would be considered jurisdictional.[233] Under this approach, **every** small pond or other water feature that retains stormwater, arguably has a "significant nexus," because each such feature, "in combination with" other waters in a broad region, regulates the flow of floodwaters, traps sediments and other pollutants, and recharges groundwater.

A larger water, or one nearer to a navigable-in-fact or interstate water, might represent the vast majority of the "cumulative" impact, and yet a smaller and/or more remote water would be pulled along into the web of federal jurisdiction. This not only expands CWA jurisdiction well beyond anything Congress could have intended to include in the term "navigable waters," but it leaves land users with virtually no way to assess the status of their local water, short of undertaking a complex and costly watershed study. (p. 30-31)

Agency Response: **See Conclusion 5 of the Science Report. The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.**

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.

While ponds are among the types of waters that may fall within the adjacent waters category ((a)(6)), that category is narrowly defined. Ponds also may be subject to a case-specific significant nexus determination pursuant to (a)(8). That being said, the final rule explicitly excludes artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, settling basins, rice growing, or cooling ponds; small ornamental waters created in dry land; and stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

[233] This ignores the fact that much of the cumulative impact thought to be "significant" would, in most instances, be attributable to a handful of waters, or even a single water, that is deemed to be among a larger group of "similarly situated" waters.

The (a)(8) category is narrowly defined and limited to 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), whichever is broader, where they are determined on a case-specific basis to have a significant nexus to a water identified in paragraphs (a)(1) through (3). The rule places limits on which waters could be subject to a case-specific significant nexus determination and limits the subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis. The definition of significant nexus identifies nine functions that will be considered.

The agencies believe the clarity provided in the rule along with the agencies' existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

John Deere & Company (Doc. #14136.1)

4.304 It is proposed that *other* waters will be evaluated either individually, or as a group of waters where they are determined to be similarly situated in the region. How these other waters are aggregated into a project area for a case-specific significant nexus analysis will depend on the functions they perform and their spatial arrangement within the "region" or watershed. Establishing a project area for review based on the boundaries of "the watershed that drains to the nearest water identified" is not appropriate for several reasons:

- First, many small waters have no assigned watershed. If the water nearest the area of review does not have a defined watershed, the subsequent direction is unclear.
- Second, the watersheds of large rivers are vast. Decision makers reviewing a project "near" any large river will have to examine a complex ecosystem with interconnecting features that could contain hundreds of thousands of acres. The monumental size of the study area creates the potential for multiple claims that the property "in combination with others similarly situated" has a significant nexus to the water. Providing data or countering these claims will be onerous because there is no reasonable limitation placed on the size of the project review area.
- Third, it will create massive administrative backlogs. If the watershed is a key to making applicability decisions, it should remain important to all phases of the project review process. Consider the process implications of expanding the area for review to a watershed containing 200,000 acres. The project review, and notice and comment period for an average Section 404 permit project currently takes about 18 months to complete. This includes agency consultation, notifying potentially affected parties in the immediate area, receiving comments from local participants and interest groups and preparing written responses. Expand the area under consideration by a factor of 100, 500 or 1,000 and magnify with it the number of notices, comments and responses that will result when many thousands

of people, businesses and interest groups are declared significant for the purpose of decision-making for any project affecting that watershed. There simply has to be a reasonable end point for regulatory inquiry if a workable process to determine jurisdictional waters is going to exist. (p. 9-10)

Agency 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. Available mapping tools, such as those that are based on the NHD, topographic maps, and elevation data, can be used to demarcate boundaries of the single point of entry watershed. Also, see Agency Summary Response Essay 2 and 9.**

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

4.305 Of concern is the fact that there are no defined boundaries for the aggregation principles in the Proposed Rule. While the preamble acknowledges that principles such as the "single point of entry" for a particular watershed may be unduly expansive, the Proposed Rule nonetheless fails to constrain the boundaries of the judgment-call prerogative of the Corps field representative. Such lack of specificity and direction belies the lack of clarity and transparency that purportedly are the hallmark of the Proposed Rule. See, *e.g.*, *Proposed Rule* at 22,212. This approach seems to cherry-pick terminology from Justice Kennedy's concurrence and put it into practice far beyond his analytical approach in Rapanos. See Rapanos at 780 (Kennedy, J., concurring).

Indeed, the SAB's panel's comments on the Proposed Rule call into question the potential breadth of the "single landscape unit" terminology. Dr. Michael Josselyn of the SAB Panel noted that a watershed of the "nearest navigable water" "could be a very large area that may drain significant portions of *a single State*." SAB Panel Comments on the Proposed Rule at 25 (emphasis added).

And the analysis directed by the Proposed Rule, not unlike its sweeping categorical declaration of significant nexus for tributaries and adjacent waters, as respectively defined, is remarkably devoid of consideration of significance. While the Proposed Rule specifies examples of indicators of a possible nexus as a basis for exerting jurisdiction over so-called "other waters" (e.g., "sediment trapping, nutrient recycling, pollution trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat" *Proposed Rule* at 22,261), there is no meaningful focus on or direction of consideration of the significance of such indicators to the purported nexus between the feature and truly navigable waters as was foundational to Justice Kennedy's test in *Rapanos*. (p. 21-22)

Agency Response: **See Agency Summary Response Essay 6.**

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

4.306 The Agencies propose a catch-all category for "other waters." Unlike tributaries and adjacent waters, these other waters are not per se jurisdictional but can be regulated on a case-by-case basis. While it may be reasonable to include a catch-all such as "other waters" in a rulemaking as broad and diverse as this one, the Agencies undermine the concept by claiming that a case-by-case determination may be made on an aggregated, regional basis, meaning that a decision in one case will have binding effect on all similar waters (even where the other affected landowners have no notice of the decision or any opportunity to participate in it). What happens, for example, if one landowner seeks a jurisdictional determination and the Agencies claim jurisdiction, then proceed to say that the same feature(s) would be jurisdictional on an ecoregional basis? In this situation, other affected landowners would essentially have their rights determined without notice or an opportunity to comment. Beyond basic fair notice concerns, this concept of "aggregation" raises a host of legal and technical questions. When, where and how will it be applied? What size watershed and how close to a TNW must a water be in order to be aggregated? Does aggregation apply only to "other waters"? What ecoregions will be subject to aggregation and what criteria will the Agencies use to make that determination?

The confusion over "other waters" will only be magnified by the varying interpretations of EPA's 10 distinct regional offices and the Army Corps' 37 district offices for purposes of CWA permitting and enforcement. Divergent interpretations will almost certainly lead to more regional inconsistencies, greater uncertainty in compliance obligations, more permit delays and costs, more litigation and more enforcement. (p. 8-9)

Agency Response: **See Agency Summary Response Essays 5 and 9. The agencies do not agree that the owner of a similarly situated water would lack recourse. With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water together with similarly situated waters in the region, the agencies note that approved jurisdictional determinations is of limited duration and would expire after five years. See RGL 08-02. An approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information. 33 C.F.R. § 331.5(b)(7).**

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

4.307 The "other waters" category will become a new catch all to include isolated waters and wetlands that, when aggregated with all other wetlands and waters in the entire watershed, have a "more than speculative or insubstantial" effect on traditional navigable waters. Id. at 22,211. "Other waters" need to be clearly defined for consistent and fair application with jurisdictional determinations and subsequent permitting requirements. A broad based definition such as this one will have significant impacts through unintended misuse requiring permits and mitigation.

In addition, using any scale of land unit or watershed (hydrologic unit) in light of proximity to each other does not provide clear direction for determining jurisdiction. It will not provide for fair and consistent permitting and mitigation requirements throughout

the U.S. Any general terminology will not provide for proper application for the CWA and the protection of watersheds and their ecosystems in a consistent matter. (p. 11-12)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.**

The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. With respect to how the final rule defines "in the region" for purposes of a significant nexus analysis under (a)(8), see response 4.305 (Doc. #14523). Waters are identified as similarly situated for purposes of a significant nexus analysis under (a)(8), when they satisfy the threshold in (a)(8), function alike, and are sufficiently close to function together in affecting downstream waters.

4.308 This interpretation expands the concept of "similarly situated" beyond reason and would allow the Agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assess jurisdiction. This ruling does not clearly define what is jurisdictional, based on location, scale of the land unit, or similar guidance to ensure consistency for jurisdictional determination, permitting or mitigation.

The Agencies' proposal for "other waters" is overbroad, ambiguous and confusing. The golf industry is concerned the provision is meant to assert jurisdiction over isolated waters, such as prairie potholes or stormwater/irrigation ponds that have little or no connection to traditional navigable waters.

"Other waters" should be determined using an established set of clear and science based guidelines for jurisdiction and with a clear function and connection to perennial and intermittent waters. Also, the Supreme Court has determined such isolated waters are not within the Agencies' authority to regulate under the CWA. For these reasons, we recommend elimination of the proposed provision. If the Agencies insist on regulating "other waters," they should require a true case-by-case analysis of the feature at issue to determine if the science supports a determination that the feature in question shares a meaningful relationship with traditional navigable waters. (p. 16)

Agency Response: See Agency Summary Response Essay 1 and 4. With respect to prairie potholes, see reponse 4.163 (Doc. #16447). The final rule specifically excludes Artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, settling basins, rice growing, or cooling ponds Artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, settling basins, rice growing, or cooling ponds and stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

Water Advocacy Coalition (Doc. #17921.1)

4.309 Looking at all "other waters" within a watershed is too broad and not supported by science. As Dr. Michael Josselyn of the SAB Panel noted, the watershed of the nearest navigable water "could be a very large area that may drain significant portions of a single State."[234] Even small Hydrologic Unit Code ("HUC")-10 watersheds, which the preamble recommends for use in the arid West, are typically between 40,000 and 250,000 acres in size (i.e., approximately 60-390 square miles). See 79 Fed. Reg. at 22,212. As Dr. Josselyn noted, "It would be hard to argue that including all the [waters] within such a large area in one grouping would not have an effect on the downstream water."[235] In addition, the agencies' proposed aggregation of all "similarly situated" features within a watershed is not supported by the science. The GEI Report explains that "the Agencies' aggregation approach is not based on a scientific evaluation of whether aggregated effects result in a significant nexus."[236] The studies cited by the agencies to support their aggregation principle support the notion that aggregation of small effects to downstream waters can result in a "measurable" effect, but "these studies do not provide support for the Agencies to reach a consistent determination of how much aggregation is sufficient to

[234] SAB Panel Comments on the Proposed Rule, Exhibit 7 at 44. Confusingly, the agencies acknowledge that defining "in the region" as the watershed area is not appropriate in arid West where the single point of entry watershed is very large, and suggest a modified approach based on National Hydrology Dataset (NHD) mapping tools to demarcate catchments surrounding the water at issue. 79 Fed. Reg. at 22,212. But, as Dr. Josselyn notes, the large size of the watershed is also likely to be a problem outside of the arid West.
[235] Exhibit 7 at 44 (comments of Dr. Michael Josselyn).
[236] GEI Report, Exhibit 6 and 6.

justify a jurisdictional determination."[237] The proposed rule's failure to provide a scientifically defensible standard method for determining when aggregated effects are significant "will likely lead to inconsistent case-by-case determinations in the field."[238]

Moreover, not all features within a "single landscape unit" are similarly situated. The preamble suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, so long as they "perform similar functions" and are located "sufficiently close" to a water of the United States to allow them to collectively function together. 79 Fed. Reg. at 22,213. This interpretation stretches the concept of "similarly situated" beyond reason and would allow the agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assess jurisdiction.

Furthermore, the proposed "other waters" standard is problematic because the case-by-case significant nexus analysis touted by the agencies for "other waters" is not really a case-by-case analysis. The agencies propose to evaluate similarly situated waters within a watershed, which as noted above could cover a geographic area of 60-390 square miles, "as a group." 79 Fed. Reg. at 22,211. They will aggregate all similarly situated "other waters" within a watershed to determine if, when combined, all of those waters have a significant nexus with a TNW, interstate water, or territorial sea. Id. The agencies will not perform an individual analysis on the feature at issue unless they cannot make a finding that there are "similarly situated" features in the region. As noted above, if "other waters" that are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics can all be treated as "similarly situated," it seems unlikely that the agencies would ever be in a situation where they could not find similarly situated features in the region. In addition, the agencies note that information relevant to finding that an "other water" has a significant nexus "need not always be specific to the water whose jurisdictional status is being evaluated," but instead can be based on "regional and national studies of the same type of water," or a "desktop" analysis. 79 Fed. Reg. at 22,214. Thus, the "other waters" analysis described in the preamble can hardly be characterized as a case-by-case analysis.

The end result of the proposed process for evaluating "other waters" will be the assertion of jurisdiction over many isolated features that, like the isolated, non-navigable ponds at issue in SWANCC, are a far cry from the "waters of the United States" to which the CWA extends. (p. 66-67)

<u>Agency Response:</u> While (a)(7) of the proposed rule contained a broad reference to other waters, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina

[237] Id.
[238] Id. at 6-7.

and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. Waters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters. As set forth in the Preamble to the final rule, 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. For purposes of a case-specific significant nexus analysis under (a)(7) or (a)(8), 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. See Agency Summary Response Essay 2, 3, 10, 9, 6 and 7.

North Houston Association et al. (Doc. #8537)

4.310 The new rule proposes to include isolated wetlands that are either singularly or in combination with similarly situated waters as having significant nexus to TNW and thus jurisdictional by rule. The basis of this focus and drive to include whole regions such as the WGCP appears to be a desire to bring land-use management and regulation by the Federal Government into the State and local setting. A single compendium study, in Draft Form, is the technical basis for the expansion of jurisdiction.

Although the Rapanos Supreme Court ruling directed that significant nexus to traditional waters should not be speculative, the use of a Draft Report, that itself is a synthesis of published reports of a wide variety, does not address the specifics of the WGCP and the varying situations that this broad area presents. The use of the few, limited studies conducted in the WGCP as validation of jurisdictional inclusion of WGCP isolated wetlands are highly speculative and biased in our view. We object to the attempt to include the WGCP and any subgroup of that ecoregion, into the jurisdictional fold by rule, without rigorous, local, and regional based studies, with public participation of the significance of connectivity of the various watershed units in the ecoregion. (p. 5)

Agency Response: See the Preamble and the Technical Support Document, section I, for a discussion of the scientific and legal basis for the determination that five specific categories of waters are to be considered "similarly situated" in case-specific significant nexus analysis.

4.311 Several studies are referenced in the proposed rules as the basis for "other waters" in the WGCP being similarly situated, meeting the significant nexus test. We find these studies

to be quite limited in their scope, and thus limited in usefulness for determining such an important regulatory expansion, due to the broadly diverse nature of the WGCP. The few studies cited for consideration of inclusion of the WGCP as "similarly situated" are clearly not representative of the WGCP as a whole. Following are comments to specifically address issues that we have with three of the studies that touch on the WGCP and the Greater Houston area.

The application of "similarly situated" to Level III ecoregions grossly oversimplifies the attempt to clarify jurisdiction of "other waters." For example, in III ecoregion 34, WGCP, portions thereof have been significantly altered due to farming practices for rice and row crops and land management changes to improve drainage. Prior to regulation for and more holistic approaches to watershed management, landowners frequently altered landscapes by constructing levees, reservoirs, roads, upland drainage ditches and modifying stream channels – all of which intentionally modified connectivity of the landscape to the surface tributary system.

Attempts at drainage-shed definition and connectivity are further complicated by remnant or abandoned agricultural structures (e.g., levees and irrigation canals). In areas of III ecoregion 34 with no appreciable topography, it is very difficult to know where and when "other waters" might drain without a detailed topographic and/or hydrologic analysis. Aggregation of all wetlands in III ecoregion 34 as similarly situated, and therefore jurisdictional, transcends the intent of the proposed rule to establish clarity in implementation of the Regulatory Program. (p. 6)

Agency Response: **The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. In the final rule, paragraph (a)(8) 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 within the 100 year flood plain 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 that meet the threshold described in (a)(8) can be determined on a case-specific basis to be similarly situated in the single point of entry watershed. This is a change from the proposal which would have allowed for a significant nexus determination for any water, anywhere in the landscape. The agencies believe that in establishing the "bright line" thresholds identified in (a)(8) for these case-specific significant nexus determinations in the rule, the agencies are carefully applying the available science. The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states.**

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

4.312 The proposal would allow (but not require) the agencies to aggregate "other waters" of a particular type within an entire watershed when conducting a significant nexus analysis.

See proposed 33 C.F.R. § 328.3(c)(7) (defining the "region" for potentially aggregating waters as being the watershed that drains to the nearest TNW, territorial sea or interstate water). In some areas, such as the arid West, where there are relatively few TNWs or interstate waters, this watershed approach could lead to extremely large areas being considered part of the same region. (As noted above, the watershed of the Hassayampa River west of Phoenix, where it enters the Gila River, is 1471 square miles.)

When the agencies first review a proposed delineation for an "other water" in a particular watershed, they may look at all other waters of the same type in that watershed, and potentially conclude that aggregation is appropriate. If they do, the agencies would then make a region-wide determination with respect to the status of all those "other waters," but would so in the context of a site-specific request by a single applicant. If the particular group of other waters are deemed to have a significant nexus, then presumably the agencies would stick by that decision in all future delineations in the same watershed that affected the same class of "other water." A party later requesting a jurisdictional determination related to that class of waters would find itself effectively bound by the previous determination regarding the status of the class of "other waters" in the watershed, even though that party had never had a chance to present evidence or participate in the determination in any fashion.

A scenario similar to this has played out under the existing guidance in an analogous context. The agencies have designated two sections of the Santa Cruz River in Arizona as TNWs,[239] and used those designations in jurisdictional determinations for projects in the vicinity of the designated segments. No public notice or comment occurred when the navigability designation was first made, even though they affect any potential land disturbance activities within the watershed. Moreover, potentially affected parties wishing to challenge the designation have extremely limited opportunities to do so. The agencies have vigorously, and thus far successfully, argued that the designations cannot be challenged on their face in court because, *inter alia*, they are not final agency actions.[240]

That leaves only a project-specific challenge as a vehicle for questioning a TNW designation. However, a preliminary jurisdictional determination based on the TNW designation cannot be challenged in any fashion under the Corps' regulations. See 33 C.F.R. § 331.2 ("preliminary JDs are advisory in nature and cannot be appealed"). So an applicant would have to secure an approved jurisdictional determination (which can take a year or more). An approved jurisdictional determination based on the TNW designation may be appealed internally within the Corps, but no right to judicial appeal exists until a final permit decision is issued. See 33 C.F.R. § 331.12.[241] Thus, the only

[239] Corps Memorandum for the Record, Determination of Two Reaches of the Santa Cruz River as Traditional Navigable Waters (May 23, 2008); "affirmed" as a "special case" by EPA in correspondence from Benjamin Grumbles to John Paul Woodley dated December 3, 2008.

[240] See, e.g., National Association of Home Builders v. EPA, 956 F.Supp.2d 198, 209-12 (D.D.C. 2013).

[241] To date, courts have generally agreed that approved jurisdictional determinations cannot be independently challenged in court even though they represent the culmination of agency decision-making with respect to the status of waters at a site. See, e.g., Belle Co. v. Corps of Engineers, 761 F.3d 383, 389- 94 (5th Cir. 2014). The joint commenters believe this line of decisions is legally unsound and compels landowners to participate in a permit process that may ultimately prove to be inapplicable.

way to challenge the TNW designation in court is to secure a project-specific approved jurisdictional determination, negotiate a final permit decision based on that determination, appeal that decision internally within the Corps (in order to exhaust administrative remedies), and then file a lawsuit challenging the negotiated permit on the grounds that no permit was required in the first place because the TNW designation was inappropriate. That process could easily take years and, as a practical matter, deprive the landowner of an adequate remedy.

The joint commenters are concerned that a similar scenario could play out with respect to the aggregation of "other waters" on a regional basis, as contemplated by the proposal. Even if other entities in the region somehow became aware of a pending jurisdictional determination that could result in regulation of a class of waters on a regional basis, there apparently will be no way for them to participate in the agency decision-making process, even though the result of that process may ultimately impact them. (Entities not involved in a pending approved AJD cannot participate in the administrative appeals process on that AJD or resulting permit, see 33 C.F.R. § 331.2 (definition of "affected party")). The joint commenters believe that if the agencies are making regional decisions, a public participation process should accompany any such decision.

Recommendation: If the agencies include in the final rule the ability to consider some types of "other waters" in the aggregate, then they should establish some public notification procedure (including the opportunity to comment) when they are evaluating the jurisdictional status of a particular class of "other waters" in an entire watershed for the first time. (p. 38-40)

Agency Response: In the arid West, the agencies gave the example in the preamble that 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 smaller 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 code (HUC-10) 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 situations. The basis for such an approach in very large single point of entry watersheds, such as in the arid West, should be documented in the jurisdictional determination. See Agency Summary Response Essay 3, 9. See also response 4.146 (Doc. #14637).

The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. For a discussion of the status of similarly situated waters analyzed as part of a case-specific significant nexus analysis under (a)(7) or (a)(8), See response 4.17 (Doc. #5843.1).

The agencies do not agree that the owner of a similarly situated water would lack recourse. With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water together with similarly situated waters in the region, the agencies note that approved

jurisdictional determinations is of limited duration and would expire after five years. See RGL 08-02. An approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information. 33 C.F.R. § 331.5(b)(7). With respect for the need to obtain an approved jurisdictional determination, the administrative processes for obtaining agency identification of a water of the United States is beyond the scope of the final rule and remains unchanged.

ERO Resources Corporation (Doc. #14914)

4.313 In the arid West, there can be substantial distance between "other waters" and a TNW and substantial time between precipitation and flow events. Within the watershed encompassing that distance, there can be numerous "other waters" with different relationships to the TNW including hydrology, landform, soils, vegetation, and distance to the TNW. It is not appropriate to assume that these "other waters" are similarly situated because it cannot be assumed that they perform similar functions and are located sufficiently close to a TNW to be evaluated as a single landscape unit.

As proposed, the rule would assume that if all of the combined similarly situated "other waters" could affect the physical, chemical, or biological integrity of a TNW, then individually, each water comprising the similarly situated waters affects the physical, chemical, or biological integrity of a TNW. This assumption is not logical and does not consider scale. All does not equal one. This is particularly true when considering the proposed large single-entry watershed size and the variability of "other waters" in the arid West. What proportion of other waters in the single-entry watershed would need to be adversely affected to create a significant impact on a TNW? What is the measure of significance when aggregating other waters and their effects on the physical, chemical, or biological integrity of a TNW? The proposed rule needs to clearly state these important criteria. (…)

When determining the jurisdictional status of "other waters," eliminate the single-entry watershed as the appropriate scale for consideration of "similarly situated" when performing the SNA. Other wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit may be considered together for the SNA.

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

When determining the jurisdictional status of "other waters" in the arid West, eliminate the single-entry watershed as the appropriate scale for consideration of "similarly situated" when performing the SNA. Other wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit may be considered together for the SNA. The "Arid West Region" is defined as the geographic area in which the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Corps 2008) or its subsequent versions apply. (p. 25-28)

Agency Response: 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. 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. 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 FR 22246, Science Report, and Technical Support Document.

In the Preamble, the agencies gave the example of the arid West, where 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 smaller 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 code (HUC-10) 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 situations. The basis for such an approach in very large single point of entry watersheds, such as in the arid West, should be documented in the jurisdictional determination.

See Agency Summary Response Essay 6. See response 4.310 (Doc. #8537).

CEMEX (Doc. #19470)

4.314 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. (p. 3)

Agency Response: See Agency Summary Response Essay 1 and 5. The scope of jurisdiction in this rule is narrower than that under the existing regulation. Fewer waters will be defined as "waters of the United States" under the rule than under the existing regulations, in part because the rule puts important qualifiers on some existing categories such as tributaries. See Technical Support Document Section VII. It is important to note that many ephemeral waters are jurisdictional under current regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. The agencies have historically taken regulatory action in connection with ephemeral waters under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime.

The final rule recognizes that not all waters have a significant nexus to a traditional navigable waters, an interstate water, or a territorial sea. In order to improve clarity, the final rule expands the discussion of excluded waters and other features

not regulated. When a water is excluded by rule, it is not a "water of the United States" even where it meets the definition of a paragraph in (a)(1) through (a)(6).

National Association of Home Builders (Doc. #19540)

4.315 **Aggregating "Other Waters" to Assert Collective Jurisdiction over "Similarly Situated Waters" Goes far Beyond what the Supreme Court Anticipated.**

For the first time in the Act's history, the Agencies propose to assert jurisdiction over waterbodies under a new watershed aggregation approach that is overbroad and inconsistent with *Rapanos*. Under Justice Kennedy's "significant nexus" standard, wetlands are "waters of the United States" if they "alone or in combination with similarly situated lands *in the region*" have a significant nexus to navigable waters.[242] As discussed above, NAHB disagrees with the emphasis that the Agencies place on Justice Kennedy's test. But even if the "significant nexus" test drives determinations for jurisdictional waters, the new watershed aggregation treatment of "other waters" goes far beyond what the Supreme Court anticipated. Justice Kennedy's reference to wetlands "in the region" did not specifically refer to those that "fall within the same watershed." Indeed, the proposed rule contains no definition of watershed. In a footnote, rather, the Agencies discuss the term "region" as the basis upon which to base the aggregation of similarly situated waters and define the "region" as the watershed of the traditional navigable water, interstate water, or territorial sea.[243] Obviously, such a watershed could cover a very large area. EPA's SAB panelist Dr. Michael Josselyn noted that the watershed of the nearest navigable waters "could be a very large area that may drain significant portions of a single State."[244] Even small Hydrologic Unit Code (HUC)-10 watersheds, which the preamble recommends for use in the arid West,[245] typically range in size between 40,000 and 250,000 acres (i.e., ~ 60 to 390 mi2).[246] As Dr. Josselyn noted, "It would be hard to argue that including all the [waters] within such a large area in one grouping would not have an effect on downstream water."[247]

Under the proposed rule, the Agencies will make significant nexus determinations based on the aggregation of waters that are many miles apart from each other and have distinctly different relationships with the traditional navigable water and, therefore, are not reasonably within the same region. What's more, the Agencies introduce confusion by using "region" and "watershed" interchangeably in the proposed rule. Indeed, even the members of the SAB have seemed confused by the definition of "region." SAB Chair, Dr. Amanda Rodewald, asked, "Is it appropriate to use 'in the region' and 'watershed' interchangeably? In general, regions seem to include many watersheds."[248]

[242] Rapanos, 547 U.S. at 780 (emphasis added).
[243] 79 Fed. Reg. at 22,199.
[244] 8/14/14 SAB Comments on the Proposed Rule at 25.
[245] 79 Fed. Reg. at 22,212.
[246] U.S. Geological Survey and U.S. Department of Agriculture, Natural Resources Conservation Service, 2009, Federal guidelines, requirements, and procedures for the national Watershed Boundary Dataset: U.S. Geological Survey Techniques and Methods 11–A3, 55 p.
[247] 8/14/14 SAB Comments on the Proposed Rule at 25.
[248] Id. at 79

NAHB is equally as perplexed. Yet, the Agencies assert the proposed rule provides clarity.

The watershed aggregation approach also appears inconsistent with the analysis rejected in Rapanos. As discussed above, both the plurality and the Kennedy concurrence agreed that a mere hydrologic connection (like this watershed-based approach) may not provide the basis for CWA jurisdiction.[249] In his concurrence, Justice Kennedy rejected the Agencies' assertion of jurisdiction over non-navigable waters based on "any hydrologic connection" to navigable waters, and repeatedly cautioned that "remote," "insubstantial," "speculative," or "minor" flows are insufficient to establish a "significant nexus."[250] Instead, Justice Kennedy's concurrence directs the Agencies to make these determinations on a "case-by-case basis" that reflects "the significance of the tributaries to which the wetlands are connected," a "measure of the significance of [the hydrologic connection] for downstream water quality," and "the quantity and regularity of flow in the adjacent tributaries."[251] Indeed, the Agencies recognized the importance of proximity to navigable waters, and the amount and regularity of flow in their 2008 guidance following Rapanos.[252] What's more, this guidance states "'[s]imilarly situated' wetlands include all wetlands adjacent to the same tributary." Clearly, defining similarly situated lands in the region as broadly as those within the same watersheds represents a substantial expansion of CWA jurisdiction well beyond status quo.

Additionally troublesome, this new watershed aggregation approach marginalizes the distance, amount, and regularity of flow in the significant nexus determination by potentially distributing those parameters among different waters. To give effect to the regularity of flow as an important factor in determining significant nexus for streams, for example, the proposed rule should, at a minimum, develop certain specific criteria tied to water-level gauging and the ability to support aquatic organisms for a specified minimum period of time. As today's proposal is written, however, a water could be jurisdictional despite its remoteness – possibly located hundreds of miles from the nearest traditional navigable water – and the irregularity of its flow. Thus, the Agencies' instruction to aggregate all "similarly situated" waters within a watershed to evaluate a water's significant nexus to traditional navigable waters, interstate waters, and territorial seas expands the significant nexus analysis far beyond what Justice Kennedy intended. Indeed, Justice Kennedy's own application of the significant nexus test in Rapanos did not contain any aggregation of wetlands in the same watershed. He did not instruct the lower courts to determine jurisdiction over the wetlands at issue based on the aggregate impacts of nearby wetlands or other wetlands in the region. Rather, he instructed the

[249] Rapanos, 547 U.S. at 731, 736 n.7, 778, 784.
[250] Id. at 778-79 ("[T]he dissent would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote and insubstantial, that eventually may flow into traditional navigable waters. The deference owed to the Corps' interpretation of the statute does not extend so far.").
[251] Id. at 782, 784, 786.
[252] 2008 Rapanos Guidance at 10 ("Principal considerations when evaluating significant nexus include the volume, duration, and frequency of flow of water in the tributary and the proximity of the tributary to navigable water.")

lower courts to apply an individual significant nexus test and to examine the distance, quantity, and regularity of flow for each wetland at issue. [253]

The watershed aggregation approach is also inconsistent with recent case law. In 2011, the Fourth Circuit "urge[d] the Corps to consider ways to assemble *more concrete evidence* of similarity before again aggregating such a broad swath of wetlands," and remanded that decision to the Corps to articulate a "significant nexus" between that "broad swath of wetlands" and the navigable water located several miles away.[254] Clearly, the Agencies cannot assert jurisdiction over waters using watershed aggregation, or any other aggregation approach for that matter. (p. 97-99)

Agency Response: **See Agency Summary Response Essay 1, 6, 13, 15. See response 4.2 (Doc. #13024). 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 v. United States*, 547 U.S. 715, 780 (2006). Several terms in this standard were not defined by the Supreme Court's opinion. 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.**

Under the final rule, case-specific determinations will not be based upon "any" hydrologic connection. In the final rule, 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. As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. 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.

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. Given that the significant nexus standard is premised on the significant affect on a traditional navigable water, interstate water or territorial sea, it follows from both the science and the caselaw that "the region" should be defined in terms of the nearest traditional navigable water, interstate eater or territorial sea.

[253] See Rapanos, 547 U.S. at 784-787.
[254] Precon Development Corp. v. U.S. Army Corps of Engineers, 633 F.3d 278, 293-95 (4th Cir. 2011) (emphasis added).

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 and the fundamental premise of the rule that these waters are the ultimate focus of CWA protections.

The agencies note a number of comments expressing concern that the single point of entry watershed may be very large. With the exception of the Arid West, the agencies do not anticipate that to be the case. The final rule defines "in the region" as "the watershed that drains to the *nearest* water identified in paragraphs (a)(1) through (3) of this section." (emphasis added) The comments reflect some confusion because the term "watershed" in general usage loosely refers to the drainage area of a particular waterbody, regardless of the size of that waterbody. For example, one can speak of both the Chesapeake Bay "watershed" or the "watershed" of a small local creek or stream. The final rule clarifies that the term "watershed" as used in the final rule refers solely to the single point of entry watershed, *i.e.*, the watershed in which the water in question is located and is defined by the point at which flow enters the *nearest* water identified in (a)(1) to (a)(3). With the exception of the Arid West, the agencies would expect as a general matter the watershed draining to the nearest (a)(1) through (a)(3) water would not be as large as the commenter expresses. Taking the example of the Chesapeake Bay used by one commenter, for a water within the Chesapeake Bay watershed, the applicable "region" generally would not be the entire Chesapeake Bay drainage basin, but rather the single point of entry watershed in which the water is located. That single point of entry watershed would be defined by the point at which water from the watershed first flows into the (a)(1) through (a)(3) water nearest the water on which the case-specific analysis is being conducted.

In the Preamble, the agencies gave the example that in the arid West, 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 smaller 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 code (HUC-10) 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 situations. The basis for such an approach in very large single point of entry watersheds, such as in the arid West, should be documented in the jurisdictional determination.

The agencies believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. The agencies also believe that the view that

certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings.

Pennsylvania Coal Alliance (Doc. #13074)

4.316 The Proposed Rule should limit the types of water bodies that would be considered to be "other waters." Other than those waters specifically excluded from the definition of "waters of the United States," nearly every other type of aquatic resource could be interpreted as jurisdictional by overly zealous agencies, given the broad range of factors that could establish a significant nexus, when considered alone or in combination with other similarly situated waters in a region. (p. 15)

Agency Response: See Agency Summary Response Essays 1 and 6. See response 4.261 (Doc. #13074). The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). In order to undergo a case-specific evaluation, a water must meet the parameters established by either (a)(7) or (a)(8) of the final rule.

Newmont Mining Corporation (Doc. #13596)

4.317 Of more concern to Newmont and other hardrock mining companies is that the Agencies would deem to be jurisdictional ephemeral drainages and intermittent streams that lose channel definition before reaching another surface water and where flow, if any, infiltrates into the ground and never connects by surface or shallow subsurface hydrology to a TNW. Under the Proposal's "other waters" concept, jurisdiction over "waters" that never connect to a TNW via confined surface flow depends upon a discretionary case-by-case evaluation of whether those waters "alone or in combination with other similarly situated waters in the region significantly affect[] the chemical, physical, or biological integrity of [a TNW]." See, e.g., paragraph (c)(7) at 79 Fed. Reg. at 22263. Ascertaining whether a "significant nexus" exists requires a case-specific evaluation of the strength of

the connection (or lack of connection) between the potential "other water" and the TNW (or tributary), including the potential that the "other water" exhibits "biological connectivity" to the TNW by, for example, providing habitat for "aquatic or semi aquatic species" that also reside in the TNW. See id.; see also 79 Fed. Reg. at 22214. Under one reading of the Proposal, therefore, an ephemeral or intermittent drainage with a bed and banks and an ordinary high water mark, but with no confined surface connection to a TNW or tributary, could nonetheless potentially be deemed a jurisdictional "other water," based upon a case-by case evaluation as described above.

Even more problematic is that, under the "other waters" analysis, individual ephemeral or intermittent drainages with no physical connection to a TNW (or a tributary thereof) would have to be aggregated with all other "similarly situated" drainages in the same watershed when determining whether they have a "significant nexus" to the TNW. Thus, the jurisdictional status of a particular ephemeral or intermittent drainage on Newmont's property could be dictated not by the characteristics of that drainage itself (as under the 2008 Guidance), but more by what happens on other properties with other drainages that do not connect with Newmont's ephemeral drainages. And given all of the ephemeral and intermittent drainages in the Humboldt River watershed where the vast majority of Newmont's properties are located (see Exhibit A at slide 55), this could mean that all ephemeral and intermittent drainages on Newmont's properties are now effectively jurisdictional – even though most fan out, infiltrate into the ground, and lose channel definition miles from the nearest TNW or tributary and do not, ever, contribute one drop of "water" to a downstream TNW or tributary system. (p. 32-33)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. The agencies believe that certain waters without a direct hydrologic connection can nevertheless have a significant nexus. See response 4.12 (Doc. #17921.1). This is supported by the science and the Supreme Court's rulings. See the Technical Support Documentation for a discussion on the science and legal underpinnings of the rule. It is important to note that many ephemeral waters are jurisdictional under the existing regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. See response 4.9 (Doc. #8536). The agencies have historically taken regulatory action in connection with ephemeral waters under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 addresses discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime. If the referenced ephemeral drainages, do not meet the tributary definition, the final rule excludes other ephemeral features under paragraph (b). If the referenced intermittent drainages do not meet the tributary definition, the agencies have retained only in specified circumstances (described in (a)(7) and (a)(8)) the current practice of case specific significant nexus determinations.**

National Stone, Sand and Gravel Association (Doc. #14412)

4.318 The agencies improperly rely on Justice Kennedy's statement allowing the agencies to categorize "wetlands in the region," to support their theory allowing aggregation of all waters that "fall within the same watershed." Rather, Justice Kennedy conditioned his support for this "aggregation" to areas that "are likely, in the majority of cases, to perform functions for the aquatic system incorporating navigable waters." Rapanos at 2248. (emphasis added). He especially focused on "volume of flow" and "proximity" to navigable waters as factors. Instead, the proposed rule substitutes the "watershed" concept for Kennedy's reference to region. However, the agencies' approach would allow aggregation of wetlands (and other non-wetland waters) within large geographical watersheds, potentially covering thousands of square miles that may have little if any relationship in terms of proximity, flow, and other factors to the aquatic functions of the closest TNW. Under the proposed rule, the agencies could support such sweeping inclusion, without providing the kind of analysis of function and flow that Kennedy envisioned. They could do so by asserting that all such waters are "similarly situated" just because they are in the same watershed – even though they do not provide any data or analysis to explain what "similarly situated" means – a serious omission because the ecological importance of such features may vary greatly. This is especially seen in the arid west with relatively few TNWs, such as the Colorado River in Arizona, whose drainage area may include isolated and ephemeral waters and wetlands that are hundreds of miles away and many miles apart.[255]

Agency Response: **With respect to the term "in the region," see response 4.316 (Doc. #13074). With respect to identifications of similarly situated waters, he 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 to reflect the consideration for the body of science that exists. Waters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters. As noted above, the agencies also establish by rule subcategories of waters that are "similarly situated" by rule in a single point of entry watershed for the purposes of a significant nexus analysis because science supports that the subcategory waters fall within a higher gradient of connectivity. The agencies' experience and expertise indicate that there are waters within the 100 year floodplain of (a)(1) to (a)(3) waters or located out to 4000 feet of the ordinary high water mark or high tide line of (a)(1) to (a)(5) waters where the science demonstrates that they often have a significant effect on downstream waters. 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 and more than speculative and insubstantial. See response 4.54 (Doc. #15538). The agencies believe that the provisions in the final rule narrowly defining which waters may be considered similarly situated in the region is consistent with both the science and the Supreme Court rulings. The agencies also**

[255] For example, the Corps has designated only three rivers in Arizona as jurisdictional: all of the Colorado River, two segments of the Gila River and two segments of the Santa Cruz River. See US Army Corps of Engineers, LA

believe that the view that certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings. See the Technical Support Documentation for a discussion on the science and legal underpinnings of the rule.

4.319 Indeed, the agencies "aggregation" rationale could have a severe impact on aggregate mining. The agencies provide a vague definition of "in the region" to mean "the watershed that drains to the nearest navigable water" to justify aggregation of "other waters" under the significant nexus test. Id. at 22212. The agencies then seek comment on several options for defining "similarly situated", ranging from finding that eighty-five Level III Ecoregions meet that test to a finding that no other waters are similarly situated. Yet, the agencies concede that there is "likely insufficient existing scientific information" to support a determination that all "other waters in watersheds across the Country" are "similarly situated", highlighting the uncertainty facing aggregate operators should the agencies choose to categorize certain ecoregions as "similarly situated." The vague aggregation criteria ("[o]ther waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together")[256] creates even more confusion. Aggregate operators are left to guess what the term may mean on the ground and could very well be at the mercy of Corps field reviewers to whether a site is "similarly situated." It is entirely possible that a Corps reviewer in one district such as Omaha will aggregate all isolated prairie potholes and ephemeral washes within the Platte River watershed. In contrast, a Corps reviewer in the LA District might determine that a vernal pool or ephemeral water feature in Southern Arizona is too remote from the Colorado River to be included within that watershed.

To illustrate the potential reach of "other waters," a Colorado operator provided the example of a Colorado Prairie isolated pools with maps and photos to illustrate the effect of aggregating "similarly situated waters" over a huge area of the landscape. Attachment 2 depicts isolated pools located within the Pawnee Grassland Valley of Colorado which is marked as an unnamed drainage on the topo map, but which eventually drains to Sand Creek, identified as an ephemeral stream without yearlong flow. The area map identified Sand Creek as a tributary to Crow Creek, a 153-mile stream channel that begins in the Laramie Range of Wyoming and flows through North Colorado. Aggregating of all isolated pools with the Valley as "similarly situated" would sweep in literally hundreds of square miles of a huge drainage basin including pools that are many miles from Crow Creek, without doing a site-specific analysis as to whether such pools provide significant water quality benefits to the Creek. Such a result would be in direct conflict with Justice Kennedy's analysis. (p. 28-29)

Agency Response: **See Agency Summary Response Essay 7.**

Continental Resources, Inc. (Doc. #14655)

4.320 Application of Justice Kennedy's significant nexus test on individual "other waters" is likely to be illusory. Many "other waters" might never receive the individual significant nexus review that Justice Kennedy required in *Rapanos*. The proposed definition of

[256] 79 Fed. Reg. at 22263.

significant nexus suggests that the agencies are likely to clump together a wide range of diverse waters and treat them as "similarly situated" if they are within the same watershed or single landscape unit. This approach to jurisdiction is unprecedented and likely to sweep in marginal, low value waters "in the region" or watershed that have never been jurisdictional in the past and should not be considered jurisdictional now. (p. 13)

Agency Response: **See Agency Summary Response Essay 1, 6, 7, 8.**

4.321 Continental is also concerned about how jurisdictional determinations will be conducted for the "other waters" category and, particularly, the extent to which determinations either will be made on a case-by-case basis or simply by the agencies' grouping waters it deems to be "similarly situated" and, thereby, ignoring the individual facts applicable to each of the waters being evaluated. In either case, Continental anticipates problems. If each individual "other water" receives a unique jurisdictional determination based upon a desktop analysis using available data, important information could be missing without any field work. However, even the requirement of a desktop analysis for the many new waters which will require review as an "other water" (the total number of which Continental believes EPA and the Corps of Engineers have significantly underestimated) will result in delays as the agencies are likely to see a marked increase in their jurisdictional determination workload. Even greater delays will occur if field work is required to provide more accurate information. In promulgating the "other waters" category, the agencies have no doubt calculated the likelihood that a responsible company like Continental, having recognized the likelihood of significant timing delays for "other waters" jurisdictional determinations (not to mention the uncertainty about the potential outcome of any such jurisdictional determination) is apt simply to presume jurisdiction – even when jurisdiction is unlikely – in an effort to avoid further delays or prolonged disputes over jurisdiction. This pragmatic approach would have the unintended consequence of including even more marginal waters in the CWA program.

On the other hand, the agencies' proposed aggregation of "other waters" will inevitably include waters never before considered jurisdictional. There is no question that the agencies' subversive aggregation approach will serve their goal to reduce documentation requirements and the time it takes to make approved jurisdictional determinations by decreasing the number of jurisdictional determinations that require case-specific significant nexus evaluations. 79 Fed. Reg. at 22,194. But this approach only meets the goal of improving clarity because it creates the presumption among the regulators and regulated community that everything wet is necessarily jurisdictional. Thus, aggregation may be more efficient, but it violates the CWA and, potentially, the Commerce Clause, by asserting federal jurisdiction over waters that are clearly intended to be regulated by the states. (p. 14)

Agency Response: **See Agency Summary Response Essays 1, 2, 3, 9, 6, 7, 8, See responses 4.318 (Doc. #14412). With regard to the Commerce Clause, all waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of**

traditional navigable waters, interstate waters, and the territorial seas. See Technical Support Document, Section I.

The agencies also disagree with the statement that case-specific significant nexus determinations under (a)(7) or (a)(8) will result in extension of the CWA to waters that have never been considered as within the scope of the CWA under the existing regulations. See the Technical Support Document Section I for a discussion of the types of waters historically identified as jurisdictional. Moreover, while both *SWANCC* and Justice Kennedy in *Rapanos* identify significant nexus as a touchstone for CWA coverage, neither opinion defines many of the key terms, introducing uncertainty and leaving the agencies, the public, and the courts to "feel their way." *Rapanos,* 547 U.S. at 758 (Roberts, C.J., concurring). The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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." Additionally, the final rule limits which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. The final rule also identifies nine functions that may be considered as part of a significant nexus analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters and improve clarity and predictability for the regulated community.

American Petroleum Institute (Doc. #15115)

4.322 The 2014 Proposed Rule's standards for determining the jurisdictional status of "other waters" are interminably vague and shapeless. As a result, the jurisdictional criteria for "other waters" will provide no certainty to landowners, will require endless and needless jurisdictional determinations over possibly millions of isolated waters, and will give permitting authorities unfettered discretion to find remote waters to be jurisdictional.

Under the 2014 Proposed Rule, "other waters" may be jurisdictional if "those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus" to navigable waters, interstate waters, and the territorial seas.[257] In the 2014 Proposed Rule's application of the significant nexus test, the agencies apply the term "similarly situated in the region" to all waters (not just wetlands), and include waters that "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)."[258] Explanations of the terms "sufficiently close" and "similar functions" and "single landscape unit" appear in the 2014 Proposed Rule's preamble but are not in the proposed

[257] Id. at 22,272.
[258] Id. at 22,200.

regulatory text itself.[259] Waters are "sufficiently close" when they are within a contiguous area of land with homogeneous soils, vegetation and landform.[260] Waters have "similar functions" based upon habitat, water storage, sediment retention, pollution sequestration.[261] Under the 2014 Proposed Rule, agencies would group similarly situated "other waters" in the region together when conducting the significant nexus analysis.[262] The 2014 Proposed Rule allows the agencies to make their jurisdictional determination of "other waters" based on regional and national studies, or a "desktop" analysis without any actual observation.[263]

"Sufficiently close together" and "sufficiently close to a water of the United States" are such imprecise terms that almost any size area can be selected to determine if isolated waters are jurisdictional. Isolated playa lakes, prairie potholes and wetlands in areas of hundreds of square miles could be combined to make the determination of jurisdiction because in such a combination they may arguably have an effect on the chemical, physical, or biological integrity of navigable waters.

The agencies' proposed criteria for determining jurisdiction over other waters is also squarely at odds with the Rapanos plurality's requirement that wetlands are jurisdictional only if they share a continuous surface connection to a navigable water. The agencies' proposed "other waters" criteria also fail the significant nexus test. That test applies to adjacent wetlands, not all possible water bodies within a watershed. The agencies posit that Justice Kennedy's treatment of adjacent wetlands "can reasonably be applied to other waters such as ponds, lakes, and nonadjacent wetlands that may have a significant nexus to a traditional navigable water, an interstate water, or the territorial seas."[264] The agencies also cite to Justice Kennedy's discussion of the many important functions that wetlands serve – however, as the agencies acknowledge, by definition, "other waters" include "a broad range of different types of waters performing different functions."[265]

The 2014 Proposed Rule proposes a vague and unworkable standard for jurisdiction over "other waters" that leaves landowners with no certainty whatsoever whether their property contains jurisdictional waters. This portion of the 2014 Proposed Rule, in particular, will result in countless numbers of individual and aggregate jurisdictional determinations and inconsistent applications. (p. 26-28)

<u>Agency Response:</u> The agencies acknowledge that he proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of and as a logical outgrowth of the comments expressing concern over the proposed approach, the agencies made changes to provide for case-specific determinations under more narrowly targeted circumstances based on the agencies' assessment of the importance of certain

[259] Id. at 22,213.
[260] Id.
[261] Id.
[262] Id.
[263] Id. at 22,212;22,214
[264] Id. at 22,261.
[265] Id.

specified waters to the chemical, physical, and biological integrity of traditional navigable water, interstate waters, and the territorial seas address concerns in the approach to "other waters." The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. See Agency Summary Response Essays 1, 3, 5, 13, 15, 7, 8. See the Technical Support Document for an expanded discussion of the Supreme Court decisions.

Stuart H. Kemp, Sr. Director, HSE Law Practice Group, David Martin, Halliburton Energy Services, Inc. (Doc. #15509)

4.323 Although the Agencies have not proposed to assert jurisdiction over all isolated waters on a categorical basis as they have with tributaries and adjacent wetlands, their proposed approach to determining jurisdiction over isolated waters – relying as it does on the simple but effective device of aggregation – amounts to the same thing. "Aggregation" of isolated features under a significant nexus test means a water need not be significant on its own, but can be jurisdictional even if it is only significant in combination with other "similarly situated" waters in the region. Similarly situated waters are those that "perform similar functions and are located sufficiently close together or ... are sufficiently close to a jurisdictional water." But it is not hard to imagine that within a watershed the Agencies could almost always articulate a basis for aggregation – just as the entirety of the landscape (water features and dry land) is connected to downstream water quality so too are the features of a watershed interrelated, This fact bears no relationship to the limits of the CWA as enacted by Congress and interpreted by the Supreme Court.

The Agencies readily acknowledge that aggregating features as similarly situated would result in federal jurisdiction and the "result of not finding waters to be similarly situated would most likely be a finding of no significant nexus and no jurisdiction."[266] Therefore, by introducing the concept of aggregation as currently proposed, the Agencies would provide themselves a basis for essentially unlimited jurisdiction over otherwise isolated, non-jurisdictional wetlands, ponds and other landscape features. As discussed below, this expansive approach to jurisdiction flies in the face of Supreme Court precedent and is beyond the Agencies' authority. (p. 7)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. See Agency Summary Response Essay 8. See response 4.326 (Doc. #16914).

[266] 79 Fed. Reg. at 22215.

Phillip M. Gonet, President, Illinois Coal Association (Doc. #15517)

4.324 As used in the Proposal, the words "in combination with other similarly situated waters" have been lifted but intentionally repurposed from Justice Kennedy's concurrence in Rapanos (see 547 U.S. at 780), and raise the prospect that an aggregated approach could be used to categorize numerous historically non-jurisdictional bodies of water as protected "other waters" under the CWA. While the concept of aggregation has been endorsed to some degree by the Supreme Court, the particular application sought in the Proposed Rule has not. The broad-based approach contemplated by the Agencies could lead to sweeping desktop interpretations and conclusions, impacting many bodies of water and many acres of land, all with little to no on-the ground verification by the Agencies. More importantly, the Agencies have taken far too great a liberty with the aggregation concept and seek to extend federal jurisdiction to waters well beyond even what Justice Kennedy viewed as an appropriate exercise of the Agencies' authority. See Rapanos 547 U.S. at780-81. (p. 14)

Agency Response: See Agency Summary Response Essays 7, 8, and see response 4.326 (Doc. #16914).

Coeur Mining, Inc.(Doc. #16162)

4.325 (…) The proposed rule would allow the Agencies to assert jurisdiction over "other waters" that "either alone or in combination with other similarly situated waters in the region, have a significant nexus". The proposed rule suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, so long as they "perform similar functions" and are located "sufficiently close" to a water of the U.S. to allow them to collectively function together. 79 Fed. Reg. at 22,213. This interpretation stretches the concept of "similarly situated" beyond reason and would allow the Agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assess jurisdiction. (p. 8)

Agency Response: See Agency Summary Response Essay 7 and 8. The final rule states that waters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters. As set forth in the Preamble to the final rule, 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. Assessing the functions of identified waters in combination is consistent not only with Justice Kennedy's significant nexus standard, but with the science. 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 the Technical Support Document, section XI.

Barrick Gold of North America (Doc. #16914)

4.326 While the agencies also propose the single point of entry watershed for aggregating "other waters," they present other options as well, including making "similarly situated" determinations for entire "ecoregions" 79 Fed. Reg. at 22,215. Under this option the agencies would designate specific ecoregions by rule, and then would automatically aggregate waters in single point of entry watersheds within such ecoregions. Id. The agencies suggest "Level III ecoregions" because the "'other waters' in these ecoregions are within a contiguous area of land with relatively homogeneous soils, vegetation and landform (e.g., plain, mountain, valley, etc.), and generally provide similar functions to the downstream traditional navigable waters, interstate waters or the territorial seas." Id. This last assertion – that waters within a particular ecoregion serve similar functions to downstream waters – is presented as a statement of fact, but is unsupported in the docket materials. Without understanding what kinds of waters would fall into this "other waters" category in an ecoregion, it is difficult to generalize about whether such waters actually do serve similar functions. Further, in this option, the agencies inappropriately equate similarity of ecoregion characteristics – such as landforms, soils, habitat, etc. – with "significant nexus" to traditional navigable waters, without presenting any evidence that these two things are equivalent. Most fundamentally, the analysis is not anchored by an initial finding that a particular "other water" has the requisite significant nexus. That finding, at least, would provide region-specific facts upon which to base broader conclusions for "similarly situated" waters. In the agencies' proposed rule, there is no such factual basis for such conclusions.

For these reasons, Barrick does not support aggregation at all in the forms proposed in the rule, and does not support the use of ecoregions as a basis for aggregating "other waters." Barrick does believe that if aggregation were ever appropriate, it would need to be accomplished in some manner resembling Justice Kennedy's dicta. In other words, the agencies would need to begin with a factual record soundly establishing jurisdiction over a single water feature or type of water feature, and move on that factual basis to identify waters that are factually "similarly situated." Barrick does believe that the agencies can accomplish this kind of aggregation nationally, as it has attempted to do in the proposed rule, or by declaring aggregation to be appropriate in large regions of the country. Any such rulemaking must be underlain by a sound factual record. The record in this rulemaking does not provide that basis. As Barrick illustrated in its comments, EPA's proposed aggregation of tributaries would result in jurisdiction over remote ephemeral channels that may never actually contribute flow to any traditional navigable water. See supra Section IV. Without a sound factual record, the agencies' aggregation decisions are bound to be over-inclusive and to exceed the limits of Clean Water Act jurisdiction. (p. 25)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water,**

or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional per se in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

The commenter appears to confuse two aspects of Justice Kennedy's opinion. With respect to ascertaining significant nexus, Justice Kennedy clearly stated that the significant nexus of a particular water may be analyzed "alone or in combination with similarly situated lands in the region." As a matter of administrative convenience for purposes of regulatory implementation, Justice Kennedy noted that '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." *Compare* 547 U.S. at 779 (Kennedy, J., concurring), *with* 547 U.S. at 781 (Kennedy, J., concurring.

As stated in the final rule, the significant nexus analysis for waters assessed under (a)(7) and (a)(8) is a three-step process: first, the region for the significant nexus analysis must be identified – under the rule, it is the watershed which drains to the nearest traditional navigable water, interstate water or territorial sea; second, any similarly situated waters must be identified – under the rule, that is waters that function alike and are sufficiently close to function together in affecting downstream waters; and third, the waters are evaluated 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 the territorial seas.

The agencies disagree that evaluation of a water in combination with similarly situated waters in the region will inevitably be over-inclusive and to exceed the limits of Clean Water Act jurisdiction as the final rule provides limits on which waters may be aggregated.

4.327 Barrick also expressed concern in the September 29 meeting about how the agencies would determine whether other waters were similarly situated and decide to aggregate them for purposes of Clean Water Act jurisdiction. The agency representatives present at the meeting suggested that water features of the kind Barrick encounters in the Great Basin would not be considered "similarly situated," and that the agencies intended aggregation of "other waters" to be limited to specific kinds of waters. Again, Barrick appreciates the guidance about the intent of the proposed rule, but is concerned that statements in the preamble suggest a different conclusion. For instance, when discussing the appropriate way to aggregate, the agencies propose to use the single point of entry watershed, but ask for comment on using smaller units in the arid West where the single point of entry watershed may be very large. 79 Fed. Reg. at 22,212. In such cases, the agencies would consider making aggregation decisions based on HUC-10 watershed (taken from the National Hydrography Dataset), as a smaller unit within such large watersheds. Id. The discussion presumes that the agencies, under the proposed rule, would aggregate other waters in the areas where Barrick operates. Barrick cannot reconcile the agencies' explanations of their intent in the September 29 meeting with the language of the preamble, and therefore requests that the agencies clarify. (p. 26)

Agency Response: **The agencies believe the final rule reflects this comment. In the final rule, the agencies have limited the waters subject to the significant nexus analysis to only two types. First, paragraph (a)(7) of the rule specifies five types of waters (prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined to be "similarly situated," and thus are to be considered in combination in a significant nexus analysis. Second, the rule specifies in paragraph (a)(8) that waters located within the 100 year flood plain 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) may be found to have a significant nexus on a case specific basis, but the agencies have not made a determination by rule that the waters are "similarly situated." With respect to "in the region," See Agency Summary Response Essay 7.**

Oregon Cattlemen's Association (Doc. #5273.1)

4.328 When making jurisdictional determinations of "other waters" the Agencies would also, in some situations, not even evaluate the specific water in question. The Agencies state that this information can come from many sources, including regional and national studies of the same type of water. Id. at 22214. This cannot improve clarity for landowners because the Agencies' enforcement varies across jurisdictions, and the definitions used to make jurisdictional determinations have been deliberately left "vague." U.S. General Accounting Office, Report to the Chairman, Subcommittee on Energy Policy, Natural Resources and Regulating Affairs, Committee on Government Reform, House of Representatives, Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, GAO–04–297, pp. 26 (Feb. 2004).

This variation is a result of the Agencies recognizing that standards to determine jurisdiction should be applied in a way that best suits the area under review. Information contained in studies conducted in other regions may not accurately reflect the on-the-ground conditions of the area under review. Therefore, the Agencies should refrain from using information about unrelated areas when making their jurisdictional determinations. (p. 7)

Agency Response: **While both *SWANCC* and Justice Kennedy in *Rapanos* identify significant nexus as a touchstone for CWA coverage, neither opinion defines many of the key terms, introducing uncertainty and leaving the agencies, the public, and the courts to "feel their way." *Rapanos,* 547 U.S. at 758 (Roberts, C.J., concurring). The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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." Additionally, the final rule limits which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. The final rule also identifies nine functions that may be considered as part of a significant nexus analysis. While a rule intended to address the variability of aquatic systems across**

the country necessarily must leave some room for flexibility, these limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters and improve clarity and predictability for the regulated community. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

To the extent the commenter infers that it is inappropriate to use of geographic information system from generally recognized sources, remote sensing, and scientific literature as part of a significant nexus analysis, the agencies disagree. The agencies long have utilized many tools and many sources of information, including U.S. Geological Survey (USGS) and state and local topographic maps, aerial photography, soil surveys, watershed studies, scientific literature and references, and field work. For example, USGS and state and local stream maps and datasets, aerial photography, gage data, watershed assessments, monitoring data, and field observations are often used to help assess the contributions of flow of tributary streams, including intermittent and ephemeral streams, to downstream traditional navigable waters, interstate waters or the territorial seas. Similarly, floodplain and topographic maps of federal, state and local agencies, modeling tools, and field observations can be used to assess how wetlands are trapping floodwaters that might otherwise affect downstream waters. The agencies agree that sources of information utilized in a case-specific significant nexus analysis should have some relevance for the water being analyzed.

Michigan Farm Bureau, Lansing, Michigan (Doc. #10196)

4.329 The EPA and USACE propose in this section of the rule to gauge whether waters may be regulated due to the significant nexus they have either alone or in aggregate on a jurisdictional water. The aggregation of these water features is proposed to be done at the "watershed" scale, which is of course nearly meaningless, as there is virtually no territory in the United States that is not part of a watershed. (p. 7)

Agency Response: See Agency Summary Response Essay 7.

4.330 The rule further fails to identify the scale at which the aggregation may take place. While the agencies attempt a "single point of entry" definition of scale, water moving across a landscape does not behave this way and enters waters from many points. The proposed rule does not specify how to determine this notion of single point of entry or how to address water features close to smaller and larger watersheds, which presumes that those decisions will be at the discretion of field staff and will therefore almost surely lack consistency. The EPA and USACE propose to use the National Hydrography Dataset (NHD) tool to determine watersheds and aggregation, at the 10-digit Hydrologic Unit Code (HUC-10) level to determine aggregation scale, citing difficulty of demarcating watersheds in the arid West. This proposal serves neither dry nor wet areas, as HUC-10 NHD watersheds are not necessarily the nearest point of entry for water moving across a landscape, thus creating unnecessarily large geographic aggregation areas in dry regions, and combining multiple smaller HUC-12 streams in wet regions, which the proposed rule stated it would not do. The proposal to further limit this aggregation by examining

waters in Level II Ecoregions does little to alleviate this situation, as they also are not the most detailed level of Ecoregions nationally. The agencies do not explain why they fail to adopt the most detailed level of Ecoregions for analysis other than their use in past state level projects. This is not sufficient reason to aggregate Ecoregion types in watershed analysis.

Other examples of scenarios describing the connection or aggregation potential for "other waters" include: density, co-location and proximity, which alone cannot show the significant nexus of those features to jurisdictional waters; support of species life cycles or populations, disregarding the limits placed on the agency by SWANCC on what species can be included in this assessment; and water chemistry, which also does not necessarily demonstrate significant nexus, but only that these waters occur in similar soil types and are fed by similar water sources. (p. 7-8)

Agency Response: **See Agency Summary Response Essay 7. The agencies will identify "similarly situated" waters on a single point of entry watershed scale. A single point of entry watershed is a drainage basin within whose boundaries all precipitation ultimately flows to the nearest single traditional navigable water, interstate water, or territorial sea. See the Technical Support Document for rationale regarding why 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.**

Nebraska Cattlemen (Doc. #13018.1)

4.331 The aggregation of all waters within a watershed cannot stand as a proper application of the "significant nexus" test which in reality evaluates waters for flow, proximity and impact to a traditionally navigable water. (p. 12)

Agency Response: **Many commenters refer to aggregation of "all" waters within a watershed. That statement does not accurately describe the final rule. The final rule reflects that not all waters have a requisite connection to traditional navigable waters, interstate waters, or the territorial seas sufficient to be determined jurisdictional.**

The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in Rapanos. 547 U.S. at 780.

To address the concern that commenters raised that the "other waters" category would allow the agencies to regulate virtually any water or to aggregate all waters within a watershed of any size, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule places limits on the waters that are subject to a case-specific significant nexus analysis. While the proposed rule proposed a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded, the final rule, responding to public comments, 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the final rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the final rule identifies 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). This is a change from the proposal which would have allowed for a significant nexus determination for any water, anywhere in the landscape.

Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. See Technical Support Document XI. 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. In performing a case-specific significant nexus analysis 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. Waters identified as jurisdictional by rule in paragraph (a)(6) may not be combined in a case-specific significant nexus determination under (a)(7), even if they are of the same type.

Unlike waters evaluated under (a)(7), the waters specified at (a)(8) require a determination that they are similarly situated. Under this step, the agencies apply factors in the determination of when waters evaluated under (a)(8) should be considered either individually or in combination for purposes of a significant nexus analysis. A determination of "similarly situated" requires an evaluation of whether a group of waters in the region that meet the distance thresholds set out under (a)(8) 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.

Similarly situated waters can be identified as sufficiently close together for purposes of this paragraph of the regulation when they are within a contiguous area of land with relatively homogeneous soils, vegetation, and landform (e.g., plain, 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. However, under (a)(8), waters do not need to be of the same type (as they do in (a)(7)) to be considered similarly situated. The agencies will consider the hydrologic, geomorphic, and ecological characteristics and circumstances of the waters under consideration. 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.

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).

The agencies have provided revised and more detailed definitions of the term significant nexus, identifying nine functions to be considered. See Significant Nexus Compendium. The agencies also have limited the term "in the region" to the single point of entry watershed. See response 4.316 (Doc. #13074). The agencies also have made clear that for purposes of the final rule, waters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters. Since the focus of the significant nexus standard is on protecting and restoring the chemical, physical, or 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 Conclusion 5 of the Science Report. Also see the Technical Support Document. While proximity and the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, adjacency or 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

these (a)(1) through (a)(3) waters. 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 Agency Summary Response Essay 6.

Kansas Agriculture Alliance (Doc. #14424)

4.332 The aggregation of the wetland or water being analyzed with other waters is not permitted and provides no meaningful limit to jurisdiction required by the CWA. What is more, the proposal to aggregate waters when determining if a significant nexus exists, will lead to more confusion, not less, as it will be nearly impossible for a landowner to determine the scope of aggregation the landowner must apply when analyzing an individual feature. Adopting the *Rapanos* pluralities' definition would allow landowners to easily define the feature and its relation to a TNW. (p. 6)

Agency Response: See Agency Summary Response Essays 8, 13 and 15. The agencies disagree that aggregation "provides no meaningful limit to jurisdiction required by the CWA". While the proposal asks for several approaches on how to consider waters "in the region", the final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See response 4.316 (Doc. #13074), Technical Support Document for a more detailed discussion of the agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court. The final rule recognizes that not all waters have a significant nexus to a traditional navigable waters, an interstate water, or a territorial sea. In order to improve clarity, the final rule expands the discussion of excluded waters and other features not regulated. When a water is excluded by rule, it is not a "water of the United States" even where it meets the definition of a paragraph in (a)(1) through (a)(6). The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm

The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

National Chicken Council; National Turkey Federation; and U.S. Poultry & Egg Association (Doc. #14469)

4.333 While the processes and inter-relationships identified in the Report provide mechanisms to establish potential chemical, biological and physical ties between waters, the idea of a universally applicable mechanism for every water or drainage feature that exists on the landscape lacks any degree of scientific robustness. Given the financial and potential criminal liabilities associated with violating the CWA, the connectivity of an area to a navigable water is best established on a case-by-case basis. This vague concept of connectivity cannot be applied universally to all areas and navigable waters, thereby defeating the agencies' stated purpose of avoiding case-by-case determinations for waters of the U.S. (p. 3)

Agency Response: **See Agency Summary Response Essays 1, 5, 8. As the commenter notes, it is important for the agencies to provide as much clarity and certainty as possible so that landowners are on notice that there are potential jurisdictional waters on their property. The agencies believe the final rule accomplishes this goal by identifying six clearly defined categories of waters as jurisdictional by rule. The other waters categories also are clearly defined in a manner to provide landowners with notice.**

With respect to the comment regarding connectivity, the Science Report and the SAB review confirmed that: 1) Tributary streams, including perennial, intermittent, and ephemeral streams, are chemically, physically, and biologically connected to downstream waters, and influence the integrity of downstream waters; 2) Wetlands and open waters in floodplains and riparian areas are chemically, physically, and biologically connected with downstream rivers and influence the ecological integrity of such rivers; and 3) waters that do not fall within the foregoing two categories provide many functions that benefit downstream water quality and ecological integrity, but their effects on downstream waters are difficult to assess based solely on the available science. In order to reflect the last point, the final rule establishes two exclusive, clearly defined 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." See response 4.1 (Doc. #16386).

The Mosaic Company (Doc. #14640)

4.334 If the water is found to individually have a significant nexus to traditional navigable water, then it would be found to be jurisdictional. However, if the water does not meet the test for significant nexus individually, it could still be considered jurisdictional when combined with other "similarly situated" waters "in the region". The issue here is that this approach claims jurisdiction over waters that by themselves are non-jurisdictional, based on their position in the watershed and not their ability to affect the chemical, physical, and biological integrity of downstream waters as required in the CWA. If a given water does not have a significant nexus to downstream waters, aggregating with other waters that do not have a significant nexus, does not change the status. The aggregated waters "in the region" still have no significant nexus and are not jurisdictional. Therefore, aggregation of non-jurisdictional waters to claim them as jurisdictional is invalid and violates Justice's Kennedy's significant nexus standard. (p. 25)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. See Agency Summary Response Essay 9, 13, 15, 8, 5.**

4.335 The discussion of "alone or in combination with other similarly situated waters in the region" should be removed from the "Other Waters" category of the proposed rule. There is not sufficient scientific evidence that aggregating waters is a defensible method of determining significant nexus. All waters that fall in the "Other Waters" category of

the proposed rule should be required to individually meet the significant nexus standard for jurisdiction as determined by site-specific analyses. (…)

Waters should be subject to a scientifically defensible and quantifiable significant nexus test on their own merits and not in aggregation with others. (p. 26-33)

Agency Response: **The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. See Conclusion 5 of the Science Report. Also see the Technical Support Document.**

Iowa Farmers Union (Doc. #15007)

4.336 EPA and the Corps also have requested comment on whether waters could be designated as "similarly situated" based on geographic delineations, such as eco-regions or watersheds. While geographic proximity should be one of the primary considerations in determining whether waters are "similarly situated" and whether they significantly impact a regulated water, it is also vital to consider whether there is an significant hydrological connection between the waters. It is difficult to see the benefit in making this type of designation on either an eco-region or watershed basis, and the proposal to do so injects unnecessary ambiguity into a standard that already requires a somewhat subjective case-by-case determination. (p. 6)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).**

The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. For a discussion of the agencies' limitations on "in the region," see response 4.316 (Doc. #13074). For a discussion of similarly situated waters, see response 4.272 (Doc. #14285). See also response 4.334 or 4.335 (Doc. # 14640)

Klamath Water Users Association (Doc. #15063)

4.337 The agencies should assess individual waters separately instead of considering groups of waters. In order to be considered "similarly situated," including possessing equivalent functions, such as those listed in the proposed rule, the agencies should require a confined, verifiable surface connection to each other (and not "fill and spill" as put forth in the proposed rule) and limit the distance allowable between "similarly situated"

waters. Waters not meeting these tests should not be considered "similarly situated" and thus would continue to 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 commensurate benefit to water quality and should not be considered as an alternative in the rule. (p. 7)

Agency Response: See Agency Summary Response Essay 7, 16 and 8.

North Carolina Farm Bureau Federation (Doc. #15078)

4.338 The Agencies requested comment on particular issues related to the "other waters" category. If there are efforts to determine "similarly situated" waters as "other waters," the proposed approach violates the proposed rule's concept that jurisdictional waters should be connected to navigable waters in some way, by stating that "other waters" may be "sufficiently close together" without having to be "sufficiently close to a 'water of the United States'" to be declared jurisdictional. Where is any connection to a traditionally navigable water in this case? This allows far too much.

If there is an effort to aggregate "other waters" that are "similarly situated" for the Agencies' ease in delineating jurisdiction, this exacerbates this problem, because now there will be no field determination of "significant nexus" with other "waters of the US" or navigable waters. We oppose the use of "similarly situated" waters as a way to establish jurisdiction. If "other waters" are not excluded from jurisdiction completely, then the subset of "similarly situated" waters should not be jurisdictional, and should not be included in any revised rule.

The Agencies requested comment on whether "other waters" not found in identifiable mapped regions should be categorically excluded from jurisdiction. As we have stated, we oppose the category of "other waters" as jurisdictional waters. However, if the category of "other waters" is retained, and if the Agencies decide to use some ecoregion approach to determine the jurisdictional status of "other waters," then all such waters not found in identifiable mapped regions should be categorically excluded from jurisdiction. (p. 14)

Agency Response: See Agency Summary Response Essay 14, 7, 14, 8. The agencies disagree with the commenter's assertion that jurisdictional features should be limited to those that are mapped or within mapped regions. Given that the rule is intended to identify covered waters across the wide range of ecosystems, landforms, and water types that exist across the entire country, there does not exist a comprehensive set of nationwide or statewide maps that identify waters subject to the scope of "waters of the United States." Available mapping tools, such as those that are based on the NHD, topographic maps, and elevation data, can be used to demarcate boundaries of the single point of entry watershed.

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. Additionally, the SAB has noted that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction.

4.339 If the "other waters" category is retained, the definition of "region" should be made clearer. It must be maintained that the "region" is a watershed that is not an entire river basin and all of the area that flows to a large waterbody like a river, but is a small area draining right to the point where the water flows directly into the first identifiable category (i) through (iii) water. We understand from our meeting with EPA representatives on September 30 that this is meant to be such -- a small area. In no case should the terms "region" or "watershed" be interpreted to mean large areas draining to traditional navigable waters if the "other waters" category is retained. (p. 14)

Agency Response: The agencies believe that the final rule reflects the comment. See Agency Summary Response Essay 7

4.340 We oppose the Agencies determining that "other waters" in a single point of entry watershed are "similarly situated" and we oppose aggregating these waters into a single unit such that they would automatically be determined to have a "significant nexus" and therefore be jurisdictional. As stated before, we oppose the "other waters" category, but if such a category is retained, it should be restricted to infrequent situations and should require an actual evaluation to determine whether such waters have a "significant nexus" by significantly affecting the chemical, physical, AND biological integrity of traditionally navigable waters (Kennedy uses "and" not "or"). Waters not meeting this test should never be WOTUS.

If the Agencies proceed with a revised rule, waters categorized as non-jurisdictional in a final rule should not be able to be brought into jurisdiction without additional rulemaking. The rulemaking process allows the public to comment on the addition of any additional jurisdictional criteria. Not proceeding with rulemaking in such a circumstance, after the adoption of a final rule, would be a violation of the APA. (…)

The Agencies state that site-specific determinations are resource intensive to the Agencies. There should be considerable effort expended by the government before imposing restrictions on the use of property and imposing permit requirements on private citizens, and on local and state governments. Convenience of the Agencies should not be a reason to expand the list of waters (essentially landscape positions) in the "other waters" category that are regulated without a site specific evaluation. Site-specific evaluations should be done to determine if the area significantly affects the chemical, physical, AND biological integrity of traditionally navigable waters. If the Agencies proceed with a revised rule, we oppose "other waters" not being subject to site-specific determinations, (p. 14-15)

Agency Response: See Agency Summary Response Essay 17, 7, 8, and 5. Additionally, the agencies have not determined that any (a)(7) or (a)(8) waters are

jurisdictional by rule, recognizing that a gradient of connectivity exists. The agencies will assert jurisdiction under (a)(7) or (a)(8) only when that connection and the downstream effects are determined to be significant and more than speculative and insubstantial following a case-specific analysis. The final rule excludes a number of water types. See Features and Waters Not Jurisdictional Compendium. 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.

Union County Cattlemen (Doc. #15261)

4.341 We do not think a "desktop" analysis is a good surrogate for field observations. The resolution at the Ecological Region scale is too broad. Technology has improved the field work techniques, but the field work and specificity of the rules are the two items that need to match-up. It is not a desktop analysis EPA should consider in the rules. Sites vary from place to place and there are confounding factors that make each unique. Clarity in the rules is not enhanced by ignoring the site conditions with a trained and educated person gathering detailed data for an analysis. (p. 2)

Agency Response: See Agency Summary Response Essay 14. The agencies disagree that the rule will eliminate field determination of significant nexus. The agencies have been using remote sensing and desktop tools to delineate tributaries and conduct desktop analysis of sites for many years where data from the field are unavailable or a field visit is not possible, but prefer to gather site-specific data from field visits whenever possible.

Beet Sugar Development Foundation (Doc. #15368)

4.342 BSDF recommends that the agencies find no "other waters" to be similarly situated.[267] As outlined above, BSDF believes that expanding the "significant nexus" test to "other waters" contradicts Supreme Court guidance and impermissibly expands the agencies' jurisdiction beyond the boundaries the CWA delineates. (p. 17)

Agency 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

[267] See id. at 22215 (requesting comment on alternative approaches for determining the jurisdictional status of "other waters").

ameliorate the potential impacts of flooding and pollutant contamination from affecting downstream waters. See Agency Summary Response Essay 1, 13, 15.

Jensen Livestock and Land LLC (Doc. #15540)

4.343 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).

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). 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.

In summary, the terms and phrases in (i) through (vii) above bring Jensen Livestock and Land LLC to the conclusion that the lack of clarity is an orchestrated attempt by the agencies to write the word "navigable" completely out of the CWA. The agencies cannot do this without a clear mandate from Congress, and Congress has had ample opportunities to do so and has refused. Let us be clear, Jensen Livestock and Land LLC. assert that the agencies failure to clearly define anything throughout their proposed rule renders this comment period meaningless. The regulated public cannot meaningfully comment on the proposed rule until these fatal flaws are fixed, and to do that the agencies must withdraw this proposed rule, fill in the numerous gaping holes, and re-propose the rule. (p. 20-21)

Agency Response: See Agency Summary Response Essays 1, 7, 8. This final rule reflects the over 1 million public comments on the proposal, the substantial majority of which supported the proposed rule, as well as input provided through the agencies' extensive public outreach effort, which included over 400 meetings nationwide with states, small businesses, farmers, academics, miners, energy companies, counties, municipalities, environmental organizations, other federal agencies, and many others. The agencies sought comment on a number of approaches to specific jurisdictional questions, and many of these commenters and

stakeholders urged EPA to improve upon the April 2014 proposal, by providing more bright lines and simplifying definitions that identify waters that are protected under the CWA, all for the purpose of minimizing delays and costs, making protection of clean water more effective, and improving predictability and consistency for landowners and regulated entities. The agencies' interpretation of the CWA's scope in this final rule is informed by the best available peer-reviewed science – particularly as that science informs the policy judgments and legal interpretations as to which waters have a "significant nexus" with traditional navigable waters, interstate waters, and the territorial seas.

Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. The rule also identifies the single point-of-entry watershed as a reasonable and technically appropriate scale for identifying "in the region".

North Dakota Farmers Union (Doc. #16390.1)

4.344 We take the Agencies at their word that this rule is an attempt to provide clarity and certainty in determining what waters are regulated. However, to us, the "Other Waters" category defeats that stated purpose. Further, the Agencies already regulate discharges into wetlands that are adjacent to other waters of the United States, but we are concerned that attempts to provide certainty mean that more wetlands will be regulated under a blanket approach. The proposal to aggregate "similarly situated" waters – that is, to determine that a group of waters are so similar that they should be viewed as one for purposes of determining whether they will significantly impact a downstream Waters of the United States – without a more robust significant nexus test is an example. NDFU is very concerned this will result in large areas in the Prairie Pothole Region falling under the Agencies' jurisdiction just because they are near each other. We insisted that each water must be viewed on its own to determine whether pollution in that water will impact the downstream navigable water's integrity.

Recommendation: We propose that the Agencies' articulate categorically that "similarly situated" waters are not jurisdictional. (p. 3-4)

Agency Response: The rule does not identify prairie potholes as jurisdictional by rule. Section (a)(7) represents one of two narrowly defined circumstances under which a water may be subject to a case-specific determination as to whether that water, alone or in combination with other similarly situated waters in the region, has a significant nexus on a downstream traditional navigable water, interstate water, or territorial sea. The agencies have identified prairie potholes as one of five categories of water types that are similarly situated by rule. That means that the agencies have concluded that a water falling within one of the water types must be analyzed "in combination" with all other waters of the same type in the single point of entry watershed when making a case-specific significant nexus analysis. The agencies determined that waters of the 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. For the agencies' scientific basis for identifying prairie potholes as similarly situated by rule, see the Preamble, the Technical Support Document, and the Significant Nexus Compendium.

Additionally, the SAB has noted that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction.

Clearwater Watershed District, et al. (Doc. #9560.1)

4.345 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. Using ecological regions to establish waters that are similarly situated will almost-always lead to a finding of significant nexus. This brings into question the validity of existing non-jurisdictional determinations in many of the proposed ecological regions listed in the new rule. (p. 10)

Agency Response: **The agencies' definition of the term "significant nexus" in the rule is consistent with 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. By not determining that any of the "similarly situated" waters is jurisdictional by rule, the agencies will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

The commenter appears to confuse the effects of a particular discharge with the effects of a water, alone or in combination with similarly situated waters in the region, on downstream waters. The jurisdictional status of a water is not dependent upon the nature of the proposed discharge. The effect of a discharge depends upon the nature of the discharge. The purpose of the case-specific significant nexus evaluation is not to evaluate the impacts of a particular discharge, but to evaluate whether there is a significant nexus between a water, either alone or in combination with other similarly situated waters in the watershed, on downstream (a)(1)-(a)(3) waters. The commenter also appears to confuse the jurisdictional status of a water with authorization to discharge into a jurisdictional water. A determination that a water is covered by the CWA does not preclude all discharges to that water. Such a determination simply means that a permit to authorize a discharge must be obtained. The agree that not every discharge to a covered water will cause adverse effects downstream. That is the purpose of the permits programs. If a particular

discharge to a jurisdictional water will not result in adverse impacts, the discharge can be authorized by a permit. For example, in FY 2010, alone, 2,766 discharges were authorized under CWA Section 404 by individual permit and 49,151 discharges were authorized by general permit. Similarly, thousands of discharges are authorized each year under CWA Section 402. See response 4.54 (Doc. #15538), 4.244 (Doc. #16630), 4.316 (Doc. #13074), 4.272 (Doc. #14285), Economic Analysis

Duke Energy (Doc. #13029)

4.346 Other waters should only be deemed jurisdictional if, through a truly case-specific analysis, the single water feature in question is determined to have a significant nexus with a navigable water. Aggregation of "similarly situated" water bodies over large geographical areas (i.e. and entire watershed) is too broad and doesn't truly represent the contribution for the single water feature that would be impacted. (p. 12)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. An analysis of the nexus of a water "either alone or in combination with" similarly situated waters in the region is a "truly case-specific analysis." See Agency Summary Response Essay 8.

4.347 The agencies do not define "single landscape unit" within the proposed rule, but they do suggest it would be identified at a watershed level or some other type of regional designation, such as an Ecoregion or through a Hydrologic Unit Code. However, aggregating all "other waters" within a single landscape unit at a watershed level is too broad, since a single watershed could drain significant portions of an entire state. Likewise, using Level III or IV Ecoregions[268], as the agencies have suggested as a possible option for determining waters that are similarly situated, is too vast since a single ecoregion could cover geographic areas over thousands of square miles and cross through several states. Even small Hydrologic Unit Code (HUC)-10 watersheds, which the agencies also suggested using[269], are typically between 40-000-250,000 acres in size (i.e. approximately 60-390 square miles).

Moreover, not all features within a "single landscape unit" are similarly situated. The preamble suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, so long as they "perform similar functions" and are located "sufficiently close" to a water of the U.S. to allow them to collectively function together.[270] "Perform similar functions" is another broad concept that is again subject to inconsistent interpretations. For example, are two stormwater retention ponds, that could be located hundreds of miles away from each other, considered "similarly situated"

[268] Map A: Level III Ecoregions for Consideration Under "Other Waters" available at http://www.epa.gov/wed/pages/ecoregions/level_iii_iv.htm
[269] 79 Fed. Reg. at 22,212
[270] Id. at 22,213

because they provide the same function? What about for water features that provide similar biological functions, such as habitat for frogs or turtles? How many functions must they have in common to meet this criteria? Would they be "similarly situated", regardless of their proximity to each other, if they are located within the same watershed? What is a landscape unit? These terms are hardly clear and are broad enough for very subjective and inconsistent interpretation. This interpretation can then stretch the concept of "similarly situated" beyond reason and would allow the agencies to find that essentially every water feature within a watershed is "similarly situated" and therefore, can be aggregated to assess jurisdiction. (p. 39-40)

Agency Response: **See Agency Summary Response Essay 7, and 8. As set forth in the Preamble to the final rule, 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.**

4.348 Another concern Duke Energy has with the proposed "other waters" standard concerns the provision to aggregate similarly situated waters. By virtue of aggregating these waters, the jurisdictional determination for the water in question will not be truly established using a "case-by-case" significant nexus analysis as specified. The agencies propose to evaluate similarly situated waters within a watershed "as a group."[271] They will aggregate all similarly situated "other waters" within a watershed to determine if, when combined, all of those waters have a significant nexus with a TNW, interstate water, or territorial sea.[272] The agencies will not perform an individual analysis on the feature at issue unless they cannot make a finding that there are "similarly situated" features in the same region. As noted above, if "other waters" that are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, can all be treated as "similarly situated," it seems unlikely that the agencies would ever be in a situation where they would not find similarly situated features in the region.

In addition, the agencies note that information relevant to finding that an "other water" has a significant nexus "need not always be specific to the water whose jurisdictional status is being evaluated," but instead can be based on "regional and national studies of the same type of water" or a "desktop" analysis.[273] However, this also seems to be inconsistent to statements made by Tom Reynolds that "The U.S. Army Corps of Engineers determines jurisdiction using detailed site specific information in response to requests."[274]

[271] 79 Fed. Reg. at 22,211
[272] *Id.*
[273] 79 Fed. Reg. at 22,214
[274] EPA Blog by Tom Reynolds (August 28, 2014) (emphasis added) (See Appendix E)

Furthermore, additional questions arise concerning establishing jurisdiction for waters that were not associated with the original project in question. For example, if a developer is evaluating land for a new development project, and an "other water" analysis determines that there are "similarly situated" waters outside of his project site, are these waters automatically deemed jurisdictional by virtue of the aggregation process if a significant nexus determination is established? How would the other landowners become aware that they now have jurisdictional waters on their property? Especially, if hundreds of "similarly situated" waters are aggregated over such large geographical areas.

Thus, the concept of aggregation brings a whole new level of complexity and uncertainty to the determination of "other waters" and is not truly performed on a case by- case basis. This needs to be remedied in a final rule. (p. 40-41)

Agency Response: As set forth in the Preamble to the final rule, 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. See Agency Summary Response Essay 10, 9, 8, and response 4.343 (Doc. #15540)

Southern Company (Doc. #14134)

4.349 The agencies have taken too great a liberty with the aggregation approach, and are seeking to extend federal jurisdiction to waters well beyond even what Justice Kennedy viewed as an appropriate exercise of the agencies' authority under the CWA. This approach has the potential to broadly expand jurisdiction to waters that, alone, have no significant nexus to TNWs, and to do so on a broad regional or ecoregion basis. This will have particular meaning to wetlands and seasonal waters located in headwaters or relatively flat areas of a watershed. Here, the agencies may deem a group of small and insignificant non-jurisdictional wetlands to be "similarly situated" and thus jurisdictional based on a single determination that, when combined, the group has a significant nexus to TNW. We strongly oppose the use of both aggregation and ecoregions, which we firmly believe is contrary to the Supreme Court's precedence. (p. 42)

Agency Response: See Agency Summary Response Essay 1 and 8.

4.350 Applying an ecoregion approach, the agencies even go so far as suggesting that "a hydrologic connection is not necessary to establish a significant nexus," based solely on biological connectivity. 79 Fed. Reg. at 22213–14 (citing the presence and movement of amphibians, aquatic and semi-aquatic reptiles, and aquatic birds as sufficient to assert jurisdiction). This position seems eerily reminiscent of the prior MBR which the Supreme Court struck down in *SWANCC* as beyond the reach of the Act and presenting serious constitutional questions. Taking another bite at the apple, the agencies appear poised to resuscitate the MBR through the broad and sweeping use of ecoregions and aggregation.

This use of eco-aggregation to automatically establish jurisdiction flies in the face of Justice Kennedy's significant nexus test. As explained earlier, Justice Kennedy's views

on significant nexus (and aggregation) was limited solely to *adjacent wetlands* based on their "ecological interconnection" with TNWs. *Rapanos*, 547 U.S. at 780 (Kennedy, J., concurring) ("[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.'") Justice Kennedy referred to this spatial area that was inseparably bound with TNWs as the "zone fairly encompassed by the term 'navigable waters.'" *Id. at* 717–18. Thus, the use of aggregation should not and cannot reasonably be extended to "other waters" – a catchall category that falls outside the ambit of adjacent waters – as the agencies have sought to do under this proposal through the use of ecoregions. This, though, seems incorrect. Id. at 780. Nor can it be used for adjacent waters, as Justice Kennedy has previously rejected the Corps' broad jurisdictional blanket for adjacent waters. (The Corps' theory of jurisdiction in these consolidated cases – adjacency to tributaries, however remote and insubstantial – raises concerns that go beyond the holding of *Riverside Bayview*; and so the Corps' assertion of jurisdiction cannot rest on that case. Id. at 718. Yet that is exactly what the Corps and EPA seek to do here. (p. 43)

Agency Response: **The portion of the rule allowing for case-specific determinations under two narrowly described circumstances derives from Justice Kennedy's *Rapanos* opinion which recognizes that not all waters have this requisite connection to traditional navigable waters, interstate waters, or the territorial seas. The agencies do not agree that considering whether a water, alone or in combination with other similarly situated wates in the region automatically brings a water within coverage of the CWA, nor is that the intent. See Agency Summary Response Essay 7 and 8.**

As discussed in the Significant Nexus compendium and the Preamble, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, ((c)(5)(I)) includes "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 water identified in paragraphs (a)(1) through (3)." This function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of effect on biological integrity 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 effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and biological integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus. The agencies believe that the rule's consideration of waters beyond (a)(1) through (a)(6) is consistent legally with the Supreme Court rulings and support by the Science Report and the SAB review of the report.

Southern Illinois Power Cooperative (Doc. #14402)

4.351 Coops are also concerned that the asserted authority to aggregate waters in "common landscape units" would no longer allow coops to consider each WOTUS crossing as a "single and complete" project, again rendering NWP 12 essentially useless. (p. 5)

Agency Response: The final rule does not change the agencies' longstanding practices or processes for implementing this rule, and those practices and processes are outside the scope of the final rule, nor the terms of the Nationwide Permits or other regulations addressing the contents or issuance of CWA permits.

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

4.352 The rule would create an unrealistic presumption for purposes of the evaluation that if all of the tributaries or wetlands in a watershed were lost and would collectively have a more than speculative or insubstantial effect on the chemical, physical, or biological integrity of a traditional navigable water, then any sing le wetland or tributary in the watershed would have a significant nexus sufficient for CWA jurisdiction. By aggregating the potential impacts of all similarly situated waters in a watershed to establish a significant nexus, the rule fails to consider the scale of an individual waterbody. Under the rule's "all-equals-one" approach, CWA jurisdiction could be asserted over a specific area that may individually lack a demonstrated connection to navigable waters.

This approach would also lead to jurisdictional determinations potentially affecting entire classes of waters in a watershed, raising questions concerning other entities' rights to participate in or challenge those determinations. This will likely give rise to increased conflicts and challenges rather than simplify the process. While there is value in evaluating the effects to waters and wetlands on a watershed basis and in considering cumulative effects, we believe the appropriate venue to do so is during the permitting process, not as part of determining the jurisdictional status of a specific waterbody. The approach of aggregating potential impacts to similarly situated waters as the basis f or determining whether a particular water body is jurisdictional is not reasonable and should not be adopted. (p. 8-9)

Agency Response: See Agency Summary Response Essay 10, 9, 6, 7, 8, See responses 4.343 (Doc. #15540). Consistent with Justice Kennedy's opinion and the recent opinion of the U.S. Court of Appeals for the Fourth Circuit in *Precon,* the agencies believe it is appropriate to evaluate whether a water alone or in combination with other similarly situated waters in the region has a significant

nexus with a downstream traditional navigable water, interstate water, or territorial sea, lest the downstream waters suffer "death by a thousand cuts." The final rule retains only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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." It also places limitations around the terms "in the region," "significant nexus" and "similarly situated," in recognition that not all waters have this requisite connection to traditional navigable waters, interstate waters, or the territorial seas.

International Brotherhood of Electrical Workers (Doc. #15174)

4.353 (…) The proposed rule suggests that other waters could be similarly situated even if they are located in different landforms, have different elevation profiles, and have different soil and vegetation characteristics, so long as they "perform similar functions" and are located "sufficiently close" to a water of the U.S. to allow them to collectively function together. 79 Fed . Reg. at 22,213. This interpretation stretches the concept of "similarly situated" beyond reason and would allow the agencies to find that essentially every feature within a watershed is "similarly situated" and therefore can be aggregated to assess CWA jurisdiction. The agencies ' proposal for "other waters" is overbroad, ambiguous and confusing. It is without question the provision is meant to assert jurisdiction over isolated waters, such as prairie potholes or industrial ponds, which have little or no connection to traditional navigable waters. (p. 3)

Agency Response: The Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis. Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. With respect to prairie potholes, See response 4.163 (Doc. #16447), 4.345 (Doc. #9560.1).

Washington County Water Conservancy District (Doc. #15536)

4.354 The Agencies' jurisdictional-by-rule proposal is also unsupported by the facts. As discussed in Section V.A below, the scientific information in the Agencies' draft Connectivity Report, does not provide a legally sufficient basis for a unilateral jurisdictional-by-rule proposal to designate all "tributaries," all "impoundments" of such tributaries, and all "adjacent" waters as "waters of the United States" under the "significant nexus" test or some other test. (p. 12)

Agency Response: See Tributaries Compendium, Significant Nexus Compendium, and Adjacent Waters Compendium.

4.355 If the Agencies insist on pursuing this watershed approach, at a minimum, they should clarify how they will use this approach to determine that "other waters" located in a particular watershed are jurisdictional. The Proposed Rule leaves un-answered a number

of questions about how this "regional" approach would work in practice. For example, will the Agencies' approach require site-specific data regarding the specific waterbody in question, or can the agencies rely on data from other "similarly situated" waters? Will the Agencies apply any presumption to a particular water body if they have previously studied "similarly situated" waters? How will the Agencies provide meaningful opportunities for the public to comment before a jurisdictional determination is made in a particular watershed? As further discussed below, the proposal to regulate areas on the basis of "regional," "similarly situated" waters rule raises significant questions about due process.

The Proposed Rule uses the terms "in the region" and "watershed" interchangeably and does not indicate how the specific geographic boundaries of a watershed will be determined. In particular, the WWG is concerned about the Agencies' proposal to determine watersheds in the arid West by using National Hydrography Dataset.[275] The WWG believes that any determination of this type should be subject to separate public notice and comment so that interested stakeholders can provide the Agencies with valuable information to make these assessments. (p. 21)

Agency Response: **See Agency Summary Response Essays 1, 10, 9, 7, 8. The final rule does not establish quantifiable metrics for waters subject to a case-specific significant nexus analysis. The agencies believe that a determination of the relationship of these waters to traditional navigable water, interstate waters, and the territorial seas, and consequently their significance to these waters, requires sufficient flexibility to account for the variability of conditions across the country and the varied functions that different waters provide. The case-specific analysis called for by paragraphs (a)(7) and (a)(8) recognizes geographic and hydrologic variability in determining whether one of these waters, or a group of these waters, possess a significant nexus with traditional navigable waters, interstate waters, or the territorial seas.**

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 believe that creating a definitive list of functions to be evaluated provides individual regulators who conduct the analysis clear and consistent parameters that they will consider during their review in making jurisdictional determinations and provides transparency to the regulated public over which factors will be considered. The final rule also clarifies that a water may have a significant nexus based on a single function alone so long as that function contributes significantly to the chemical, physical, or biological integrity of the nearest traditional navigable water, interstate water, or the territorial seas.

4.356 In particular, the WWG opposes the Agencies' proposal to analyze the effects of allegedly "similarly situated" waters, in the aggregate, on traditional navigable waters.[276] The CWA does not support the Agencies' expansive theory of jurisdiction-by-

[275] Id.
[276] Proposed Rule, 79 Fed. Reg. at 22,211.

cumulative-impact, and the Connectivity Report does not provide an adequate scientific basis for such an aggregated analysis. The Agencies have not indicated whether a particular water would need to make a particular level of contribution to an effect on traditional navigable waters in order for the water to be jurisdiction. One possible interpretation is that, if a water makes any contribution to an effect on traditional navigable waters, no matter how insignificant, it will be deemed jurisdictional as long as the surrounding "similarly situated" waters are found to have a significant nexus. The Agencies should abandon this approach, which fails to recognize the wide spectrum of effects that an individual water may have within a watershed.

Moreover, the Agencies' watershed approach raises significant legal and practical questions about notice, opportunities to comment, and appeal rights. Currently, only an applicant has the right to administratively appeal a Jurisdictional Determination. If a "similarly situated" Jurisdictional Determination was made for all "other waters" in a watershed, it is unclear who would have standing to file an administrative appeal. Courts have held that judicial challenges to a Jurisdictional Determination are premature if raised prior to agency action on a section 404 permit, raising further questions about how a party could challenge a significant nexus determination for all "other waters" within that watershed. If the Agencies insist on proceeding with their proposed watershed approach, they should revise the Proposed Rule to provide affected parties with notice and an opportunity to comment on every jurisdictional determination that is based on similarly situated waters in a watershed. (p. 22)

Agency Response: See Agency Summary Response Essays 10, 9, 7, 8. See response 4.343 (Doc. #15540).

Texas Water Development Board (Doc. #16563)

4.357 If the agencies persist in using the significant nexus test, EPA and the Corps should remove the concept of similarly situated waters from the definition of "significant nexus." The proposed rule suggests that similarly situated water bodies, even those that are relatively isolated and small, can create a cumulative significant nexus. This implies a significant nexus to groups of isolated wetlands where none exists. (p. 8)

Agency Response: The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780.

Agency Response: See Agency Summary Response Essay 8

Northern California Association (Doc. #17444)

4.358 In our opinion, 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. 7)

Agency Response: See Agency Summary Response Essay 8 and 16. The agencies disagree that the analysis is fraught with uncertainty and subjective decision-making.

Tucson Electric Power Company, UNS Energy Corporation (Doc. #19561)

4.359 Claiming federal 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.

Recommendations: We suggest the following with regards to the definition and use of the terms "other waters", "significant nexus", and "similarly situated" in the proposed rule.

- 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 specific examples in the proposed rule.
- The agencies should require a confined, verifiable surface connection to each other in order for waters to be considered "similarly situated", and specify the distance allowable between "similarly situated" waters to be considered WUS.
- Surface water features not meeting these tests should not be considered "similarly situated" and thus the rule should specifically indicate what surface water features are not considered WUS under the CWA.
- The term "other waters" if not more clearly defined and limited to specific types of surface water features, should be deleted from the definition of WUS. (p. 7-8)

Agency Response: The agencies note that the final rule identifies nine functions that will be considered as part of a significant nexus determination. With respect to the remainder of the comment, see Agency Summary Response Essay 8Also, see Technical Support Document regarding the connectivity of waters that may lack confined surface connections. While the presence of a hydrologic connection increases the strength of the impact of the downstream traditional navigable water, interstate water, or the territorial seas, 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 these (a)(1) through (a)(3) waters. 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. The agencies recognize that the connectivity of streams and wetlands to downstream waters occurs along a gradient. Additionally, the SAB has noted that

science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction.

Ducks Unlimited (Doc. #11014)

4.360 We cannot agree with the proposed jurisdictional treatment in the draft rule of "other waters" in light of the strength, abundance, and diversity of the available and rapidly growing scientific literature that sheds light on the significant nexuses that exist between many of these wetland categories and "waters of the U.S.", or given the language and rationale contained in Justice Kennedy's ruling viewed in concert with other judicial decisions. We believe the regulatory presumption that all "other waters," across the entire U.S., lack a significant nexus with traditionally navigable waters, interstate waters, or the territorial seas, and therefore have no impact on the integrity of these waters, is an inappropriate presumption in the face of the abundant science available. To make this presumption is to willfully exclude waters that science clearly demonstrates have a significant impact upon downstream waters and therefore will result in degradation of the chemical, physical and biological integrity of the Nation's waters, and expressly run counter to the fundamental purpose of the Act. (p. 21)

Agency Response: The final rule is not based on presumptions, but rather 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 final rule (as did the proposal) defines the term "significant nexus" consistent with the language in SWANCC and Rapanos. The definition relies most significantly on Justice Kennedy's Rapanos opinion which recognizes that not all waters have this requisite connection to traditional navigable waters, interstate waters, or the territorial seas.

Pacific Legal Foundation (Doc. #14081)

4.361 Under the proposed rule, "similarly situated" waters in the region are aggregated to determine their effects on downstream navigable-in-fact waters. Obviously, the larger the region the more likely one is to find a "significant effect." Therefore, to ensure such an effect is found, the proposed rule aggregates waters over an entire "ecoregion," covering thousands of square miles, such as the entire California Central Valley and the Central Great Plains. There are over 100 of these ecoregions. The problem with this approach is that when aggregated over such a large area, all waters have a "significant effect" on downstream navigable waters, including isolated water bodies that the Supreme Court determined cannot be regulated without raising serious constitutional conflicts.

On any fair reading of *SWANCC*, isolated water bodies are not subject to federal regulation. *Rapanos* reinforced this conclusion as all nine Justices acknowledged that *SWANCC* limited federal control over "other waters." According to the plurality, in *SWANCC*, "we held that 'nonnavigable, isolated, intrastate waters' . . . were not included as 'waters of the United States.'" *Rapanos*, 547 U.S. at 726. Justice Kennedy was even clearer:

Asserting jurisdiction pursuant to a regulation called the "Migratory Bird Rule," the Corps argued that these isolated ponds were "waters of the United States" (and thus "navigable waters" under the Act) because they were used as habitat by migratory birds. The Court rejected this theory. "It was the significant nexus between wetlands and 'navigable waters,'" the Court held, "that informed our reading of the [Act] in *Riverside Bayview Homes."* Because such a nexus was lacking with respect to isolated ponds, the Court held that the plain text of the statute did not permit the Corps' action.

Id. at 766-767.

Even the dissent agreed with this assessment of *SWANCC*:

The Corps had asserted jurisdiction over the gravel pit under its 1986 Migratory Bird Rule, which treated isolated waters as within its jurisdiction if migratory birds depended upon these waters. The Court rejected this jurisdictional basis since these isolated pools, unlike the wetlands at issue in Riverside Bayview, had no "significant nexus" to traditionally navigable waters.

Id. at 795.

The proposed rule's inclusion of isolated water bodies is therefore at odds with these decisions. Also, this category is not really a case-by-case analysis at all. It is another per se rule. It is not practical for the Corps and EPA to physically assess any particular water body's aggregate affect on navigable waters over thousands, or even millions, of square miles. That is why the agencies have selected such large areas to aggregate. The agencies must assume that the aggregate effect of any similar waters are significant because the area is so big. And, of course, no one can refute the assumption because actual effects over an entire ecoregion can't be assessed.

The Corps and EPA simply ignore the fact that federal authority under the Clean Water Act is defined by the Commerce Clause, not by hydrology. See *SWANCC* fn 3, (finding that Congress did not intend to exercise "anything more than its commerce power over navigation."). The Supreme Court has expressly rejected this broad approach to aggregating effects because it fails to recognize constitutional limits on agency jurisdiction. (p. 10-11)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). The final rule does not resurrect the Migratory Bird Rule. See response 4.25 (Doc. #14569), 4.110 (Doc. #15822.1), 4.180 (Doc. #4292). With respect to "in the region," the agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the much narrower "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See response 4.316 (Doc.**

#13074). With respect to analysis of a water "in combination with similarly situated waters," see response 4.272 (Doc. #14285) and 4.341 (Doc. #15261). All waters protected by the significant nexus standard fall within the federal government's authority under the Commerce Clause because they are traditional navigable waters, interstate waters, or the territorial seas or because they play an important role in restoring and maintaining the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See the Technical Support Document for discussion of the Supreme Court decisions and Commerce Clause.

Save the Bay (Doc. #13221)

4.362 Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools. (p. 2-3)

Agency Response: In consideration of the variety of views of the commenters, the Science Report, the input from the SAB, and the developing state of the science, the agencies reasonably decided not to establish jurisdiction over all waters that do not meet the requirements of (a)(1) through (a)(6) by rule. Instead, the agencies established case-specific provisions for some specified waters at (a)(7) and waters within a specific distance threshold at (a)(8). This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support. The final rule does not assert jurisdiction by rule over "other waters". By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Common Sense Nebraska (Doc. #14607)

4.363 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)

Agency Response: **See response 4.1(Doc. #16386), 4.272 (Doc. #14285), 4.341 (Doc. #15261)**

Consortium of Aquatic Scientific Societies (Doc. #14802)

4.364 We encourage the USEPA to sponsor research to develop better indicators of ecological connectivity that allow for easier identification of significant nexus and therefore less case-by-case analysis of these "other waters". (p. 2)

Agency Response: **See Agency Summary Response Essay 1. The final rule states that an evaluation of the functions provided by the water must be conducted in order to demonstrate a significant nexus with (a)(1) through (a)(3) waters. The final rule lists nine functions relevant to the physical, chemical, and biological significant nexus, one of which is "provision of life cycle dependent aquatic habitat." The preamble highlights that streams, wetlands, and open waters provide life-cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, and use as a nursery area) for species located in traditional navigable waters, interstate waters, or the territorial seas. Many species require different habitats for different resources (e.g., food, spawning habitat, overwintering habitat), and thus move throughout the river network over their life-cycles.**

The agencies provided additional clarity by expanding the discussion of "similarly situated" in the preamble and for reasons stated in the previous paragraph believe the final rule contains adequate specificity and exclusions to prevent jurisdiction from being asserted over waters that do not have a significant nexus with (a)(1) through (a)(3) waters.

Society of American Foresters (Doc. #15075)

4.365 SAF suggests that while the concepts of significant nexus, ecoregion, and other situated waters attempt to address scale and specific conditions, they still tend to produce generalized findings and potentially unnecessary conclusions about the need for federal jurisdiction. SAF recognizes that waters are different in the various regions across the US, and would prefer to see the agencies utilize a case-by-case approach to determinations of WOTUS rather than the proposed categorical determinations of per se WOTUS. (p. 2)

Agency Response: **See Agency Summary Response Essay 1, 8, and 16. See response 4.33 (Doc. #14980).**

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

4.366 The aggregation of wetlands and nonwetland waters is inappropriate. If you aggregate the flow from a thousand 1-ft wide ephemeral erosion channels you can end up with the flow of a river, yet each channel's flow may seldom if ever reach a Section 10 waterbody. Furthermore, wetland functions are vastly different and cannot simply be lumped together under the category of "wetland." (p. 1)

Agency Response: **See Agency Summary Response Essay 8. 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. Waters are similarly situated under (a)(8) where they perform similar functions or are located sufficiently close to each other, regardless of type.**

4.3.2 None Jurisdictional

Clearwater Watershed District, et al. (Doc. #9560.1)

4.367 We oppose further categorizing sections of "other waters" by rule as jurisdictional. As stated in the previous section, the proposed rule's definition of "other waters" fails to meet the Clean Water Act's textual limitations, the legislative history behind the Act's intent and purpose, and the mandate for adjacency included in SWANCC and in Justice Kennedy's concurring opinion in Rapanos. (p. 9)

Agency Response: **See Agency Summary Response Essay 1. Waters identified in (a)(7) and (a)(8) are not jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

4.368 In addition, prairie potholes are essential parts of the Upper Midwest's hydrologic systems. Prairie potholes are the thousands of shallow lakes and marshes in the Upper Midwest, including Iowa, North Dakota, South Dakota, Wisconsin, and Minnesota, that were formed when glaciers gouged out shallow depressions and then retreated 10,000 years ago. Each spring these depressions are filled by rain and snow melt. Some retain water year round.

Prairie wetlands can function as groundwater recharge sites, flow-through systems, or groundwater discharge sites. The hydrologic function a particular wetland performs is determined by variations in climate, its position in the landscape, the configuration of the associated water table, and the type of underlying geological substrate. See U.S. Geological Survey, Northern Prairie Wildlife Research Center, "Wetlands of the Prairie Pothole Region: Invertebrate Species Composition, Ecology, and Management," available at http://www.npwrc.usgs.gov/resource/wetlands/pothole/prairie.htm. Prairie potholes serve as natural sponges that reduce the severity and risk of downstream flooding by holding excess water. They also recharge groundwater systems that supply water to farmlands and wells. See National Wildlife Federation, "Prairie Potholes," available at http://www.nwf.org/wildlife/wildplaces/prairie-potholes.aspx. Prairie potholes provide essential habitat for millions of water fowl, including more than 50 percent of North American migratory waterfowl species. Species dependent on the potholes for breeding include pintails, mallards, gadwall, blue-winged teal, shovelers,

canvasbacks, redheads, white pelicans, rails, herons, piping plover (protected under the Endangered Species Act), American avocet, and Wilson's phalarope.

Prairie potholes provide important migration habitat species such as lesser hudsonian godwit, American golden plover, sandpipers, scaup, wigeon, green-winged teal, Canada geese and snow geese. See National Wildlife Federation, "Prairie Potholes," available at http://www.nwf.org/wildlife/wild-places/prairie-potholes.aspx; Ducks Unlimited, "Prairie Pothole Region," available at http://www.ducks.org/conservation/wherewe-work/prairie-pothole-region.

Ducks Unlimited rates the Great Plains and Prairie Pothole Region as the number one most important and threatened waterfowl habitat in North America, with 50 percent of the original 8 million hectares (20 million acres) already lost or severely degraded (USGS, "Wetlands of the Prairie Pothole Region"; Ducks Unlimited, "Prairie Pothole Region") and with only ten percent remaining in pre-settlement condition (Darrel Drake, Brenda Tozer, and Geoffrey Stillwell, "Prairie Potholes Wetlands and Region" (2012), available at http://academic.emporia.edu/aberjame/student/drake2/ppr.html, attached as Exh. C). Efforts to restore drained potholes to natural conditions have been generally unsuccessful, and climate change will be an additional stressor. See id. The predominant cause of loss and degradation is agriculture, draining for conversion to crops, and deposition of pesticides, sediments, and excess nutrients, as well as non-agricultural impacts from road construction and urban development. See USGS, "Wetlands of the Prairie Pothole Region."

The SAB noted that prairie potholes, along with other waters such as Carolina and Delmarva Bays, Texas coastal prairie wetlands, pocosins, and western vernal pools, are "similarly situated" and "thus could be considered waters of the United States," while "other sets of wetlands may be identified as 'similarly situated'" as the science develops. SAB letter at 3; see also SAB Review at 24 ("the individual effect of any single water or wetland on downstream waters might be negligible, but the cumulative effects of many similarly situated waters and wetlands on downstream waters might nevertheless be important"). The Connectivity Report recognized that "unidirectional wetlands" such as prairie potholes, vernal pools, and playa lakes can be "hydrologically connected directly to river networks through channels, nonchannelized surface flow, or subsurface flows," even if surrounded by wetlands. EPA Connectivity Report at 1-12; see also Id. at 1-3 – 1-4 ("Unidirectional wetlands" provide functions including "storage of floodwater; retention and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow").

In short, Defenders urges the agencies to categorically include these waters as "waters of the U.S.," or, at a minimum, retain the flexibility to review these waters on a case-by-case basis under proposed subsection (s)(7). Including these waters within the jurisdiction of the Clean Water Act is consistent with the science, case law, and statute and a reasonable interpretation of the statute. See Chevron, 467 U.S. 837, 842-43. Critically, the SAB noted that "the existing science does not support excluding groups of 'other waters' or subcategories thereof." SAB letter at 3 (emphasis in original); see also Member Comments, Dr. Mazeika Sullivan, at 88 ("I do not believe that the science is sufficiently developed to support a determination to exclude any groups of 'other waters' (or subcategories thereof, e.g., Great Plains playa lakes) from jurisdictional status at this time

in spite of the resource-intensive nature of a case-specific analytical approach."). (p. 10-12)

Agency Response: **In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered 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. See Agency Summary Response Essay 8 and see response 4.163 (Doc. #16447). Among the factors to be considered in connection with a case-specific significant nexus analysis, the final rule identifies runoff storage, retention and attenuation of flood waters, pollutant trapping, nutrient recycling and contribution of flow.**

Tennessee Clean Water Network et al. (Doc. #16537)

4.369 Vernal pools are shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, drier months.[277] They typically do not have surface water connections to permanent waters and are usually situated on underlying substrate that impedes water infiltration. Vernal pools in Appalachia are host to rare amphibians like the wood frog, spadefoot toad, and four-toed salamander.[278] (p. 3-4)

Agency Response: **The various functions of vernal pools are well documented in the Science Report. While non-western vernal pools (as defined in (a)(7)(D)) have not been identified as a subcategory of waters determined to be either jurisdictional by rule or "similarly situated" by rule in a single point of entry watershed, Appalachian vernal pools are jurisdictional where they fall within any of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.**

Kentucky Waterways Alliance (Doc. #16581)

4.370 We support the proposed Rule's use of physical adjacency as a clarification of the Act's scope, but believe the concept should include *functional adjacency* as well. When functional interconnectivity – both chemical and biological – is taken into account, there are several types of so-called isolated wetlands found in Kentucky and other states that should be categorically included in the proposed Rule as waters of the United States.

A. Vernal Pools

Vernal pools are shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, drier months. They typically do not have surface water connections to permanent waters and are usually situated on underlying substrate that impedes water infiltration. Vernal pools provide optimal breeding habitat for many species of Minnesota amphibians. Likewise, vernal pools in Kentucky,

[277] Connectivity Report at 5-66.
[278] Tom Biegbighauser, found Eastern Kentucky Pride webpage at http://kypride.org/educate/wetlands/

particularly in Appalachia, are host to rare amphibians like the wood frog, spadefoot toad, and four-toed salamander.[279]

The Connectivity Report acknowledges several common features of vernal pools that provide scientific evidence of hydrologic connectivity to other waters: temporary or permanent outlets, frequent filling and spilling of higher pools into lower elevation swales and stream channels, and conditions supporting subsurface flows through pools without perched aquifers to nearby streams. Temporary storage of rainfall and snowmelt in vernal pool systems can attenuate flooding, provide a reservoir for adjacent vegetation during the spring growth period, and increase nutrient availability. It also highlights evidence of biological connections to downstream waters, including the fact that insects and amphibians use glaciated vernal pools as breeding habitat, refuge from predators or other stressors, hunting or foraging habitat, or stepping-stone corridors for dispersal and migration. (p. 9)

Agency Response: See response 4.370 (Doc. #16581)

4.3.2.1 Supporting Approach

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

4.371 While the state agencies generally support retaining the category of "other waters" as determined to be jurisdictional on a case-specific basis, it is difficult to imagine what waters are left given the breadth of waters included within the definitions of tributary and adjacent waters. However, the case-specific inquiry is a reality the states have become accustomed to and it may serve, in some circumstances, to require that federal agencies achieve some level of consistency with how they go about making case-specific determinations and/or using best professional judgment. While there is still much needed room for improvement in this area, the state agencies recognize the importance of having this category of waters in the definition of waters of the U.S. given the vast geographic and ecological differences across the U.S. At this time, *the state agencies recommend that EPA and the Corps refrain from making any categorical declarations of jurisdiction with regard to "other waters." If the agencies believe that certain subcategories of any waters are non-jurisdictional, then they should include that information as it would serve to improve clarity and consistency in the field. (p. 27*)

Agency Response: Waters identified in (a)(7) and (a)(8) are not jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Additionally, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. See Technical Support Document. However, the agencies have clarified the features not considered jurisdictional. These exclusions reflect current agencies' practice, and their inclusion in the rule furthers the agencies' goal of providing greater clarity

[279] Tom Biegbighauser, found Eastern Kentucky Pride webpage at http://kypride.org/educate/wetlands/

over what waters are and are not protected under the CWA. Under the rule, all waters and features identified in paragraph (b) as excluded will not be "waters of the United States," even if they otherwise fall within one of the categories in paragraphs (a)(1) through (a)(8).

National Association of State Conservation Agencies (Doc. #15778)

4.372 NASCA believes that "other waters", as defined in the rule, should be considered non-jurisdictional. As written, the proposed rule requires a case-specific significant nexus evaluation to determine if such "other waters" are subject to Clean Water Act jurisdiction. Our member agencies have found that similar "case-specific" evaluations have taken, at a minimum, months to complete, and have unnecessarily delayed water conservation projects. This certainly is not the intent of the rule, but would undoubtedly be a consequence of moving forward with the proposed rule as currently written. (p. 2)

Agency Response: See response 4.3 (Doc. #14625).

New Mexico Mining Association (Doc. #8644)

4.373 The proposed rule's creation of an "other waters" determination defeats the agencies' purposes of enhancing clarity, certainty, and predictability in determining jurisdictional waters. Under the proposed rule, even if a land manager or owner can determine that a water body does not fall within subsections (a)(1) through (a)(6) – a determination which already lacks clarity due to various ambiguous terms within those subsections – that land manager or owner would still be subject to a second round of resource intensive case-specific analysis. Rather than adding clarity, the proposed rule would promulgate a regime in which any water, no matter how marginal or remote, will be subject to an "other waters" determination. Eliminating the "other waters" determination would enhance the agencies' goal of increased regulatory certainty. Moreover, the practical result of the "other waters" analysis is that the regulating agencies and the regulated community will continue to have to expend extensive resources determining the status of the most isolated and marginal of waters. For this reason, the "other waters" determination arguably defeats the purpose of the Clean Water Act, as it forces the agencies to spend resources addressing marginal waters rather than protecting those waters that are clearly within the purview of the Act. For these reasons, the final rule should not include the proposed "other waters" determination. (p. 4)

Agency Response: See Agency Summary Response Essays 1, 2, 5. The agencies' experience and expertise indicate that there are waters located within the 100 year flood plain 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) where the science demonstrates that they often have a significant effect on downstream waters. Moreover, the science does not support excluding waters that are not covered by (a)(1) – (a)(6). See Technical Support Document.

Minnesota Agricultural Water Resource Center (Doc. #14284)

4.374 We recommend that all "other waters" should be considered non-jurisdictional, leaving to the states the decision of how to incorporate these waters into their watershed planning efforts. Further, CWA guidance to states should make clear that activities in non-

jurisdictional waters may be addressed by state rules but are clearly outside the scope of the CWA. (p. 2)

Agency Response: **See responses 4.373 (Doc. #8644).**

North Carolina Farm Bureau Federation (Doc. #15078)

4.375 The Agencies seem to anticipate that there will be "other waters" that are neither specifically included nor excluded from the "other waters" category. The Agencies seek comment on whether a case-specific analysis of those waters should be retained in order to allow the Agencies to exercise jurisdiction in those cases. We oppose such a case-specific analysis of those waters being retained because it reduces even more any clarity regarding which waters will be jurisdictional. As we have stated, we oppose the "other waters" category. However, if the Agencies proceed with a revised rule, any such "other waters" should be categorized as nonjurisdictional. (p. 15)

Agency Response: **See responses 4.373 (Doc. #8544)**

Chicken & Egg Association of Minnesota (Doc. #19584)

4.376 We recommend that all "other waters" should be considered non-jurisdictional, leaving to the states the decision of how to incorporate these waters into their watershed planning efforts. Further, CWA guidance to states should make clear that activities in non-jurisdictional waters may be addressed by state rules but are clearly outside the scope of the CWA. (p. 2)

Agency Response: **See response 4.373 (Doc. #8544).**

4.3.2.2 Opposing Approach

Southern Environmental Law Center et al. (Doc. #13610)

4.377 We are opposed to declaring any waters non-jurisdictional because they did not pass the significant nexus test at any given time. As the climate changes and flood events become more common, water that cannot meet the significant nexus test today may well meet that test in the future. Wetlands delineations are only good for five years for a reason – waters and ecosystems change over time. With climate change upon us, those changes will only become more dramatic. (p. 40)

Agency Response: **While waters and ecosystems change over time, not all waters have the requisite connection to an (a)(1) through (a)(3) water to be determined jurisdictional. 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". Like wetland delineations, approved jurisdictional determinations are only valid for 5 years. This will allow significant nexus determinations to be revisited if conditions change.**

4.3.3 All Case-By Case with No Aggregation

CalPortland Company (Doc. #14590)

4.378 The current case-by-case significant nexus test for identifying jurisdictional waters is unclear, opaque and unnecessarily expensive to comply with. (p. 1)

Agency Response: See Agency Summary Response Essays 1 and 2.

4.379 The Agencies should not permanently adopt the case-by case significant nexus test (or any other case-by-case test), as it provides no certainty to the regulated community, requires the unnecessary expenditure of resources (time and money) of both the regulated community and the regulators, and enhances the potential for litigation. (p. 2)

Agency Response: See Agency Summary Response Essays 1, 2, and 5.

4.3.3.1 Supporting Approach

Navajo Nation Environmental Protection Agency (Doc. #10117)

4.380 The Navajo Nation EPA Water Quality Program also agrees that, under federal law, a case-by-case determination should be made as to whether "other waters" not listed as one of the six categories above have a "significant nexus" to one of the first three categories and so satisfy the definition of "waters of the United States." (p. 2)

Agency Response: Comment noted. See Agency Summary Response Essay 1.

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

4.381 The significant nexus determination should be retained for determining jurisdiction for "other waters." The new rule proposes to automatically consider "other waters" jurisdictional by definition based on the ecoregion or hydro logic landscape region. In the Federal Register posting, the agencies specifically request comment on alternate approaches to determining whether "other waters" are similarly situated and have a "significant nexus" to a traditionally navigable water, interstate water, or territorial seas. The discussion suggests alternative approaches such as evaluating significant nexus based on ecoregions or hydrologic landscape regions. However, considering "other waters" jurisdictional by definition, based on an ecoregion or hydrologic-landscape unit, could result in "other waters" without actual connectivity being considered jurisdictional and requiring costly mitigation and permits. The County recommends that all "other waters" continue to be evaluated as potentially jurisdictional based on the "significant nexus determination" made in the context of on-the ground conditions.

EXAMPLE: In San Diego County, vernal pools are common. Some vernal pools have a clear hydrologic connection to a Waters of the U.S. based on the significant nexus determination and are therefore jurisdictional; other vernal pools do not show clear connection and therefore would not be jurisdictional under current regulations. By changing the definition to automatically consider "other waters" jurisdictional based on ecoregion or hydrologic landscape region, many additional vernal pools without clear

connectivity could be grouped in with vernal pools that have connectivity based on their location within the same ecoregion. Note that the definition of an ecoregion is very broad: "an area defined by its environmental conditions, especially climate, landforms, and soil characteristics". If additional isolated vernal pools are considered jurisdictional, this would trigger lengthy permitting and costly mitigation if impacted. (p. 8)

Agency Response: See Agency Summary Response Essay 1 and 7. See response 4.301 (Doc. #14564)

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

4.382 *Only certain types of other waters should be aggregated when assessing jurisdictional status*: The proposed rule allows (but does not require) similarly situated types of "other waters" to be considered in the aggregate when assessing their potential jurisdictional status. See proposed 33 C.F.R. § 328.3(a)(7). The joint commenters support the case-specific approach to addressing other waters, and assert that in the arid West there are no similarly situated waters that should be evaluated in the aggregate.

In its September 30, 2014 correspondence[280] (p. 3), EPA's Science Advisory Board listed only certain types of "other waters" in particular regions that could be considered to be similarly situated (i.e., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, and western vernal pools). Similarly, in the current version of its question and answer document on the proposal[281], the agencies state (p. 4): "Aggregation of waters is only appropriate for certain waters, like prairie potholes, that are very similar in specific location, size and proximity to jurisdictional waters" (emphasis added). None of these waters are present in Arizona, especially in the arid portions of the state.

Recommendations: (1) The final rule should identify the specific types of waters that may be subject to aggregation, and they should be limited to the types of waters identified in the documents cited above. In all other cases, the analysis of potential "other waters" should be done on an individualized basis.

(2) For the same reasons, the agencies should not adopt the alternative approach discussed in the preamble (see 79 Fed. Reg. at 22215) that would automatically categorize "other waters" in certain Level III Ecoregions as being similarly situated and thus appropriate for aggregation. Specifically, the joint commenters urge the agencies to not apply this alternative approach to Ecoregion 81, the Sonoran Basin and Range, which includes large parts of central and southern Arizona. (p. 36-37)

Agency Response: See Agency Summary Response Essay 1. The final rule did not determine the Sonoran Basin and Range to be one of the categories "similarly situated" by rule in a single point of entry watershed. However, the waters within

[280] Available at: http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf (accessed October 1, 2014).
[281] Available at: http://www2.epa.gov/sites/production/files/2014-09/documents/q_a_wotus.pdf (accessed on October 1, 2014).

that ecoregion may be still be covered by the CWA if they satisfy the criteria of (a)(1) – (a)(6) or (a)(8) and are not excluded by rule.

National Association for Surface Finishing (NASF) (Doc. #15398)

4.383 The fundamental tenets of the proposed rule are based on an EPA report entitled, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" (Report). The report purports to establish a scientific basis that isolated, rarely existing "waters" are connected to more traditional navigable waters, and, therefore subject to CWA jurisdiction. In essence, this is an attempt to establish a statutory nexus for asserting all-encompassing jurisdictional authority over a very broad range of categories of waters and geographic features. EPA and the Corps are claiming that areas where water is present (as infrequently as once every few years) should be subject to CWA permit requirements because the water could potentially be connected to navigable waters. Such a claim stretches CWA jurisdiction beyond statutory authority and practical implementation.

While the processes and inter-relationships identified in the report provide mechanisms to establish potential chemical, biological and physical ties between waters, the idea of a universally applicable mechanism for every water or drainage feature that exists on the landscape lacks any sort of scientific robustness. Given the financial and potential criminal liabilities associated with violating the CWA, the connectivity of an area to a navigable water is best established on a case-by-case basis. This vague concept of connectivity cannot be applied universally to all areas and navigable waters, thereby defeating the agencies' stated purpose of avoiding case-by-case determinations for waters of the U.S. (p. 4-5)

Agency Response: See Agency Summary Response Essay 5.

American Exploration & Mining Association (Doc. #13616)

4.384 The agencies' proposal for "other waters" is overbroad, ambiguous and confusing. It is without question that the provision is meant to assert jurisdiction over isolated waters, such as prairie potholes or industrial ponds that have little or no connection to traditional navigable waters. The science does not support the proposed assertion of jurisdiction over these "other waters" and the Supreme Court has determined such isolated waters are not within the agencies' authority to regulate under the CWA. For these reasons, we recommend elimination of the proposed provision. If the agencies insist on regulating "other waters," they should require a true case-by-case analysis of the feature at issue to determine if the science supports a determination that the feature in question shares a meaningful relationship with traditional navigable waters. (p. 9)

Agency Response: See Agency Summary Response Essays 1, 4, 7, and 8. With respect to prairie potholes, See Agency Summary Response Essay 1 and 8. See the Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" by rule in a single point of entry watershed for the purposes of a significant nexus analysis. Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only

when that connection and the downstream effects are significant and more than speculative and insubstantial. Conclusion 5.

Texas Wildlife Association (Doc. #12251)

4.385 The agencies' proposal for "other waters" is overbroad, ambiguous and confusing. It is without question the provision is meant to assert jurisdiction over isolated waters, such as prairie potholes or industrial ponds, that have little or no connection to traditional navigable waters. The science does not support the proposed assertion of jurisdiction over these "other waters" and the Supreme Court has determined such isolated waters are not within the agencies' authority to regulate under the CWA. For these reasons, we recommend elimination of the proposed provision. If the agencies insist on regulating "other waters," they should require a true case-by-case analysis of the feature at issue to determine if the science supports a determination that the feature in question shares a meaningful relationship with traditional navigable waters. (p. 6)

Agency Response: See response 4.315 (Doc. #12251).

4.3.3.2 Opposing Approach

Oklahoma Municipal League (Doc. #16526)

4.386 The case-by-case approach for determining the jurisdictional status of "other waters" is unworkable.

1) In view of the draft connectivity report of EPA's Science Advisory Board (SAB) panel, nearly every water feature - including groundwater - is connected to a WOTUS.
2) There is no geographical limit to this connectivity.
3) The rule does not provide the objective standard or measurement the Agencies will use to make an individual determination.

What, then, is the Agencies' regulatory reach into "other waters"? This vague regime for "other waters" is subjective and unpredictable. In turn, the case-by case approach creates uncertainty and delays which interfere with even the most fundamental public safety and public health functions of state and local governments. (p. 5)

Agency Response: See Agency Summary Response Essays 1, 5, 7, and 8.

Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)

4.387 The phrase *case-specific analysis* is ambiguous and has not been thoroughly explained or defined within the Rule, nor is it clear how these *case-specific analysis* will be able to differentiate between a significant nexus connection versus just a connection between "other waters" and a WOUS. Furthermore, relying on *case-specific analysis* provides less certainty and predictability for the regulated public. The phrase *case-specific analysis* requires more clarification and explanation on how it will be deployed in the field to make significant nexus determinations. (p. 6)

Agency Response: **As used in the preamble and these response to comments, the phrase "case-specific" determination or analysis refers to waters analyzed pursuant to (a)(7) or (a)(8) of the final rule. The significant nexus standard, i.e., that a water is within the scope of the CWA if "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,'" arises directly from Justice Kennedy's opinion in *Rapanos.* 547 U.S. at 780. The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination. Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters. The agencies established case-specific provisions for some specified waters at (a)(7) and waters within a specific threshold at (a)(8), which strike a balance between requests for bright lines and limited case-specific reviews with scientific support. Additionally, for purposes of determining whether or not a water has a significant nexus, the water's effect on downstream (a)(1) through (a)(3) waters shall be assessed by evaluating aquatic functions identified in (c)(5)(A) through (I) of the rule. See Agency Summary Response Essay 1, 7, 8, and 5.**

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

4.388 We do not support this approach. In the first instance, determining that no "other waters" are similarly situated is simply counterfactual; we know from the literature, and the SAB confirms, that many types of other waters – which, again, we discuss in detail above – are located in similar settings and perform similar functions. Accordingly, it would be arbitrary and capricious to make a determination that there are not similarly situated other waters. (p. 64)

Agency Response: **The agencies agree that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. 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 analyses may be undertaken. The rule establishes that case-specific determinations may be made for waters located within the 100 year flood plain 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). Additionally, individual waters are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8).

Environment Council of Rhode Island (Doc. #3532.2)

4.389 Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. (p. 3)

Agency Response: The agencies believe that the current science does not support identification of waters other than those identified in (a)(1) through (a)(6) to be jurisdictional by rule. The agencies determined five subcategories of waters – prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – that must be analyzed "in combination" when making a case-specific significant nexus analysis under (a)(7). Waters not falling within (a)(1) – (a)(7) and not otherwise excluded under paragraph (b) may be analyzed under (a)(8). However, (a)(7) and (a)(8) waters will not be categorically determined to be jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

4.3.4 Group in Categories of Jurisdictional Other Waters by Type

National Association of Conservation Districts (Doc. #12349)

4.390 The proposal specifically mentions prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools and other categories of waters as potentially per se jurisdictional under one option being considered.[282] Again, we have concerns about expanding the scope of authority without local input from the Northern Plains, Southern, Southeastern and other impacted regions. Local conservation districts could help provide expert input on the management of these specific "other

[282] See 76 Fed. Reg. at 22216.

waters." NACD recommends that regional determinations should be left to the states. (p. 6)

Agency Response: Only waters identified in (a)(1) through (a)(6) are determined jurisdictional by rule. Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water as part of a case-specific determination. 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. Additionally, the SAB expressed support for the agencies' option in the preamble of proposed rule to identify certain subcategories of waters as similarly situated and highlighted these same five subcategories. The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states.

Great Lakes Indian Fish and Wildlife Commission (Doc. #15048)

4.391 Seepage lakes should be addressed as a category of similarly situated waters.

In spite of the fact that GLIFWC's member tribes' ceded territories are located in a water rich area, not all of the waters the upper Great Lakes and Mississippi River basins flow directly to a traditionally navigable water, an interstate water or the territorial seas. In fact, the most common type of lake in the State of Wisconsin, a state of many thousands of lakes, is the seepage lake, which has no outlet. These lakes collectively (in size, in number, and in hydrologic connection to groundwater and ultimately to surface waters) are likely to play an important role in the chemical, physical and biological integrity of downstream waters. (p. 3)

Agency Response: At this time, the agencies are not able to determine that the available science supports that seepage lakes as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual seepage lakes are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8). The jurisdictional categories reflect the current state of the best available science, and are based upon the law and Supreme Court decisions. The agencies will continue a transparent review of the science, and gain 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.

State of Alaska (Doc. #19465)

4.392 The CWA does not confer federal jurisdiction to the EPA and Corps for an entire "wetland mosaic" containing wetlands that are not adjacent to or hydrologically connected to a navigable water, and any activities in these areas are already subject to state jurisdiction. The federal agencies cannot "jump over" the uplands/nonwetlands to other wetlands to assert federal jurisdiction simply because they determine an area to be a

"wetland mosaic." Similarly, the Supreme Court stated that federal jurisdiction is not limitless – it did not say that federal jurisdiction extends to wetlands adjacent to wetlands, adjacent to wetlands, adjacent to a navigable water. This stretches the definition of contiguous beyond the breaking point when wetlands that have an insignificant effect on traditional navigable waters are jurisdictional on the basis of contiguity particularly when the insignificant effects occur over timescales that are more akin to groundwater than surface water flow. (p. 25)

Agency Response: The agencies agree that federal jurisdiction is not limitless. Aside from explicitly listing waters not considered jurisdictional, the final rule establishes case-specific provisions for certain categories of specified waters at (a)(7), and waters within a specific threshold at (a)(8). These changes coupled with additional exclusions, reflect the agencies' intent to only cover waters with significant effect on an (a)(1) through (a)(3) water.

The rule provides that with respect to the boundaries for adjacent waters the entire water is jurisdictional as long as the water is at least partially located within the distance threshold, and the agencies interpret the rule to apply to any single waterbody or wetland that may straddle a distance threshold. Low-centered polygonal tundra and patterned ground bogs (also called strangmoor, string bogs, or patterned ground fens) are considered a single water for purposes of the rule because their small, intermingled wetland and non-wetland components are physically and functionally integrated. These areas often have complex micro-topography with repeated small changes in elevation occurring over short distances. Science demonstrates that these wetlands function as a single wetland matrix having clearly hydrophytic vegetation, hydric soils, and wetland hydrology. As a result, the agencies will continue to evaluate these wetlands as a single water under the rule. Where any portion of these wetland types is bordering, contiguous or neighboring, the entire wetland is a "water of the United States." Similarly, for purposes of a case-specific determination under (a)(8), wetlands of these types constitute a single water when making a significant nexus determination. Other wetlands may also have intermingled wetland and non-wetland components that are so physically and functionally integrated they can be considered a single water for purposes of the rule. Groups of wetlands that are simply part of a complex of wetlands would not be considered a single water for purposes of the rule.

Roosevelt Soil and Water Conservation District (Doc. #13202)

4.393 'Other waters' by not providing clear definition on how significant nexus and thus jurisdictional determinations will be established for waters not previously defined, instead the term is a catch all for any undefined waters. This ambiguous catch all could well include Playa Lakes on private property. Playas in most areas are not remotely related to waters under the original intent of the Clean Water Act jurisdiction and have no bearing on potential pollution to Navigable Waters of the US. (p. 1)

Agency Response: See response 4.1 (Doc. #16386). See the Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis.

Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Although the agencies evaluated additional subcategories of waters for consideration, such as playa lakes and kettle lakes, the agencies at this time are not able to determine that the available science supports that the suggested additional subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, to be clear, under the rule, individual waters of the suggested additional subcategories are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8).

Waters of the United States Coalition (Doc. #14589)

4.394 Without question, vernal pools, prairie potholes, and other isolated waters that are not currently waters of the United States will exist in the path of public infrastructure projects. Making these features waters of the United States will trigger extensive permitting requirements that could limit or altogether prevent construction of new roads, pipelines and aqueducts. (p. 15)

Agency Response: The final rule does not determine the referenced categories of waters to be jurisdictional by rule. Individual waters of the suggested additional subcategories are jurisdictional where fall in any of the (a)(1) through (a)(8) categories and are not excluded pursuant to paragraph (b). With respect to waters that may be subject to case-specific significant nexus determinations pursuant to (a)(7)or (a)(8), the agencies believe that the final rule will result in fewer case specific determinations. See Agency Summary Response Essay 2.

Kaweah and Tule Water Managers (Doc. #16544)

4.395 The USACE and EPA also seek comments on various additional topics related to "other waters" determinations under the "significant nexus" definition. For example, the agencies suggest that alternative processes could be considered for grouping or aggregating waters for simplicity in determination of jurisdictional extent. (Federal Register, Vol. 79 No. 76, April 21, 2014, pp. 22217-22219) The Kaweah and Tule Commenters do not support any of the alternative processes, such as aggregating "other waters" on a regional basis, and instead would support a process that simply defines "other waters as excluded from the definition of Waters of the U.S. absent an affirmative showing of significant nexus. This would essentially reverse the burden of proof. It should be kept in mind that these waters are not navigable themselves, are not tributary to navigable waters, are not wetlands adjacent to navigable waters, and are isolated and intrastate. The connection to a federal interest is therefore already minimal, at best. Federal jurisdiction over these waters should not be asserted unless and until an affirmative showing has been made that significant nexus (as defined above) exists. Any other attempt to aggregate waterways into groups, some of which may be assumed jurisdictional and others non-jurisdictional, simply makes this analysis more complicated than it needs to be. (p. 4-5)

Agency Response: **The federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The final rule, promulgated under authority of Sectio 501 of the CWA, establishes a binding definition of "waters of the United States" and is consistent with the statue, the caselaw, and the Constitution. See Technical Support Document. The SAB has noted that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Additionally, the agencies disagree that considering waters in combination with similarly situated waters in the region complicates the significant nexus analysis. The final rule identifies five specific types of waters in specific regions considered "similarly situated" by rule in a single point of entry watershed, which should ensure more consistent determinations and reduce the complexity of conducting jurisdictional determinations. The federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations. The final rule, promulgated under authority of Section 501 of the CWA establishes a binding definition of "waters of the United States" and is consistent with the statute, the caselaw, and the Constitution. Technical Support Document, I.A.**

Ann McCammon Soltis, Director, Division of Intergovernmental Affairs, Great Lakes Indian Fish and Wildlife Commission (Doc. #15454)

4.396 In spite of the fact that GLIFWC's member tribes' ceded territories are located in a water rich area, not all of the waters the upper Great Lakes and Mississippi River basins flow directly to a traditionally navigable water, an interstate water or the territorial seas. In fact, the most common type of lake in the State of Wisconsin, a state of many thousands of lakes, is the seepage lake, which has no outlet. These lakes collectively (in size, in number, and in hydrologic connection to groundwater and ultimately to surface waters) are likely to play an important role in the chemical, physical and biological integrity of downstream waters. (p. 3)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that seepage lakes as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual seepage lakes are jurisdictional where they fall within any of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Action United, et al (Doc. #18859)

4.397 We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Allegheny, Delaware, Monongahela, Ohio, Schuylkill and Susquehanna. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local

economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation. (p. 2)

Agency Response: The rule recognizes that 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.

The agencies determined five subcategories of waters – prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – that must be analyzed "in combination" when making a case-specific significant nexus analysis under (a)(7). However, (a)(7) and (a)(8) waters will not be categorically determined to be jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial

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

4.398 Only certain types of "other waters," none of which are present in Arizona, should be aggregated for purposes of assessing jurisdictional status. (p. 7)

Agency Response: See response 4.81 (Doc. #15360). See the Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis.

Railroad Commission of Texas (Doc. #14547)

4.399 The RRC is concerned that "other waters," such as isolated vernal pools and prairie potholes, may be jurisdictional subject to case-specific significant nexus evaluation assessing these waters in combination with similarly situated waters and wetlands in the same region. The proposed rule provides that such waters are "similarly situated" when they "perform similar functions and are located sufficiently close together or sufficiently close to a water of the US so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical and biological integrity" of a waters identified in previously designated categories. Under this definition, agency reviewers will have great discretion in identifying certain waters, such isolated ponds and wetlands, and evaluating them together within a large "landscape unit." It is not clear when or where the Agencies' ability. to "aggregate" would stop. Under the proposed rule, "other waters" is the only category of waters still subject to an individual significant nexus determination. However, even for this category, the Agencies are requesting comments on whether "other waters" should be categorically regulated as having a "significant

nexus" based on either their location within a defined eco-subregion or the type of water (such as a prairie pothole). RRC asserts that the proposed rule is too subjective with respect to determining whether or not "other waters" are jurisdictional, and we could find no reference to the term "landscape unit" in any Clean Water Act history. (p. 3)

Agency Response: See response 4.1(Doc. #16386), 4.163 (Doc. #16447), 4.316 (Doc. #13074), 4.272 (Doc. #14285), 4.345 (Doc. #9560.1). See the Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis. Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. In the final rule, the agencies have also identified by rule that prairie potholes and western vernal pools as defined are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.

Continental Resources, Inc. (Doc. #14655)

4.400 Continental is also concerned that minor runoff and overflow from ditches might be considered jurisdictional "other waters" resulting in a moving target of what would be considered jurisdictional, and imposing new costs and requirements on the construction of ditches located in the arid west where any jurisdictional water is miles away and unaffected. Given the impractical, elusive application of the significant nexus test to these new "other waters," Continental expects it will struggle considerably to resolve the ambiguity of this aspect of the Proposed Rule. (p. 14)

Agency Response: See Ditches compendium.

Colorado Cattlemen's Association (Doc. #15068)

4.401 CCA also requests that the agencies create an exclusion for playa lakes from the category "waters of the United States." The proposed rule requests comment on the exclusion or inclusion of playa lakes within "waters of the United States."[283] (Proposed Rule at 22216), and CCA concluded that due to their isolated nature, these waters fall squarely in the realm of those isolated ponds that were found to be beyond the Corps' authority in SWANCC and as such should be specifically excluded in the regulation.[284] Due to the

[283] Proposed Rule at 22216, ("In addition, the agencies could determine that other subcategories of waters are not jurisdictional and lack a significant nexus to an (a)(1) through (a)(3) water. Under this option the agencies could conclude that "other waters" such as playa lakes in the Great Plains, even in combination with other playa lakes in a single point of entry watershed, lack a significant nexus and therefore arc not jurisdictional.")

[284] SWANCC, at 163, 168 (describing the waters in question as "seasonal ponds of varying sizes:"and noting that to "rule for respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water").

fact that these waters are geographically isolated and fall outside the jurisdiction of the CWA, we would also submit that a specific exclusion not include a caveat wrapping playas back into the category of regulated waters through the "interstate waters," "adjacent waters," or any other category as suggested in the proposed rule.[285] Not only would this subcategory exclusion be in line with Supreme Court rulings, it would provide much needed clarity to the regulated public.

The reports cited by EPA conclude that playas are "geographically isolated wetlands" that .represent the lowest points on the landscape in closed watersheds" and "derive water from rainfall and local runoff (including irrigation water), while very few receive ground-water inputs (Haukos and Smith 1994)."[286] Another report describes them as "shallow depressional recharge wetland occurring primarily in the High Plains region of the western Great Plains. Each occurs within a closed watershed and, as the term recharge implies, only receives water naturally from precipitation and its associated runoff."[287] These characteristics clearly resemble those of the isolated ponds that were considered to be beyond the Corps' jurisdiction in SWANCC, therefore making it appropriate for clarity and legal purposes for the agencies to specifically exclude playas from the "waters of the U.S." regulation. (p. 8-9)

Agency Response: See the Technical Support Document for a discussion of the Supreme Court decisions. While playa lakes have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, as the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories.

North Carolina Farm Bureau Federation (Doc. #15078)

4.402 We oppose the Agencies selecting types of waters and declaring them automatically to be "other waters" and assuming a significant nexus. An example would be pocosins. The Agencies appear to be considering such waters as only in their most natural state, and not as they may be found in the field. For example, there will be pocosins that have some prior converted cropland, or that can have the timber harvested on them. A site-specific evaluation of features such as pocosins, Carolina bays, prairie potholes, vernal pools and other such areas should be required before the Agencies extend jurisdiction to such areas. In no case should such areas simply be listed by name and then declared "other waters" and therefore jurisdictional. (p. 15)

Agency Response: The final rule does not assume the significant nexus of waters identified in (a)(7) or (a)(8). Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) (which includes pocosins) are similarly situated by rule in the single point of entry watershed and must be

[285] Proposed Rule at 22216 ("Under this approach, where a playa lake, or other excluded category of water. would be within a category established by paragraphs (a)(1) through (a)(6) of the proposed rule (e.g.. the playa is an interstate water or the playa is adjacent to an (a)(1) through (a)(5) water), the playas would be jurisdictional.").
[286] Tiner, Geographically Isolated Wetlands of the United States, Wetlands 23(3): 494-5 J6,496 & 500 (2003).
[287] Haukos & Smith, Playa Wetland Regulation, Wetlands 2313'): 577-589, 577 (Sept. 2003).

combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water for purposes of conducting a significant nexus analysis. 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 SAB also expressed support for the agencies' option in the preamble of proposed rule to identify certain subcategories of waters as similarly situated and highlighted these same five subcategories. These subcategories will not be jurisdictional by rule. Additionally, paragraph (b) lists exclusions such as prior converted cropland, which are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8).

US Dry Bean Council (Doc. #15256)

4.403 The proposed rule asks for comments on whether to conclude by rule that certain types of "other waters," including prairie potholes, farmed wetlands and perhaps other categories of waters, have significant nexus and should ALL be considered jurisdictional under the Clean Water Act. This is an example of the broad expansion of authority that concerns dry bean producers most. A small pool of water that may or may not appear annually, where water does not stand permanently should not be considered "wetlands" or "navigable waters" and we believe this would be an extreme overreach that is unacceptable to farmers and landowners alike.

While leaving these "other waters" out of the final rule does not meet the agencies' stated goals of increased clarity, predictability, and certainty, labeling all of these "other waters" as jurisdictional –with the multiple regulatory requirements of the Clean Water Act – is an unacceptably heavy burden for dry bean producers. (p. 2)

Agency Response: The final rule does not identify any waters as jurisdictional by rule except those that fall within one of the (a)(1) through (a)(6) categories. Waters identified in (a)(7) or (a)(8) are not jurisdictional by rule. Waters identified in (a)(7) or (a)(8) are subject to a case-specific analysis to determine if the water, either alone or in combination with other similarly situated waters in the region, has a significant nexus to a downstream traditional navigable water, interstate water, or territorial sea. See the Technical Support Document regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis. Additionally, by not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Florida Federation of Garden Clubs (Doc. #5725)

4.404 The Florida Department of Environmental Protection has also estimated that 800,000 acres in the Panhandle region alone are so-called "isolated" waters, which do not have clear Clean Water Act protections. These shallow, depressional wetlands, including

cypress domes, need to be protected to support critical wildlife habitat and recreational opportunities for future generations. (p. 2)

Agency Response: At this time, the agencies are not able to determine that the available science supports that cypress domes as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual cypress domes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories. The agencies will continue a transparent review of the science, and gain 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.

Golden Spread Electric Cooperative, Inc. (Doc. #14422)

4.405 EPA defines "playa lakes" as round hollows in the ground in the Southern High Plans of the United States. They are ephemeral, meaning they are only present at certain times of the year."[288] Even in this proposed rulemaking the Agencies acknowledge that the available scientific literature indicates that "their chemical, physical, or biological connections to and effects on (a)(l) through (a)(3) are of a limited and tenuous nature."[289] Thus, by their own statements, playa lakes do not have the sufficient nexus to establish jurisdiction under the CWA and expressed Supreme Court precedent. To the extent the Agencies are attempting to bring clarity to these case-by-case jurisdictional questions to ensure there are no inconsistencies within the Agencies, they should exclude playa lakes, even those in combinations, in the final rule.[290] (p. 8)

Agency Response: While playa lakes have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, as the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories.

Southern Environmental Law Center et al. (Doc. #13610)

4.406 The agencies also sought comment on whether other waters such as "pocosins" should be considered waters of the United States by rule. Again, there are numerous studies that go beyond the Connectivity Report that demonstrate that the scientific basis exists for finding such waters jurisdictional by rule. (p. 4)

As described above, working with the Natural Resource Defense Council (NRDC), we solicited the help of a team of Masters of Ecology students from the University of Georgia to help us identify additional peer-reviewed scientific studies that demonstrate the connections that exist between certain types of "other waters" and jurisdictional waters. In our report we focused on Carolina Bays, Delmarva Bays, and other similar

[288] See 79 Fed. Reg. at 22251.
[289] See Id.
[290] We note that playa lakes have similar characteristics to the excluded ditches as proposed in in (b)(3) and (b)(4) and other waters excluded in (5)(i)-(vii). If the Agencies do not exclude playa lakes and retain only these existing proposed exclusions, the Agencies need to explain why playa lakes are so dissimilar to those excluded to warrant potential CWA jurisdiction in the final rule.

coastal depressional wetlands. In the report it commissioned, NRDC focused on vernal pools and pocosins. Both reports, which are attached as Exhibits C and D, conclude for their respective waters that more often than not there is sufficient scientific information to establish that the waters are connected either physically, chemically, or biologically to downstream traditionally navigable waters.

In issuing the final rule, we urge the agencies to review the reports attached to these comments. It is our position that when this research is combined with the Connectivity Report, the agencies will have the scientific foundation necessary to establish that coastal depressional wetlands (such as Carolina and Delmarva Bays), vernal pools, and pocosins should be defined as waters of the United States by rule. This, of course, would obviate the need to perform case-by case analyses of these waters. (p. 18)

Agency Response: At this time, the agencies are not able to determine that the available science supports that pocosins as a class have a significant nexus to (a)(1) through (a)(3) waters. In the final rule, the agencies have identified pocosins as one of five specific types of waters in that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. The agencies have reviewed the attached reports.

Agua Fund, et al. (Doc. #14546.1)

4.407 We urge that the final rule specifically assure protection of isolated wetlands, intermittent and ephemeral streams, and the variety of water bodies that may not constantly have surface water connections to traditional navigable waters, but which serve important ecological functions. We note, in this regard, that U.S. EPA's Science Advisory Board found the proposed rule's coverage of "tributaries" and "adjacent waters and wetlands" to be well supported by available science and, in fact, recommended that the final rule go further in protecting "other waters" such as Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools and Great Plains playa lakes. It is critically important that the final rule assure protection for all categories of other waters that may influence the physical, chemical and biological integrity of downstream waters. (p. 1)

Agency Response: The final rule covers all waters that meet the definition of "tributary." Additionally, based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water for purposes of conducting a case-specific significant analysis. For waters for which the agencies have made no conclusions with respect to which waters are "similarly situated", case-specific significant nexus analyses may be

undertaken for waters located within the 100 year flood plain 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).

Clean Water Action (Doc. #15015)

4.408 *We urge the agencies to categorically protect certain "other waters" that have a clear significant nexus to navigable waters, rather than requiring case-by-case determinations for these "other waters."* Relying on case-by-case analyses to determine jurisdiction provides less regulatory certainty to polluters and developers and we recommend the agencies categorically include certain classes of "other waters" where the science is clear, as categorically jurisdictional by rule. As the rule is currently proposed , the agencies will need to continue the current tedious case-by-case "significant nexus" analysis for all "other waters, including wetlands" that do not fit the definition of the six other categories of protected waters (paragraphs (a)(1) through (a)(6) in the proposed definition). We believe that many of these "other waters" clearly have an impact on navigable waters. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. In its final review of EPA's draft Connectivity report, the SAB panel disagreed with EPA's conclusion that there is not enough scientific evidence to generalize about the connectivity of wetlands and waters outside of floodplains, stating this "conclusion largely overlooks the effects of deep aquifer connections and non-hydrologic biological connections on downstream waters."[291] In fact, the conclusion reached by EPA is inconsistent with earlier sections in its Report, "which describes numerous scientifically established functions of non-floodplain wetlands that can benefit the physical, chemical, and biological integrity of downstream waters."[292]

The available science described in the draft Connectivity report clearly supports "a determination that certain subcategories and types of "other waters" 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."[293] Two independently commissioned academic reports from the River Basin Center at the University of Georgia, which synthesized additional scientific literature not reviewed in the Connectivity report, also found significant evidence to support protecting certain subcategories of "other waters." Both of these reports have

[291] U.S. EPA 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, at 58 (Oct 17, 2014) (hereinafter "SAB Connectivity Review"). Available at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf.
[292] Id. at 58.
[293] SAB Review Letter at 3.

been submitted into the docket for the proposed rule. Together with the Connectivity report, these reports provide ample evidence for the agencies to build a solid scientific case for categorically including certain "other waters" as jurisdictional by rule. In addition to the "other waters" listed above by the SAB panel, the two UGA reports highlight scientific evidence to support categorically protecting "other waters" including northeastern vernal pools, sinkhole wetlands in karst regions, rainwater basin wetlands, sand hills wetlands, playa lakes and interdunal wetlands. We urge the agencies to categorically protect these "other waters" as jurisdictional by rule under the Clean Water Act.

"Other waters" not categorically included as jurisdictional in the final rule should continue to be subject to case-specific analyses in order to determine if they have a significant nexus to navigable waters. The scientific literature summarized in both the draft Connectivity report and UGA reports clearly supports protecting "other waters" on a case-by-case basis. Waters and wetlands outside floodplains can have a significant influence on the physical, chemical and biological integrity of downstream waters, particularly when they are considered in aggregate (i.e. in combination with similarly situated waters). The SAB review of the draft proposed rule reached this same conclusion about the need to continue to review "other waters" on a case-by-case basis.[294] The primary goal of the agencies should be to move as many "other waters" into categories that can be defined by rule to be "waters of the United States," as the science evolves to reveal the significant connections between these "other waters" and jurisdictional waters. Doing this will add clarity and consistency for both agency staff and the regulated community. (p. 7-9)

<u>Agency Response:</u> At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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."

By not determining that waters identified in (a)(7) or (a)(8) are is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

4.409 *We are strongly opposed to the agencies categorically excluding <u>any</u> "other waters" from CWA jurisdiction, at any time.* The agencies should not declare any "other waters" non-jurisdictional at any time, even if a particular "other water" should fail a significant nexus test. Watersheds are dynamic ecosystems that change over time, both from natural events and human activities. As the climate changes, scientists anticipate more frequent flooding in certain regions and more intense drought in others, so just because a particular water does not meet a significant test once, does not mean it won't meet such a

[294] SAB Review Letter at 3.

test in the future. Especially with the anticipated impacts of climate change, we can expect more dramatic changes to our watershed ecosystems in the future. This, coupled with increasing demand for clean water in the future, underscore the need for the agencies to continue to do everything within their legal authority to protect our nation's precious water resources as the science evolves and resource needs shift.

Categorically excluding any water would set a dangerous precedent, especially in light of the fact that the proposed rule contains no recapture provision. Given uncertainty about the availability and quality of water resources in the future, it would be shortsighted of the agencies to categorical exclude any waters from protection. Moreover, members of the SAB panel reviewing the proposed rule commented that "the science does not support a determination to exclude any groups of "other waters" (or subcategories thereof, e.g. Great Plains playa lakes) from jurisdictional status."[295] (p. 10)

Agency Response: The SAB has noted that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Like wetland delineations, approved jurisdictional determinations are only valid for 5 years. This will allow significant nexus determinations to be revisited if conditions change. See Features and Waters Not Jurisdictional compendium.

National Wildlife Federation (Doc. #15020)

4.410 Recognizing that the case-specific analysis of significant nexus is "resource intensive for the regulating agencies and the regulated community alike," the agencies solicit information about whether "current scientific research and data regarding particular types of waters are sufficient to support the inclusion of subcategories of types of 'other waters,' either alone or in combination with similarly situated waters, that can appropriately be identified as always lacking or always having a significant nexus."

In this regard, we strongly agree with the SAB that:

1. "There is [ ] adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States … are similarly situated … and thus could be considered waters of the United States."

2. "Furthermore, as the science continues to develop, other sets of wetlands may be identified as 'similarly situated'….; and

3. "[T]he science does not support excluding groups of 'other waters' or subcategories thereof.

SAB Rule Letter at 3. (p. 62)

Agency Response: The agencies believe the final rule reflects these comments.

4.411 *The agencies should determine by rule that certain "other waters" have a significant nexus and are jurisdictional by rule.*

We also strongly support the alternative #2 proposal that the agencies determine by rule, based on the available science, that certain additional subcategories of "other waters" are

[295] SAB Review Memo at 5.

similarly situated and have a significant nexus and are jurisdictional by rule rather than via the resource-intensive case-specific significant nexus analysis under paragraph (a)(7). 79 Fed. Reg. at 22216.

The SAB has already stated its position that the agencies have sufficient scientific evidence to support making certain subcategories of "other waters" jurisdictional by rule, including, but not limited to Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, and western vernal pools:

> (…) [T]here is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' 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, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States. SAB Rule Letter.[296]

As noted previously, we strongly believe that finding subcategories of others waters to be jurisdictional by rule, where supported by the available science, will significantly decrease the administrative burdens, uncertainty, inconsistency, and wasteful litigation by significantly reducing the circumstances requiring a case-specific significant nexus analysis. (p. 68)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies determined five subcategories of waters – prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated by rule within the single point of entry watershed and must be analyzed "in combination" when making a case-specific significant nexus analysis under (a)(7). However, (a)(7) and (a)(8) waters will not be categorically determined to be jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

4.412 We summarize in this section, and incorporate by reference, several reports detailing peer-reviewed scientific literature and conclusions that support finding certain subcategories of non-adjacent waters jurisdictional by rule. These reports have been submitted to the record during the comment period at Docket ID No. EPA-OW-2001-0880, and are submitted again with our comments:

- The 2014 Ducks Unlimited Comments on the Proposed Rule, Sections III and IV (November 5, 2014

[296] See also, 79 Fed. Reg. at 22216, citing Appendix A, Part II, iii. C (1).

- *Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States*, Woolford, Bonney, Pringle, River Basin Center, University of Georgia (October 2014)
- *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters*, Woolford and Carroll, River Basin Center, University of Georgia (July 2014)

EPA's Connectivity Report and the SAB's Connectivity Peer Review Report also provide substantial support in the administrative record for such categorical jurisdictional determinations.

We highlight the wetland types and regions outlined below because, among other reasons: 1) wetland loss has been significant in these regions and the remaining wetlands are highly threatened in the absence of CWA protections; (2) there is literature that clearly demonstrates the abundance and strength of the significant nexuses that exist among these waters and with downstream navigable waters; (3) these wetland types largely fall into the "other waters" category; and, (4) despite individual wetlands often being situated not in proximity to (a)(1) through (a)(3) waters, there is a compelling scientific basis for the vast majority of these waters to be considered jurisdictional on the basis of a comprehensive, science-based significant nexus evaluation.

In issuing the final rule, we urge the agencies to review the reports attached to these comments. It is our position that when this research is combined with the Final Connectivity Report and the many peer-reviewed scientific papers cited therein, the agencies will have the scientific foundation necessary to establish that prairie pothole wetlands, coastal depressional wetlands (such as Carolina and Delmarva Bays), vernal pools, pocosins, and other subcategories of "other waters" should be defined as waters of the United States by rule. This, of course, would obviate the need to perform case-by-case analyses of these waters.

As the agencies conduct these evaluations, they should keep in mind the overall context within which important decisions about significant nexus and jurisdiction will be made. Approximately 53% of the estimated 221 million acres of wetlands originally present in the United States have been lost (Dahl 2000). The CWA undoubtedly contributed to the decrease in the rate of wetland loss since 1972, when the act was passed, through 2004 (Dahl 2006). However, not counting the additions of ponds that have little wildlife value (e.g., farm ponds, golf course ponds, storm water retention lagoons, etc.), the Nation has nevertheless experienced a net loss of over 16 million acres of wetlands since the mid-1950s. Since 1986, the Nation has lost over 2 million acres of vegetated wetlands and 1.4 million acres of freshwater marshes that are among the most important wetlands for waterfowl and other wildlife (data from Dahl 2000, 2006, 2011). These kinds and magnitudes of losses have had a cumulative negative impact not only on critical waterfowl habitats, but also on the Nation's water quality and other federal interests.

Unfortunately, the most recent national wetlands status and trends report (Dahl 2011) reported that since 2004 the rate of wetland loss had increased by 140% over the previous report period. This is the first acceleration of wetland loss over a 50-year period, and given that this is the first survey period occurring entirely post-SWANCC, the acceleration of wetland loss is likely at least partially attributable to the jurisdictional

confusion and withdrawal of CWA protections by the agencies in the wake of the SWANCC and Rapanos cases.

Therefore, the trajectory of the future status and trends of the Nation's wetlands – and therefore of the future direction of the condition of the Nation's waters – will be significantly influenced by the content of the final rule on the "definition of the 'waters of the U.S.'" (p. 70-72)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. Waters in categories other than those identified in (a)(7)are jurisdictional if they fall within one of the (a)(1) through (a)(6) or (a)(8)categories. The agencies have reviewed the attached reports.

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

4.413 You have also sought comment on whether certain sub-categories of "other waters" may be deemed non-jurisdictional by rule. The conservation groups disagree that this should be done in light of inherent uncertainty, even if doing so would be administratively convenient in some instances. Indeed, your entertainment of the view that inconclusive science could support such categorical determinations, 79 Fed. Reg. 22216-17, is repulsive to the purposes with the Clean Water Act.

In particular, you suggest that playa lakes in the Great Plains may be deemed not jurisdictional by rule. 79 Fed. Reg. 22251. You assert, in the tail end of a very brief discussion, that the "available scientific literature indicates that their [playa lakes'] chemical, physical, or biological connections to and effects on (a)(1) through (a)(3) waters are of a limited and tenuous nature." And yet, in stating that playas "typically do not drain to an (a)(1) through (a)(3) water," you are suggesting that some playas at times do "drain" to traditionally jurisdictional waters. Moreover, you concede that Great Plains playas "play a role in groundwater recharge of the Ogallala Aquifer, in local floodwater storage, and in provision of wildlife habitat." In light of this, the conservation groups urge that playa lakes should not by rule be deemed not jurisdictional. (p. 9-10)

Agency Response: See Features and Waters Not Jurisdictional compendium. The final rule does not exclude playa lakes by rule. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories.

American Rivers (Doc. #15372)

4.414 We appreciate the Agencies' request for guidance on how best to address 'other waters' under the CWA in addition to the case-specific analysis. American Rivers supports the second option that would "determine by rule that certain additional subcategories of waters would be jurisdictional rather than addressed with a case-specific analysis, and

that other subcategories of waters would be non-jurisdictional."[297] We believe that prairie potholes and western vernal pools should be categorically jurisdictional.[298] We agree with the scientific analysis provided in the proposed rule that these categories of waters have evidence of a significant nexus to other 'waters of the United States.'[299] (p. 25)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying prairie potholes and western vernal pools as jurisdictional by rule. The agencies determined five subcategories of waters – prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – that are similarly situated by rule in the single point of entry watershed and must be analyzed "in combination" when making a case-specific significant nexus analysis under (a)(7). However, (a)(7) and (a)(8) waters will not be categorically determined to be jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

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

4.415 The available science supports a "more definitive statement" about the impact of certain subcategories of "other waters" on downstream water bodies. This conclusion is supported not only by the Connectivity Report, but also by two independently commissioned academic reports reviewing supplementary evidence about so-called "isolated" waters. These reports were developed by students in the River Basin Center at the University of Georgia, and were reviewed and found highly credible by independent experts. The UGA reports and the experts' reviews of them can be found in the docket for this rulemaking.[300] Together with the Connectivity Report, they show that vernal pools, pocosins, sinkhole wetlands in karst regions, Rainwater Basin wetlands, Sand Hills wetlands, playa lakes, interdunal wetlands, Carolina and Delmarva bays, other coastal plain depressional wetlands, and prairie potholes all have a significant nexus to traditionally navigable waters and deserve protection under the law. The agencies must take this scientific evidence into account in determining which waters warrant categorical coverage. (p. 40)

Agency Response: **The agencies have reviewed the referenced reports. At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. Waters in categories other than**

[297] Definition of WOTUS, 79 Fed. Reg. at 22216.
[298] See, SAB review of the Connectivity Report, supra note 22, at 56.
[299] Id. at 22250.
[300] See Letter from Jon Devine, NRDC & William Sapp, Southern Environmental Law Center, to Water Docket, Comment No. EPA-HQ-OW-2011-0880-10578 (Oct. 17, 2104) (cover letter and attachments), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578.

those identified in (a)(7)are jurisdictional if they fall within one of the (a)(1) through (a)(6) or (a)(8)categories. The agencies have reviewed the attached reports.

4.416 While the Connectivity Report does not specifically discuss pocosins, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[301] Pocosins are bogs that naturally occur in broad swaths of flat or slightly depressed land on the Atlantic coastal plain. They are rainwater-fed bogs defined by their vegetation communities and usually are not connected or adjacent to navigable surface water, have relatively long hydroperiods with temporary inundation, and are a source of water on the coastal landscape due to their topographically high position. Pocosins are among the kinds of "other waters" that the SAB concludes should be protected as "waters of the United States."[302]

Physical impacts of pocosins on downstream waters include the determination of runoff patterns and volume, and changes in sediment loading in coastal and downstream waters. Pocosins affect the quantity and pattern of water delivery to streams and coastal waters by sequestering and losing (through evapotranspiration) the majority of precipitation entering the systems, and exporting the remainder by overland sheet flow. Studies have shown that natural pocosins regulate water flow and promote slow release of sheet-flow surface runoff to navigable waterways, while drainage of pocosins dramatically increases high-flow events. The increases in both overall runoff volume and peak flows following pocosin development sheds light on the physical impact of pocosins on downstream waters: they serve as water pumps, by sequestering water that is later exported by evapotranspiration instead of draining to navigable waterways, and they serve as water storage, slowing and diffusing water discharge to streams and coastal waters, especially after high precipitation events.

The physical impacts of pocosins on navigable waters are inextricably linked to the chemical impacts they have: natural water storage and sequestration in these systems provides for nutrient retention and organic carbon export to streams and coastal waters. Pocosins are important sources of organic nitrogen and organic carbon to navigable waters, and they retain phosphorus that would otherwise be exported with runoff. As pocosins lose on average two thirds of their hydrologic input to evapotranspiration and export the remainder through sheet-flow surface runoff, they play a large role in maintaining the brackish salinity of coastal streams and estuaries.

While there has been a limited study of pocosin biota in the literature, many mammals, birds, amphibians, reptiles, and fish are known to use both pocosin and riparian areas as habitat, and their movement between those two systems represents a transfer of energy and nutrients that affects the integrity of both.

This evidence shows that pocosins have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 42-43)

<u>Agency Response:</u> At this time, the agencies are not able to determine that the available science supports identifying pocosins as jurisdictional by rule. In the final

[301] Id. at 16-25.
[302] SAB Rule Review at 3.

rule, the agencies have identified by rule that pocosins are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

4.417 Although the Connectivity Report does not specifically discuss karstic sinkhole wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[303] Sinkhole wetlands in karst regions occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses.

While they can be classified into several different categories, sinkhole wetlands of each category generally have significant impacts on downstream waters. They can mediate flooding and stormwater runoff and reduce peak flows by retaining water on the landscape before it reaches navigable waterways. Some types can slow water infiltration to aquifers and allow for sediment and pollutant removal. Studies have demonstrated that stream flows downstream of karstic sinkhole wetlands are characterized by peak discharges that are of a lesser volume and longer duration than those upstream.

An additional scientific review by Ducks Unlimited, which can also be found in the docket for this rulemaking, reaffirms these conclusions about the physical impacts of karstic sinkhole wetlands, stating: "'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."[304]

The UGA "isolated" waters report also describes the chemical and biological impacts of karstic sinkhole wetlands.[305] These wetlands maintain water quality by transforming nutrients and organic compounds and cycling organic carbon. While specific studies on biodiversity in karst regions are less numerous than other studies, these have shown strong evidence of biological connectivity. Many sinkhole wetlands are home to a diversity of invertebrates and other migratory species, including many species of birds, amphibians, and reptiles. Many of these species migrate between wetlands and navigable waters.

[303] Isolated Wetlands at 25-30.
[304] Ducks Unlimited, Comment Letter to EPA & Army Corps of Engineers, Docket ID No. EPA-HQ-OW-2011-0880 at 63 (Nov. 5, 2014).
[305] Isolated Wetlands at 26-30.

This evidence shows that sinkhole wetlands in karst regions have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 43-44)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that karstic sinkhole wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual karstic sinkhole wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.418 Although the Connectivity Report does not specifically discuss Rainwater Basin wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[306] The wetlands of the Rainwater Basin in south-central Nebraska range in size from less than 1 to over 100 acres and are typically shallow depressions with little connection to groundwater or surface water because of a clay soil later that impedes infiltration. Nonetheless, these wetlands exhibit various physical, chemical, and biological impacts on navigable waters similar to those of other depressional wetlands.

Rainwater Basin wetlands provide important water storage functions and regulate the timing and volume of flow to downstream waters. Studies show they reduce soil erosion by lessening peak flows associated with storm events and decreasing the total amount of runoff leaving the watershed. These wetlands also improve downstream water quality when vegetation stabilizes soil at the water's edge, a process known as shoreline anchoring, which reduces soil erosion.

Wetlands in the Rainwater Basin improve downstream water quality by retaining and transforming nutrients into less polluting forms, and by retaining toxins and pollutants in herbicides and pesticides washing off the heavily farmed landscape. Birds, reptiles, and amphibians move between Rainwater Basin wetlands and navigable waters, representing a direct transfer of nutrients, energy, organic matter, and genetic material. In particular, these wetlands are a primary staging area for many migrating bird species using the North American Central Flyway in spring and fall; many of these species move between Rainwater Basin wetlands and traditionally jurisdictional waters.

An additional review by Ducks Unlimited echoes these findings regarding biological connections:

> Folk and Tacha (1990) documented patterns of use of the North Platte River and the region's temporary and semipermanent palustrine wetlands by sandhill cranes. The North and Central Platte River valley provides the primary spring staging habitat for about 80% of the entire midcontinent population of the species (Pearse et al. 2010), and the cranes typically roost in the river channel or nearby wetlands for safety during the night. They found that the cranes were collectively

[306] Id. at 30-35.

> interdependent upon the shallow navigable river and the region's wetlands, providing a biological nexus between the two types of waters. Taken together, these and other studies (Gersib et al. 1989; Tacha et al. 1994; Bishop et al. 2010; Pearse et al. 2011) indicate that the Platte River and the wetlands of the rainwater basin and surrounding landscape function as a complex of aquatic habitats for a diversity of species, and as the 'other waters' of the region are negatively impacted, so too is the biological integrity of the navigable Platte River.[307]

This evidence shows that Rainwater Basin wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 44-45)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that Rainwater Basin wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual Rainwater Basin wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.419 While the Connectivity Report does not specifically discuss Sand Hill wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[308] Wetlands in the Sand Hills region of Nebraska exist in valleys between large sand dunes and are fed primarily by groundwater from the Ogallala aquifer due to permeable sand and gravel soils. Of over 3,000 wetlands in the Sand Hills totaling 1.3 million acres, about 2,000 of them are small ephemeral pools. Yet these wetlands have a broad variety of impacts on navigable waters.

Wetlands in the Sand Hills are areas of significant aquifer discharge and recharge. These waters serve important functions as groundwater discharge constitutes a major component of stream flows in the region. In fact, approximately 98% of the Dismal River and 95% of the Middle Loup River flows are derived from groundwater seepage.[309] A review of additional scientific studies by Ducks Unlimited underscores this important function:

> LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and groundwater as water in this interconnected system flowed toward lower elevations. Novacek (1989) stated that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2003)… In summary, the scientific evidence is clear that the Sandhill wetlands are, in the aggregate and generally,

[307] Ducks Unlimited at 58.
[308] Isolated Wetlands at 35-39.
[309] Id. at 36.

> connected via groundwater linkages to navigable waters and their tributaries in this region of the country.[310]

Sand Hill wetlands also have important chemical interactions with groundwater, the primary source of water in the region. Geographically "isolated" wetlands contribute dissolved organic carbon to underlying aquifers and affect the composition of major ions in adjoining groundwater. Sand Hill wetlands are also sites of nutrient uptake, particularly phosphate and nitrate. Their biological connections are significant as well: many birds, reptiles, amphibians, mammals, and invertebrates migrate between Sand Hill wetlands and permanent navigable waters. These movements represent a direct transfer of nutrients, energy, organic matter, and genetic material.[311]

This evidence shows that Nebraska's Sand Hill wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 46)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that Sand Hill wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual Sand Hill wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.420 Although the Connectivity Report does not specifically discuss playa lakes, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[312] Playa lakes are ephemeral isolated wetlands of the southern High Plains. They are shallow, roughly round depressions of unknown origin that dry for the majority of the year due to limited rainfall in this arid region; they are inundated only during periods of heavy precipitation during summer and fall. As some of the only water bodies in the region, playa lakes play a large role in maintaining biodiversity and sustaining populations of birds, as well as in groundwater recharge, nutrient cycling, and water quality enhancement.

Playa lakes are known to recharge aquifers, mitigate floods, and reduce sediment inputs to nearby waterways. Playas in the Southern High Plains of New Mexico and Texas were shown to play a significant role in recharging aquifers by collecting runoff and focusing rapidly flowing surface waters through macropores. In fact, playas represent the only sites for aquifer recharge in some areas.[313] A separate scientific review by Ducks Unlimited echoes the importance of these functions:

> Conceptual models have recognized for years that the playas are critical recharge zones for the Ogallala (e.g., Wood 2000). Gurdak and Roe (2009; 2010) recently provided a comprehensive synthesis of the related literature (approximately 175

[310] Ducks Unlimited at 54-55.
[311] Isolated Wetlands at 37-39.
[312] Id. at 40-43.
[313] Id. at 40.

> studies) and concluded that playas are pathways of relatively rapid recharge and provide an important percentage of recharge to the Ogallala aquifer. Thus, playas are, in the aggregate, critical to supplying water to an important, interstate water body, and they therefore impact the water quantity of the underlying aquifer….Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers, as well as the Pecos and Canadian rivers (Kreitler and Dutton 1984)….Thus, the significant nexus between the playa wetlands and navigable waters is created by their direct linkage via the Ogallala aquifer.[314]

Playa lakes also have significant chemical impacts on navigable waters. They gather and store nutrients that are carried in surface water runoff. Once runoff is stored, biological and chemical processes may reduce nutrient and pollutant concentrations. Playa lakes have been shown to improve water quality; one study showed concentrations of nitrate and chemical oxygen demand in a Texas playa decreasing with time to levels that were less than nearby aquifers.[315] Finally, the biological connections between playa lakes and traditionally navigable waters are considerable. Many waterfowl, shorebirds, and wading birds use playa lakes either as a wintering residence or as a stopover location while migrating to points further north or south within the North American Central Flyway. The biological connections that playa lakes share with waters of the surrounding areas as well as distant locales have been well documented through tagging, tracking, studying, and observing these birds. In addition to birds, macroinvertebrates also provide biological connectivity, which other organisms transport between playa lakes and permanent bodies of water.[316]

This evidence shows that playa lakes have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 47-48)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that playa lakes as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not specifically excluded. The agencies will continue a transparent review of the science, and gain 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.**

4.421 While the Connectivity Report does not specifically discuss interdunal wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[317] Isolated interdunal wetlands exist in all of the

[314] Ducks Unlimited at 56-57.
[315] Isolated Wetlands at 40.
[316] Id. at 41-42.
[317] Id. at 43-50.

country's major coastal regions, interspersed among sand dunes. They are commonly connected to groundwater sources, but rainwater and surface runoff from surrounding dunes are also important sources of water in these wetlands. They have important impacts on navigable waters, typically rivers and streams flowing through dunal landscapes and nearby oceans and lakes.

The physical impacts of interdunal wetlands on navigable waters are due to groundwater flow between wetlands and nearby waters (streams, lakes, and oceans), direct surface water connections with streams or nearby lakes and oceans, and storage and sink functions for water and sediment. For example, groundwater flow from interdunal wetlands to the Great Lakes (and the reverse) is common. They also exhibit hydrologic connectivity during temporary periods of surface water connections to navigable waters, often in the form of overtopping or erosion caused by storm surges or high winds. Interdunal wetlands that receiving incoming surface water either slow flow rates or prevent these flows from entering nearby Great Lakes, as much of the water is exported through groundwater seepage or evapotranspiration.[318]

The chemical impacts of interdunal wetlands on navigable waters stem from their ability to retain and transform nutrients such as nitrogen and phosphorus. Dynamic hydrology in interdunal wetlands allows for both aerobic and anaerobic microbial processes that promote denitification, which can allow wetlands to function as a nitrogen sink and prevent excess N from entering downstream waters. Open water interdunal wetlands can also trap phosphorus bound to suspended solids as they retain incoming sediment, as well as other heavy metals and pollutants entering through surface water channels and runoff.[319]

Finally, interdunal wetlands support a wide variety of life: some 1,400 species of living organisms, split about equally between plant and animal species. Many animals move between interdunal wetlands and navigable waters like streams and rivers. These wetlands are extremely important staging and breeding areas for waterfowl, shore birds, and wading birds that migrate along the Atlantic, Mississippi, and Pacific flyways. Population-level changes due to limited wetland resources likely have ecosystem impacts in navigable waters used by migrating birds in other seasons due to changes in nutrient and energy cycling. Mammals, reptiles, fish, and invertebrates also move between these habitats and navigable waters, transferring energy, nutrients, genetic materials, and organic matter.[320]

This evidence shows that interdunal wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 48-49)

<u>Agency Response:</u> At this time, the agencies are not able to determine that the available science supports that interdunal wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual interdunal wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a

[318] Id. at 44-45.
[319] Id. at 45-46.
[320] Id. at 46-50.

transparent review of the science, and gain 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.

4.422 Justice Kennedy's "significant nexus" test is not the only legitimate basis for exercising jurisdiction over a water body under the Clean Water Act. The current regulations' definition of "waters of the U.S." as including "[a]ll other waters … the use, degradation or destruction of which could affect interstate or foreign commerce"[321] was not struck down by the Supreme Court, and it allows for the protection of resources even if they do not have a demonstrable "significant nexus" to navigable waters. The agencies should continue to protect those categories of "other waters" that have substantial effects on interstate or foreign commerce, especially where it may be difficult to find that waters in the category have a significant nexus, either individually or in the aggregate.

For example, closed or terminal ("endorheic") basins in the Southwest – streams that do not reach other water bodies due to evaporation or percolation – may not have a clear connection to downstream waters, but they may serve as a source of irrigation water for crops that are sold in interstate commerce, or other similar commercial purposes. Indeed, in response to a rulemaking initiative in the wake of SWANCC in 2003, Governor Bill Richardson of New Mexico urged EPA and the Corps not to roll back the rules, and particularly pointed to closed basin streams as critical resources to protect.[322] Governor Richardson's comments noted that "[w]aters within the closed basins of New Mexico provide recreation and fishing for interstate and foreign travelers, as well as water for industry."[323]

Similarly, different types of geographically isolated "other waters" recharge the Ogallala aquifer, the source of water supplies for millions of people and businesses. As discussed above, the evidence supports finding that these waters have a significant nexus to navigable waters. But even without that basis for protecting these resources, their critical linkages to interstate commerce would authorize their protection. (p. 55-56)

Agency Response: See Agency Summary Response Essay 11. The agencies note that, to the extent the final rule does not extend coverage to certain categories of waters, nothing in the final rule precludes States or localities from extending their regulatory authority to those waters.

4.423 Although the science supports a finding that many kinds of "other waters" have significant downstream effects, it does not support the conclusion that any category of waters lacks such relationship to covered waters. The record of this rulemaking contains no support of which we are aware that specific categories could not possibly significantly impact water quality in downstream waters. For this reason, and especially because "the

[321] 33 C.F.R. § 328.3(a)(3).
[322] Letter from NM Gov. Bill Richardson to U.S. EPA, Comments in Response to the Advance Notice of Proposed Rulemaking Regarding the U.S. Supreme Court Decision in Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al. (SWANCC). No. 99-1178 Argued October 31,2000 -Decided January 9, 2001, (Mar. 5, 2003) (attached to NRDC/SELC SAB Letter, supra & enclosed in Appendix A).
[323] Id.

science continues to develop," the SAB cautioned EPA not to make categorical exclusions, saying, "the science does not support excluding groups of 'other waters' (or subcategories of them, e.g., Great Plains playa lakes) that may influence the physical, chemical and biological integrity of downstream waters."[324] (p. 63)

Agency Response: **See Features and Waters Not Jurisdictional compendium.**

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

4.424 There is strong scientific support for categorically including most of these waters as waters of the United States. See Member Comments, Dr. Mazeika Sullivan, at 88 ("I believe that the science is currently available (partially summarized starting at 22250) to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of 'other waters' (22216) (e.g., prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools)."). (p. 10)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. In the final rule, the agencies have identified by rule five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. See the Technical Support Documents. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Waterkeeper Alliance et al. (Doc. #16413)

4.425 The agencies requested comment on whether it should categorically include or exclude prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas, in the definition of "waters of the United States." These waters should be categorically included within the definition because they either alone or in the aggregate have significant impacts on the quality of the nation's water as demonstrated by the Connectivity Report and individual SAB member comments.[325]

As noted in the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrological perspective.[326] As noted by SAB member Dr. Sullivan, "the science is currently available (partially summarized starting 22250) to demonstrate that sufficient connectivity exists without a case-specific analysis for certain

[324] SAB Rule Review at 3.
[325] With the one small exception of playas where the experts conclude that the science is not adequately developed but that it should simply mean that they be decided on a case-by-case basis, not categorically excluded. See Member Comments, supra note 72, Sullivan at 88; Connectivity Report supra note 3.
[326] Connectivity Report, supra note 3, at 1-11 and 1-12.

subcategories of "other waters" (22216) (e.g. prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools). However, I do not believe that the science is sufficiently developed to support a determination to exclude any groups of 'other waters' (or subcategories thereof, e.g., Great Plains playa lakes) from jurisdictional status at this time in spite of the resource-intensive nature of a case-specific analytical approach."[327]

With regard to pocosins, "seventy percent of the nation's pocosins are found in North Carolina, and they comprise approximately 50 percent of the State's freshwater wetlands . . ." and these pocosins:

- Serve as the last refuge for many upland and floodplain species requiring large blocks of habitat, especially area-sensitive, forest-interior birds and the black bear;
- Provide important habitat for four federally-listed endangered species and one federally-listed threatened species. Two other State-listed endangered species are also found there;
- Stabilize estuaries by controlling the rate of freshwater flow thereby regulating salinity. Much of the State's $63 million commercial fishery depends on this estuarine regime;
- Contain 6 National Wildlife Refuges, 1 national and 2 State forests, 7 State parks, 5 State game lands, and 2 State natural areas. About 18 percent is owned by Federal and State forestry agencies.[328]

By 1993, Only 695,000 acres (31 percent) of North Carolina's original 2.5 million acres of pocosins remained in their natural state resulting in fragmentation of wildlife habitat and removal of pollutant filtering capacity.[329] The U.S. Department of Interior describes the impact of pocosin alteration as follows:

> The remaining "islands" support less species diversity in fewer numbers. Thousands of contiguous acres are required for forest interior bird species and the black bear to survive. Drainage systems interrupt the sheetflow that moves slowly across the wetland surface. Under natural conditions the runoff rises slowly after storms, often peaking several days after the rain. This process modulates the flow of water and controls the salinity of receiving waters. Nutrients, pollutants, and silt from agricultural runoff are filtered, as well. Once [agricultural] drainage is installed, peak and annual flows increase, and pulses of freshwater containing increased loads of chemicals and sediments are discharged into streams, marshes, and shallow estuarine nursery areas. Over 90 percent of North Carolina's commercial fish harvest depends on the estuaries. Comparisons show that unaltered areas maintained stable salinity, while areas which received drainage from ditched pocosins and non---alluvial swamp forests had salinity

[327] Member Comments, supra note 72, Dr. Mazeika Sullivan at 88.
[328] U.S. Department of Interior, The Impact of Federal Programs on Wetlands, Vol. II, Chapter 16: North Carolina-The Pocosins and Other Freshwater Wetlands, available at: http://www.doi.gov/pmb/oepc/wetlands2/v2ch16.cfm.
[329] Id.

> which varied by 100 percent over short periods of time. The altered areas produced fewer shrimp, finfish, and oysters. Other studies have linked agricultural drainage to excessive algal blooms and food chain disruptions. Studies of the Chowan River, which flows into Albemarle Sound, have linked increased nutrient loads from agricultural drainage and point source discharges to excessive algae blooms, subsequent food chain disruptions, and red sore disease problems. In 1976, about 95 percent of the white perch and half of the commercial fish caught in Albemarle Sound was discarded due to lesions.[330]

Pocosins occur in the southeastern Coastal Plain of the U.S. from Virginia to north Florida and

> . . . are often found adjacent to estuaries and have surface hydrologic connections that are linked to the regional water quality and salinity gradients found in estuarine areas along the southeastern coast. This hydrologic connection, combine with the vast continuous expanses of pocosins on the landscape, suggests that they are connected to regulated tributary waters of the United States. In addition, a survey of U.S. Army Corps of Engineers personnel in North Carolina indicates that most pocosins are considered hydrologically connected to regional water supplies since they are the source of water flow on the landscape where they dominate.[331] (p. 58-61)

Agency Response: See response 4.403 (Doc. #15256), 4.344 (Doc. #16431)

Association of State Floodplain Managers, Inc. (Doc. #19452)

4.426 ASFPM strongly supports the definition of appropriate categories of wetlands or waters as jurisdictional by rule, where supported by existing science and consistent with the requirements of the CWA. We believe that the literature reviewed by the Science Report includes sufficient scientific documentation to designate some categories of wetlands as jurisdictional by rule, and recommend that such designations be considered as part of developing a final rule.

We also encourage development of a process to expedite documentation of additional categories of other waters as jurisdictional by rule on a regional basis, as discussed under recommendations, below. (p. 3)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies will continue a transparent review of the science, and gain 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.

[330] Id.
[331] Richardson, Curtis J. Pocosins: Hydrologically isolated or integrated wetlands on the landscape? Wetlands 23(3): 563-576, available at http://nicholas.duke.edu/wetland/ab_Richardson_03.htm

4.427 Both the Rapanos decision and the Science Report recognize that there may be a significant nexus between specific "other waters" and downstream navigable waters. This is true even where the strength of the connection and its significance varies greatly within a class or category of such waters – that is, jurisdiction may not extend to the entire category. In spite of the legal scientific acceptance of the concept of protecting waters having a significant nexus, there has not been an established process to protect these individually important waters since the Rapanos decision. Therefore, ASFPM supports this provision in the proposed rule. Protection of these waters may be of critical regional or local importance to provide flood storage and attenuation, prior to reaching navigable waters to provide flood risk reduction for downstream communities and protection of essential fish and wildlife habitat. We recognize that a regulation that is national in scope cannot reasonably define all instances in where other waters have a significant nexus with waters of the U.S., and in these instances, a case-by-case decision is appropriate. (p. 3-4)

Agency Response: **Comment noted.**

The Association of State Wetland Managers (Doc. #14131)

4.428 Jurisdiction over appropriate categories of "other waters" has been supported legally by the *Rapanos* decision and scientifically by the EPA Science Report. This approach relies on a one time analysis of the nexus between the "other water" category and navigable waters, and greatly improves the predictability and efficiency of the permit process. We will not reiterate all of the reasons discussed in the Science Report and the SAB report and underlying literature for which "other waters" should be protected, but emphasize that on a broad basis, "other waters" can play a primary role in protecting water quality and managing water quantity, as well as providing critical fish and wildlife habitat.

ASWM strongly supports the definition of appropriate categories of wetlands or waters as jurisdictional by rule, where supported by existing science and consistent with the requirements of the CWA. We believe that the literature reviewed by the Science Report includes sufficient scientific documentation to designate some categories of wetlands as jurisdictional by rule, and recommend that such designations be considered as part of developing a final rule.

We also encourage development of a process to expedite documentation of additional categories of other waters as jurisdictional by rule on a regional basis. (p. 2-3)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies agree that the science and the agencies' technical knowledge and experience support that there are waters other than those identified in (a)(1) through (a)(6) that, along or in combination with other similarly situated waters in the region, significantly affect downstream traditional navigable waters, interstate waters, and territorial seas. Waters that meet the criteria in (a)(7) or (a)(8) are jurisdictional.**

Earthjustice (Doc. #14564)

4.429 EPA has also requested comment regarding inclusion, or categorical exclusion, of particular types of waters—prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas—in the definition of in waters of the U.S. Earthjustice urges inclusion of all these waters as they, sometimes alone, but definitely in the aggregate, play critical roles in the quality of all waters of the U.S. This conclusion is amply supported by the Connectivity Report and individual SAB member comments.[332] As such, their inclusion as waters of the U.S. is required under the Clean Water Act, or at a minimum is a reasonable and permissible interpretation. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decisionmaking supported by the record.

As the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrological perspective. Connectivity Report at 1-11 and 1-12. In particular, the Connectivity Report unequivocally concludes in section 5.8.3.1. that generalization of "isolation" for prairie potholes has been in many instances "measurably false". As noted by SAB member Sullivan, at 88, "the science is currently available [summarized in the proposed rule notice] to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of 'other waters'… (e.g., prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools)." At a minimum, playas should absolutely not be categorically excluded but allowed to be determined waters of the U.S. on a case-by-case basis, and prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, and western vernal pools should be categorically included. This result is a reasonable interpretation amply supported by the science. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decision making supported by the record. (p. 10)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies determined that the science supports identification of the five categories of waters in (a)(7) as similarly situated by rule in the single point of entry watershed for purposes of a case-specific significant nexus analysis. The agencies will continue a transparent review of the science, and gain 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.**

[332] With the one small exception of playas, where the experts conclude that the science is not adequately developed but that it should simply mean that they be decided on a case-by-case basis, not categorically excluded. See Sullivan at 88 and Connectivity Report.

Environmental Defense Fund (Doc. #14946)

4.430 The final rule must protect all intrastate waters that have a significant nexus to navigable waters to achieve the goals of the CWA.[333] The goal of the Clean Water Act is to "restore and maintain the chemical, physical and biological integrity of the Nation's waters."[334] This cannot be achieved if the CWA fails to protect upstream waters that have a significant nexus to downstream navigable waters. In holding that intrastate adjacent wetlands are protected by the CWA, the Supreme Court observed that "Congress recognized" that "[p]rotection of aquatic ecosystems" required "broad federal authority to control pollution for '[w]ater moves in hydrologic cycles and it is essential that the discharge of pollutants be controlled at the source.'[335]

In SWANCC, the Supreme Court reversed the "Migratory Bird Rule" as a test of which intrastate waters could be protected by the CWA. The Court observed that in Riverside, it had upheld the agencies' authority to protect intrastate, adjacent wetlands because "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 because "the significant nexus between the wetlands and 'navigable waters'" influenced the Court's interpretation of the Clean Water Act.[336] In Rapanos, Justice Kennedy noted 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."[337] A four-justice plurality agreed that the CWA extends beyond traditional concepts of navigable waters, but relied upon whether these waters were "relatively permanent, standing or continuously flowing bodies of water" connected to navigable waters and wetlands with "a continuous surface connection" to navigable waters.[338] However, they clarified that "relatively permanent" waters could include, for example, "seasonal rivers."[339] In the wake of these decisions, the U.S. Courts of Appeals have either relied solely upon Justice Kennedy's significant nexus test or upon this test plus the four justice plurality test. None have relied only on the plurality test.

The agencies employed a sound reading of the case law in restoring CWA protection to those intrastate waters that have a significant nexus to navigable waters. The agencies reasonably define "significant nexus" as a water, including wetlands, that alone or in combination with other similarly situated waters in the watershed that drains to the nearest navigable water, significantly affects the chemical, physical or biological integrity

[333] The proposed rule does not, and should not, change the long-standing protection of navigable waters which include traditionally navigable waters (33 CFR 328.3(a)(1)), interstate waters (33 CFR 328.3(a)(2)), and the territorial seas (33 CFR 328.3(a)(3)). Accordingly, EDF does not address the regulation of these (a)(1)-(3) waters in our comments, but we fully support their continued protection.
[334] 33 U.S.C. 1251(a).
[335] United States v. Riverside Bayview Homes, 474 U.S. 121, 133 (1985) (citing S.Rep No. 92-414, p.77 (1972), U.S. Code Cong. & Admin. News 1972, pp. 3668, 3742.
[336] 531 U.S. at 167 (emphasis added).
[337] 547 U.S. at 759 (emphasis added).
[338] Id. at 742.
[339] Id. at 732 n.5

of the navigable water. For an effect to be significant, it must be "more than speculative or insubstantial."[340] This exactly comports with J. Kennedy's language in Rapanos.[341]

The agencies rely upon strong evidence of connectivity impacting the chemical, physical and/or biological integrity of navigable waters. See e.g., 79 Fed. Reg. 22195-22198, 22201-22217, 22222-22252 (Appendix A). This clearly extends beyond just a finding of mere physical connection. The agencies have grounded protection of adjacent intrastate waters and tributaries, including seasonal, headwater streams and wetlands, on extensive, peer reviewed, scientific documentation of chemical, physical and biological connections between these waters and navigable waters. Id.

The proposed rule also provides greater clarity as to the meaning of adjacency and tributaries by providing definitions of neighboring, floodplain and tributary. It is quite clear that waters, not land within floodplains, are protected. The agencies have reasonably declined to adopt an arbitrary definition of floodplain (such as a 100-year floodplain). Conditions vary too much throughout this country to adopt the same flood interval for the entire nation. It is much more accurate and faithful to the best scientific understanding of connectivity to leave the determination of which flood interval to use to best professional judgment. We support the agencies' broad definition of tributaries based on the science, including that tributaries contribute flow directly, or indirectly through another water, to a navigable water or impoundment of navigable water and that tributaries can be natural, man-made, or artificial and can include ditches, canals, ponds, wetlands and impoundments. Finally, like the proposed rule, the final rule should protect as many of these waters with a significant nexus to navigable waters through bright line per se categories as is consistent with the science and the law, including, as we discuss below, at the ecoregional or other hydrologic landscape level. (p. 3-5)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. The agencies determined that the science supports identification of the five categories of waters in (a)(7) as similarly situated by rule in the single point of entry watershed for purposes of a case-specific significant nexus analysis. Waters that are not identified in (a)(7) are jurisdictional if they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The final rule recognizes that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.**

[340] Id. at 780.

[341] Id. at 779 ("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"); 780 ("if the wetlands, either alone or in combination with other similarly situated [wetlands] in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'")

Tip of the Mitt Watershed Council (Doc. #12855)

4.431 We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. The rule should categorically define as "waters of the U.S." at least some prairie potholes and other depressional, non-floodplain waters where the scientific evidence demonstrates connectivity to downstream traditionally navigable waters or interstate waters. (p. 3)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule. In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

Galveston Bay Foundation (Doc. #13835)

4.432 We believe that the categorical approach to the determination of "other waters" is the best approach. The increased transparency of the jurisdictional determination by the agencies is best achieved by using a scientific method to determine categories of "other waters." Determining certain types of "other waters" that, in the aggregate, have a great impact on downstream waters would clarify what would and would not be subject to CWA jurisdiction. For example, coastal prairie pothole wetlands make up a significant portion of Galveston Bay's watershed. We encourage you to include coastal prairie pothole wetlands as a category of "other waters" that is covered under CWA protection because of their connectivity to our watershed. We expect that the administrative record for this rulemaking will include such scientific evidence, and we urge the agencies to modify the rule to restore protections for these important waters consistent with the science. (p. 3)

Agency Response: Waters that meet the criteria in (a)(7) or (a)(8) may be determined to be jurisdictional following a case-specific significant nexus determination, but are not jurisdictional by rule. In the final rule, the agencies have identified by rule that Texas coastal prairie wetlands are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream

effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

Kansas Natural Resource Council (Doc. #14599)

4.433 It is unfortunate that decisions made by the Supreme Court in the early 2000s preclude greater protections for so-called isolated wetlands given their valuable contribution to habitat diversity. Many of our playa wetlands likely fit the category of isolated and will therefore remain unprotected (Haukos and Smith 2003) under the proposed rule. Yet there remains the possibility that they are in fact connected to jurisdictional waters. Playa lakes may play a role in groundwater recharge, specifically the recharge of the Ogallala aquifer. While that possibility alone warrants research and potential protections, any recharge to the Ogallala might impact the base flow of our western, jurisdictional tributaries and rivers. The research on playa recharge, however, is slim and far from conclusive (but see Rosen 1994, Rainwater et al. 2009 and Blainey et al. 2011) and would therefore require concerted attention before any jurisdictional protections could be meted out under current guidelines. In the mean time our playa wetlands remain unprotected unless they can be aggregated as "other waters" with a significant nexus to jurisdictional waters. This, again, is unfortunate given the specific and significant role Kansas playas play as habitat for migrating birds (Flowers 1996). (p. 1)

Agency Response: Playa lakes have not been identified as jurisdictional by rule or in paragraph (a)(7) as one of the five subcategories of waters to be analyzed as similarly situated by rule. As the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.

Mystic River Watershed Association (Doc. #14633)

4.434 We also urge your agencies to strengthen the categorical protections to be extended to our nation's wetlands. Many non-adjacent waters, referred to in the proposed rule as "other waters" provide critical benefits to the waterways we love, filtering out pollution and preventing flooding. Prairie potholes, Carolina and Delmarva Bays, and vernal pools are among the waters with great benefit to ecosystems and needing protection under the law. We urge you to follow the best science available on the connectivity of our waterways and protect at least those waters that have significant downstream effects. (p. 2)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. "Similarly situated" waters identified in (a)(7) will not be categorically determined to be jurisdictional by rule. Waters that do not meet the criteria of (a)(1) through (a)(6)

are jurisdictional if they satisfy (a)(7) or (a)(8) and are not excluded by rule. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

Idaho Conservation League (Doc. #15053)

4.435 EPA has also requested comment regarding inclusion, or categorical exclusion, of particular types of waters – prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas – in the definition of in waters of the U.S. ICL urges inclusion of all these waters as they, sometimes alone, but definitely in the aggregate, play critical roles in the quality of all waters of the U.S. This conclusion is amply supported by the Connectivity Report and individual SAB member comments.3 As such, their inclusion as waters of the U.S. is required under the Clean Water Act, or at a minimum is a reasonable and permissible interpretation. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decision-making supported by the record. As the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrological perspective. Connectivity Report at 1-11 and 1-12. In particular, the Connectivity Report unequivocally concludes in section 5.8.3.1. that generalization of "isolation" for prairie potholes has been in many instances "measurably false". As noted by SAB member Sullivan, at 88, "the science is currently available [summarized in the proposed rule notice] to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of 'other waters'… (e.g., prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools)." At a minimum, playas should absolutely not be categorically excluded but allowed to be determined waters of the U.S. on a case-by-case basis, and prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, and western vernal pools should be categorically included. This result is a reasonable interpretation amply supported by the science. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decision-making supported by the record. (p. 10)

Agency Response: **See response 4.352 (Doc. #14633), 4.353 (Doc. #15053)**

Environmental Justice Coalition for Water (Doc. #15105)

4.436 We also urge your agencies to strengthen the categorical protections to be extended to our nation's wetlands. Many non-adjacent waters, referred to in the proposed rule as "other waters" provide critical benefits the waterways we love, filtering out pollution and preventing flooding. We urge you to follow the best science available on the connectivity of our waterways and use it to shape jurisdictional decisions. (p. 2)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. "Similarly situated" waters identified in (a)(7) will not be categorically determined to be jurisdictional by rule. Waters that do not meet the criteria of (a)(1) through (a)(6) are jurisdictional if they satisfy (a)(7) or (a)(8) and are not excluded by rule. This**

approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

Tulane Environmental Law Clinic; and Tennessee Clean Water Network; et al (Doc. #15123)

4.437 We believe the proposed Rule should be strengthened to make clear that some categories of so-called isolated wetlands found in the Mississippi River Basin states – such as prairie potholes, vernal pools, and karst wetlands – are also physically, chemically and biologically connected to traditionally navigable waters and should be entitled to the Act's full protections on a categorical basis. (p. 2)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. Based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7), which include prairie potholes, and western vernal pools in California, are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. While karst wetlands and non-western vernal pools have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, they are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not specifically excluded.

Anacostia Riverkeeper et al. (Doc. #15375)

4.438 EPA has also requested comment regarding inclusion, or categorical exclusion, of particular types of waters-prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas, in the definition of in waters of the U.S . Waterkeepers Chesapeake urges inclusion of all these waters as they, sometimes alone, but definitely in the aggregate, play critical roles in the quality of all waters of the U.S. This conclusion is amply supported by the Connectivity Report and individual SAB member comments.[342] As the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrologic al perspective. Connectivity Report at 1-11 and 1-12. In particular, the Connectivity Report unequivocally concludes in section 5.8.3.1. that generalization of "isolation" for prairie potholes has been in many instances "measurably false" . As noted by SAB member Sullivan, "the science is currently available [summarized in the proposed rule notice] to demonstrate that sufficient connectivity

[342] With t he one small exception of playas where t he experts conclude that the science is not adequately developed but that it should simply mean that they be decided on a case by case basis, not categorically excluded. See Sullivan at 88 and Connectivity report.

exists without a case-specific analysis for certain subcategories of "other waters" .. . (e.g. prairie potholes , Carolina and Delmarva bays, pocosins, Tex as coastal prairie wetlands, western vernal pools).") At a minimum, playas, should absolutely not be categorically excluded but allowed to be determined waters of the U.S. on a case by case basis and prairie potholes, Carolina and Dehnarva bays, pocosins, Texas coastal prairie wet lands, and western vernal pools should be categorically included. This result is amply supported by the science. (p. 9)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Clean Wisconsin (Doc. #15453)

4.439 In addition to supporting protection of tributaries and wetlands, we also support the categorical inclusion of "other waters" as identified in Subsection (s)(7) of the proposed rule, such as prairie potholes, vernal pools, fens, bogs and other types of water bodies with scientifically demonstrated connectivity to traditionally jurisdictional waters. Beyond the current rulemaking, we encourage the agencies to similarly allow for the application of future scientific information to the categorization of jurisdictional waters as new data arises. (p. 2)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Hank Graddy, Water Chair, Sierra Club Cumberland Chapter (Doc. #15466)

4.440 Much of the geology of the Commonwealth of Kentucky is karst, meaning that connectivity with downstream major rivers is already documented and that the "significant nexus" as defined in the proposed rule corresponds to current actual practices by the U.S. Army Corps of Engineers and the Kentucky Division of Water.

We have attached to this letter selected pages from the October 2014 report from Woolford et aI., to the NRDC, titled, Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States (UGA Study). The complete report with supporting reviews was filed in the EPA record on WOTUS last month by NRDC and others. We have included the section discussing karstic regions that reviewed scientific literature concerning Mammoth Cave National Park, concluding that "it is more than likely that each isolated wetland exerts at least some kind of significant effect on the physical, chemical, or biological integrity of "waters more readily understood as 'navigable ."'

Kentucky's large karstic region is one of the areas in the United States where EPA and the Corps should consider making the proposed WOTUS rule more effective than currently proposed. The above-referenced UGA study reviewed scientific literature concerning a number of categories of so-called "isolated wetlands" and consistently found significant effects on the physical, chemical, or biological integrity of other waters. Yet the proposed WOTUS rule will continue to require an individual "case-by-case" analysis to extend CWA protection to these waters - in spite of the scientific consensus about these effects on other waters.

In general, the Corps in Kentucky and the Kentucky Division of Water already recognize the significance of our karst regions - there are no "isolated waters" in a karst region. This is an area that needs a categorical inclusion within the definition of "Waters of the United States" just as with "adjacent" waters. (p. 3)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that karstic sinkhole wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual karstic sinkhole wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Friends of the Rappahannock (Doc. #15864)

4.441 The Chesapeake Bay and Rappahannock River watersheds are home to several types of important and sensitive waters that are not currently covered by the rule as *per se* jurisdictional. Coastal plain depressional wetlands[343] are critical to protecting water

[343] Coastal plain depressional wetlands, such as Delmarva bays, are found in the Chesapeake Bay watershed. See http://www.dnr.state.md.us/naturalresource/spring2001/delmarvabays.html

quality in Virginia and other Bay states and should be categorically protected by the Clean Water Act. As noted by University of Georgia scientists in their report *Supplemental Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters*, coastal plain depressional wetlands significantly impact water quality of traditionally navigable waters including the Rappahannock River. Specifically, "The chemical and physical impacts of isolated wetlands on downstream waters occur in part because their isolation allows for the retention of nutrients, sediment, and water, and the exclusion of these from river networks." These isolated wetlands will also play a larger role in flood mitigation as coastal areas become more susceptible to sea level rise and more frequent storm surges.

In the Rappahannock River watershed, where we struggle with excess nutrients and sediments, protection of these wetlands that capture nutrients and sediment is critical to meeting local and regional water quality goals and the Chesapeake Bay TMDL — all under the Clean Water Act. (p. 4)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Wyoming Outdoor Council (Doc. #16528.1)

4.442 Prairie potholes, southwestern intermittent and ephemeral streams, and western vernal pools and playas are waters that we believe should be defined as "other waters" by rule. The discussion in Appendix A of the proposed rule makes it clear these waters uniformly have highly significant impacts on the chemical, physical, and biological integrity of downstream (a)(I)-(3) waters. These are waters that are uniformly similarly situated in the same region and they clearly have a significant nexus with downstream (a)(l)-(3) waters. The agencies recognize that they "could conclude by rule" that prairie potholes and vernal pools have a significant nexus and are jurisdictional. 79 Fed. Reg. at 22250 and 22251.

These waters can clearly be connected to downstream waters in a number of ways. 79 Fed. Reg. at 22246-52. And even when there are not connections, these waters can influence downstream waters through water storage and mitigation of peak flows, as well as by affecting pollution discharges, or lack of discharge, downstream. Geographically isolated wetlands can still have connections to downstream waters. Id. at 22246, 22248, 22249. Vernal pools exist in "vernal pool landscapes." Id. at 22226. Lack of pollution transport can create a significant nexus and a significant nexus can exist without

hydrologic connectivity. Id. at 22261. The "ability of potholes to modulate streamflow may be widespread across portions of the prairie pothole region." Id. at 22225. The presence of these attributes in prairie potholes, western intermittent and ephemeral streams, and vernal pools and playas makes it clear they should be defined as jurisdictional by rule.

Another aspect or issue that indicates these "other waters" should be defined as jurisdictional by rule relates to unidirectional wetlands. Unidirectional wetlands can have effects downstream due to isolation, not connection. 79 Fed. Reg. at 22225. They can have a collective geographic and hydrological connectivity. Geographic isolation "should not be confused with functional isolation" because there can still be hydrological and biological connections downstream when it comes to unidirectional wetlands. Id.

These waters could be recognized as jurisdictional due to their presence in clearly defined ecoregions where the waters are similarly situated, especially when viewed in the aggregate, and therefore have a significant nexus and should be jurisdictional by rule. 79 Fed. Reg. at 22215. To potentially implement this ecoregion approach, the agencies identify a number of Level III ecoregions where waters are similarly situated and aggregation would be appropriate. Id. However, none of the identified ecosystems appear to be located in the Rocky Mountains. This is an oversight that should be corrected. We believe that if Level III ecoregions were identified in the Rockies, prairie potholes, western intermittent and ephemeral streams, and vernal pools and playas would be seen as similarly situated in the aggregate.

In many areas of the West, prairie potholes, southwestem intermittent and ephemeral streams, and vernal pools and playas define the waters that are present over vast areas, but are not open streams, rivers, lakes and the like. These "other waters" may well be the only waters that are present over extensive areas. Therefore, the agencies should recognize the ubiquitous and important role of these other waters in western "waters of the United States," and define them as jurisdictional by rule. (p. 6-7)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Tennessee Clean Water Network et al. (Doc. #16537)

4.443 We support the proposed rule's use of physical adjacency as a clarification of the Act's scope, but believe the concept ought to include functional adjacency as well. We request

the proposed rule be strengthened to make clear some categories of so-called isolated wetlands found in Tennessee - such as vernal pools and karst wetlands - are also physically, chemically and biologically connected to traditionally navigable waters and should be entitled to the Act's full protections on a categorical basis.

Tennessee has lost 59% of its wetlands - wetlands that historically provided important flood storage, water filtration, and fish and wildlife habitat. A single wetland can store 1 to 1.5 million gallons of flood water - important flood protection in Tennessee's flood prone areas. This addition to the rule will better protect Tennessee's remaining wetlands. (p. 3)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.444 Tennessee is underlain with extremely karstic geology, which has produced an abundance of caves, sinkholes, losing streams, and other geologic features that have interaction with surface water.[344] These sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses. (p. 4)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

[344] Missouri Department of Natural Resources, Comments on "Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of 'Waters of the United States,''' Docket ID OW-2002-0050, at p-2 (Mar. 5, 2003).

Kentucky Waterways Alliance (Doc. #16581)

4.445 Large portions of Kentucky are underlain with extremely karstic geology, which has produced an abundance of caves, sinkholes, underground streams, and other geologic features that have interaction with surface water. These sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses.

While they can be classified into several different categories, sinkhole wetlands generally have significant impacts on downstream waters. They can mediate flooding and stormwater runoff and reduce peak flows by retaining water on the landscape before it reaches navigable waterways. Some types can slow water infiltration to aquifers and allow for sediment and pollutant removal. Studies have demonstrated that stream flows downstream of karstic sinkhole wetlands are characterized by peak discharges that are of a lesser volume and longer duration than those upstream.

Ducks Unlimited's review of the scientific research bears this out:

> "'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 a large Conservation Reserve Enhancement Program (CREP) in Kentucky's upper Green River watershed, protection of karst sinkholes with buffers was an approved practice – acknowledging the water quality connection between sinkholes and the Green River and its tributaries. KWA supports the need for categorical protection of these karst sinkhole wetlands, given the demonstrated hydrologic connections to surface waters. (p. 10)

Agency Response: **At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

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

4.446 Mudflats and Sandflats

These coastal wetlands are formed by mud and sand deposited by the tide. Clearly, they are subject to the ebb and flow of the tide. Therefore, their exclusion is in direct contradiction to (a)(1) that includes all waters which are subject to the ebb and flow of the tide among 'waters of the United States'. (p. 7-8)

Agency Response: Mudflats and sandflats have not been categorically excluded. At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8)categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.

4.3.4.1 Prairie Potholes

Continental Resources, Inc. (Doc. #14655)

4.447 In the Bakken play region, a single representative study area (3,224-acre rectangle area) was chosen (the "Bakken Study Area"). The area included a named river with floodplain and riverine wetlands, a mapped tributary to that river, prairie potholes, drainage ditches, ponds, and artificial impoundments. Findings in the Report for the Bakken Study Area may be extrapolated to other regions in the Bakken play. In particular, the analysis from the Bakken play would likely be appropriate to other prairie pothole areas within the play.

In the past, the Corps of Engineers has generally considered prairie potholes in North Dakota to be non-jurisdictional. However, given the emphasis on prairie potholes in the EPA's Connectivity Report,[345] which summarizes the available scientific literature and forms the scientific basis of the agencies' Proposed Rule (see, e.g., 79 Fed. Reg. 22,195, 22,222), it is likely that the Corps of Engineers will change its approach to these determinations. The number of prairie potholes ultimately determined to be jurisdictional will depend on how the agencies apply the Proposed Rule to groundwater and subsurface connectivity. Fewer prairie potholes will be defined as jurisdictional if the Corps of Engineers limits its evaluations of groundwater connectivity to an examination of surface

[345] EPA, Preliminary Draft: Connectivity of Streams, and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (September 2013) ("Connectivity Report").

soil characteristics, local geography, and climate and conducts jurisdictional determinations on a case-by-case basis. Site-specific evaluations likely will require site visits and highly technical evaluations based on soils data, climate (e.g., precipitation), geography, and other factors and may require subsurface explorations (i.e., deep soil borings) to deduce the subsurface environment (i.e., permeability). It is likely that some of the prairie potholes in the Bakken Study Area currently not having an obvious surface connection (i.e., ditches) to downstream jurisdictional waters would become jurisdictional under such a case by- case approach, but the increase in area of jurisdictional potholes because of subsurface connectivity is impossible to quantify at present.

On the other extreme, many prairie potholes could be redefined as jurisdictional if waters are aggregated. There is reason to suspect the agencies will advocate an aggregation approach. The preamble to the Proposed Rule, as well as the Connectivity Report, the Science Advisory Board's (SAB's) draft comments on the Connectivity Report, and the SAB draft "Consideration of the Adequacy of the Scientific and Technical Basis ... " of the Proposed Rule all state or imply that the science supports the inclusion of a significant percentage of prairie potholes in the category of jurisdictional waters because of various forms and degrees of surface and subsurface connectivity with downstream jurisdictional waters. E.g., 79 Fed. Reg. at 22,216,22,223 (noting beneficial functions), 22,225 (same), 22,249, 22,250. These reports also suggest a need for a landscape perspective of connectivity in which the effects of small water bodies in a watershed are evaluated in the aggregate. Thus, many prairie potholes previously considered non jurisdictional, isolated wetlands would be considered connected and jurisdictional when considered in combination with other similarly situated wetlands in the area. To the extent that a single landscape unit approach is taken, the agencies may abandon the case-by-case approach and sweep in all prairie potholes within a geographic region, defining them all as similarly situated and jurisdictional.

The Report, however, took a more conservative approach than the aggregation approach likely to be implemented by the agencies: it assumed prairie potholes will continue to be determined to be non-jurisdictional unless a more direct physical connection to downstream waters can be confirmed on a case-by-case basis. Two indicators of physical connectivity between prairie potholes and downstream waters were used to provide an estimate as to which _ prairie potholes are likely to be determined to be jurisdictional under the proposed rule: surface connection and subsurface connection. Ascertaining the prairie potholes with a surface connection was relatively straightforward; however, determining whether there was a shallow subsurface hydrologic connection between certain wetlands and a jurisdictional water of the United States was more difficult.

In the Report, the presence of a subsurface connection to nearby jurisdictional waters of the United States (i.e., a named river and its tributary) was evaluated by examining two pieces of available data: (l) soil permeability based on the ease with which pores in a saturated soil transmit water as defined by the soil's saturated hydraulic conductivity (Ksat), and (2) grain size of the underlying soils, which has a direct impact on the permeability and, therefore, the rate and speed of subsurface water flow in the glacial till soils in the Bakken Study Area. After a detailed analysis, the Report concluded that the combination of Ksat values and soil grain size was reliable for predicting where prairie

potholes might be located but not for accurate prediction of subsurface connectivity with downstream jurisdictional waters of the United States or the jurisdictional status of a given prairie pothole. While the analysis was able to identify prairie potholes, it was unable to estimate the fraction of previously "isolated" wetlands found to have subsurface connectivity under the Proposed Rule. This fraction, however, likely would be significant.

More specifically, the analysis of the Bakken Study Area for waters currently considered jurisdictional as compared to the increased potential jurisdictional waters under the Proposed Rule indicates the following:

- The river, its tributary, its floodplain, the riverine wetlands in the floodplain, and the artificial impoundment on the tributary are jurisdictional waters of the United States under current regulations and under the Proposed Rule, so there would be no expansion of jurisdiction.
- While none of the prairie potholes in the Bakken Study Area is likely to be considered a jurisdictional water of the United States under the current regulations:
    - Approximately 33 acres of 198 acres (approximately ***17 percent***) of prairie potholes in the Bakken Study Area would likely be considered waters of the United States under the Proposed Rule based upon their connection to downstream waters of the United States by ditches.
    - The additional 165 acres of the 198 acres (approximately ***83 percent***) of prairie potholes could potentially be considered jurisdictional under the Proposed Rule because of their physical connection to downstream waters of the United States either by other surface connectivity or by subsurface flows. If jurisdictional determinations are conducted on a case-by case basis and each prairie pothole is analyzed separately, it is not expected that all of these prairie potholes would be determined to be jurisdictional; however, a significant portion of them might be.
    - By contrast, the entire 198 acres (***100 percent***) of prairie potholes would likely be considered jurisdictional under the Proposed Rule if the agencies aggregate them into a single landscape unit.
- While the current regulations, for the most part, do not require permits at the federal level for impacts on prairie potholes and connecting ditches, there would be potential for "considerable additional time and costs required to complete individual JDs for prairie potholes because:
    - Desktop information (soil permeability and grain size) is not a good predictor for determining subsurface flow and, thus, more effort would be required to determine connectivity to downstream waters of the United States on a case-by-case basis. The Corps of Engineers may require site-specific evaluations of connection to downstream waters of the United States, including the use of soils data, climate (e.g., precipitation), geography, and other factors, and may require subsurface explorations

(i.e., deep soil borings) to deduce the subsurface environment (i.e., permeability).

- While the Proposed Rule focuses on physical connections (e.g., ditches or subsurface flow) of prairie potholes with downstream waters of the United States, indirect connections (e.g., prairie potholes acting as water sinks influencing downstream flows without a physical connection to downstream waters of the United States) and aggregation of similar features could make all prairie potholes jurisdictional under such the Proposed Rule.
- Although ditches that drain prairie potholes generally are not considered jurisdictional waters under the current regulations, approximately 68,846 feet of the 80,561 feet of currently non-jurisdictional ditches in the Bakken Study Area (approximately ***85 percent***) could become jurisdictional under the Proposed Rule.
- The above factors affecting JDs could require desktop and field studies to determine connection to downstream waters of the United States.
- These studies, in addition to the added layer of review of the applicant JDs by the Corps of Engineers, will result in increased costs to a project and additional time of at least several weeks to the current typical permitting process and a project's schedule. Perhaps of even greater concern would be the inability to plan comprehensively with a level of certainty for the layout for pads, infrastructure, and access roads and pipeline corridors to mitigate potential delays in obtaining JDs.

The potential for expanded federal jurisdiction and associated case-by-case JDs could have the following impacts in the Bakken Study Area:

- For well pads under existing regulations, most prairie potholes are non-jurisdictional, no Corps of Engineers permitting is required, and siting considerations are related to resource and engineering design needs. Under the Proposed Rule, many prairie potholes would become jurisdictional, and it is unclear how current well pads would be treated. The siting of new pads near prairie potholes likely would have to include JDs and consideration of Corps of Engineers permitting requirements in addition to resource and engineering design factors. To avoid such delays would require the siting of pads at locations that do not directly impinge on a pothole (or connecting ditch) and avoiding locations that could affect subsurface flow, where subsurface flow might be basis for a prairie pothole to be considered jurisdictional. Depending on the subsurface flow regime, locating a well pad anywhere down-gradient of prairie potholes could be problematic from a permitting perspective. Up-gradient siting also could be an issue, depending on the water source for the prairie pothole (surface runoff or subsurface flows). Obtaining permits would still be possible, but the process would add time to the project schedule and cost to the project budget.
- Under the Proposed Rule, selecting corridors for pipelines in the Bakken Study Area likely would become more involved due to the need to mitigate potential

conflicts and delays. Corridors likely could be sited along a line through the center of the prairie pothole area without crossing a potentially jurisdictional water. However, avoiding the pothole area might require considerable rerouting to avoid these potential costs and delays for JDs.

- Development of SPCC plans and stormwater controls in the Bakken Study Area likely would become more involved because of the potential for an increased number of receiving waters (as represented in the Bakken Study Area, a potential increase from the current 0percent to up to 100 percent jurisdictional prairie potholes and associated ponds and an 85 percent increase in jurisdictional connecting ditches). Extrapolated to pipelines and other facilities affecting similar proportions of these features, the time to develop such measures also could be increased due to the need to wait for JDs, particularly for those prairie potholes (and connecting ditches depending on the prairie pothole JDs) requiring additional field work and evaluation to determine subsurface connectivity (up to 83 percent of the potholes and up to 85 percent of the ditches). There may also be a new requirement to prepare resource-intensive FRPs for some facilities. (p. 21-24)

Agency Response: **The final rule does not identify prairie potholes as jurisdictional per se. The agencies disagree that there will be "considerable additional time and costs required to complete individual JDs for prairie potholes". The agencies believe that the rule will result in a reduction of case-specific determinations for waters such as prairie potholes. Therefore, the agencies do not foresee an increase in delays due to workload on jurisdictional determinations. In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. See Preamble and Technical Support Document for a discussion of the scientific basis for identification of prairie potholes as similarly situated by rule in the single point of entry watershed. The identification of prairie potholes as similarly situated by rule in the single point of entry watershed in (a)(7) strikes a balance between requests for bright lines and limited case-specific reviews with scientific support. The agencies believe that the final rule will simplify the process of making jurisdictional determinations for these waters.**

Alameda County Cattlewomen (Doc. #8674)

4.448 Under the proposed rule, the prairie pothole region will all be jurisdiction. Not a single activity will go on in the region without the federal government's approval, because any activity will likely impact a prairie pothole. Please address, specifically, the prairie pothole region of the United States, and show, with maps, what will and will not be jurisdictional under this proposed rule. (p. 14)

Agency Response: **The final rule does not identify prairie potholes as jurisdictional per se. In the final rule, the agencies have identified that prairie potholes are one of five specific types of waters in specific regions that science**

demonstrates should be subject to a case-specific significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. See Preamble and Technical Support Document for a discussion of the scientific basis for identification of prairie potholes as similarly situated by rule in the single point of entry watershed. The identification of prairie potholes as similarly situated by rule in the single point of entry watershed in (a)(7) strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

The agencies will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Therefore, the agencies currently do not have maps that show "what will and will not be jurisdictional". As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

Jensen Livestock and Land LLC (Doc. #15540)

4.449 Under the proposed rule, the prairie pothole region will all be jurisdiction. Not a single activity will go on in the region without the federal government's approval, because any activity will likely impact a prairie pothole. Please address, specifically, the prairie pothole region of the United States, and show, with maps, what will and will not be jurisdictional under this proposed rule. (p. 14)

Agency Response: See response 3.66

Duck Unlimited (Doc. #11014)

4.450 We will attempt to highlight and augment some of the existing science that supports a finding that the "other waters," in the aggregate and across broad ecoregions, or significant portions thereof, possess a significant nexus with downstream jurisdictional waters. The draft Connectivity Report contains a tremendous amount of information that bears upon this key issue, and we recognize we will repeat some of that as we attempt to add to and synthesize the science for a few regions. We are also aware that the final set of recommendations from the SAB's special panel on connectivity will contain additional references to relevant literature, and that many of those citations will likely be incorporated into the final Connectivity Report.

That being the case, we will focus on conveying the primary points relevant to the existence of a significant nexus, as supported by key citations, in order to frame the case in support of these wetlands being designated as jurisdictional by rule. We understand that agency scientists with access to the referenced reports and all the science contributed through the public comment period will ultimately be responsible for synthesizing the wealth of information from these diverse sources as the rule is finalized.

The area on which we will focus much of our attention is the Prairie Pothole Region. This landscape is the United States' most important waterfowl breeding and production area, and it contains more wetlands, at a higher density, than any other comparable area in the U.S. Thus, prairie pothole wetlands provide one of the best opportunities to show

that a large subcategory of wetlands falling primarily within the "other waters" category do indeed have a demonstrable significant nexus with downstream navigable waters. While we put special focus on the Prairie Pothole Region, we have also compiled some similar information for Texas Gulf coastal prairie wetlands and Nebraska's sandhill wetlands, in particular, and included scientific citations from other key wetlands such as playas and rainwater basins. The wetland types and regions we have focused on were selected for special emphasis for several reasons: (1) they are all key wetlands and landscapes for waterfowl conservation; (2) wetland loss has been significant in each region and the remaining wetlands are highly threatened in the absence of CWA protections; (3) there is literature that clearly demonstrates the abundance and strength of the significant nexuses that exist among these waters and with downstream navigable waters; (4) these wetland types largely fall into the "other waters" category; and, (5) despite individual wetlands often not being situated in proximity to (a)(1) through (a)(3) waters, there is a compelling scientific basis for the vast majority of these waters to be considered jurisdictional on the basis of a comprehensive, science based significant nexus evaluation.

In our synthesis of much of the related science for the Prairie Pothole Region and other areas, we will also offer citations referencing science that, while it may not have been conducted within the region, nevertheless informs the fundamental question of significant nexus in a geographically broad way such that the findings of the research are to at least some degree applicable to the Prairie Pothole Region.

As the agencies conduct these evaluations, they should keep in mind the overall context within which important decisions about significant nexus and jurisdiction will be made. The CWA has been an important component of the national framework of wetland conservation for more than 30 years. It has been the basis of one of the most successful environmental efforts in the Nation's history, and has helped measurably improve the chemical, physical, and biological aspects of the Nation's waters since its enactment. However, approximately 53% of the estimated 221 million acres of wetlands originally present in the United States have been lost (Dahl 2000). The CWA undoubtedly contributed to the decrease in the rate of wetland loss since 1972, when the Act was passed, through 2004 (Dahl 2006). However, not counting the increases of ponds that often have little wildlife value (e.g., golf course ponds, storm water retention lagoons, farm ponds, etc.), the Nation has nevertheless experienced a net loss of over 16 million acres of wetlands since the mid-1950s. Since 1986, the Nation has lost over 2 million acres of vegetated wetlands and 1.4 million acres of freshwater marshes that are among the most important wetlands for waterfowl and other wildlife (data from Dahl 2000; Dahl 2006; Dahl 2011). These kinds and magnitudes of losses have had a cumulative negative impact not only on critical waterfowl habitats, but also on the Nation's water quality and other federal interests.

Unfortunately, the most recent national wetlands status and trends report (Dahl 2011) reported that between 2004 and 2009 the rate of wetland loss had increased by 140% over the previous report period. This is the first acceleration of wetland loss over a 50-year period, and given that this is the first survey period occurring entirely post-SWANCC, the acceleration of wetland loss is likely at least partially attributable to the jurisdictional

confusion and withdrawal of CWA protections by the agencies in the wake of the SWANCC and Rapanos cases.

Therefore, it is reasonable to anticipate that the trajectory of the future status and trends of the Nation's wetlands will be significantly influenced by the content of the final rule on the "definition of the 'waters of the U.S.'" We believe that the science, viewed comprehensively, clearly supports the contention that the loss of over 50% of the Nation's wetlands has had a lasting, negative effect on the physical, chemical and biological integrity of navigable waters partly as a direct result of the lack of recognition and appropriately science-based regulatory framework to protect those waters that have a significant nexus with downstream navigable waters. Thus, the level of protection afforded wetlands by the final rule will be a significant determinant of the future trajectory of the status of wetlands in this country, and therefore of the future direction of the condition of the Nation's waters. (p. 35-37)

Agency Response: **See response 3.66.** **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.451 Prairie Potholes: General Information and Status

The Prairie Pothole Region (PPR; Fig. 1) of the northern Great Plains encompasses over 300,000 square miles, and is situated within four Level III ecoregions (#42, 46, 47, and 48). This is the most important breeding area for ducks (e.g., mallards, blue-winged teal, northern pintails, canvasbacks) in North America (Ducks Unlimited 2001). An estimated 50% of the total average annual production of continental duck populations originate from this region (Dahl 1990), including up to 70% in wet years (Ducks Unlimited 2001). One analysis (U.S. Fish and Wildlife Service 2001) suggested that duck production in the PPR of the U.S. northern prairies would decline by over 70% if all wetlands less than one acre were lost, and another analysis (Johnson 2010) estimated that pre-CWA wetland loss in a five-county portion of the PPR in west-central Minnesota resulted in a reduction in waterfowl productivity in excess of 80%. Because of the PPR's importance to continental waterfowl populations, and as a response to the challenges of wetland loss in the region, Ducks Unlimited and its partners have expended billions of dollars to protect and conserve the wetlands and other habitats that remain in the region.

However, despite those investments, which include significant federal resources, there continues to be a net loss of wetlands in this region (Dahl 2006; Dahl 2014). Oslund et al. (2010) documented that the Prairie Coteau portion of Minnesota's PPR lost 15% of its wetlands between 1980 and 2007, and the Minnesota River Prairie ecological region lost 7.9%. The most recent evaluation of wetland status and trends in the PPR (Dahl 2014) documented a net loss of over 74,000 acres of wetlands, and a loss of over 95,000 acres of emergent wetlands. Interestingly, some of the greatest rates of loss were noted in the places (e.g., Minnesota) that had already experienced some of the greatest overall wetland loss (quantity) over time. Historic drainage has been most intense in Iowa, where about 95-99% of the original wetlands (Dahl 1990; Miller et al. 2009) have been lost. Miller et al. (2009) indicated that about 30,500 ac remain out of what was originally about 3.5 million ac, or almost 50% of that region in Iowa.

Prairie pothole wetlands are stereotypical examples of wetlands that would generally be characterized as being "geographically isolated" and classed as "other waters" in the proposed rule. The region is characterized by high wetland densities, and typically contains between 15 and up to 150 wetlands per square mile (National Wetlands Working Group 1988; Baldasarre and Bolen 2006; Fig. 2 - 6). With typically high wetland densities over such a large area, it is estimated there were originally approximately 20 million acres of prairie pothole wetlands, largely in the Dakotas, Minnesota and Iowa, and one study estimated wetlands covered approximately 25,000 square miles of the region (van der Valk and Pederson 2003). As of 2009, Dahl (2014) estimated 6.4 million acres of wetlands remained in the U.S. PPR, involving 2.6 million wetland/water basins.

In general, the PPR possesses a limited internal drainage system so inflow and outflow to prairie potholes via streams is uncommon (Winter and Woo 1990; Carroll et al. 2005; Fang et al. 2014). One analysis (Petrie et al. 2001) documented that most (>95%) prairie potholes would likely not be considered adjacent to, or even located within 0.6 mi (~50%) of navigable or jurisdictional waters. However, as is readily apparent from Figures 2 – 6 or a casual look at satellite imagery throughout the region, and as documented most recently by Dahl (2014), wetlands in the PPR tend to be remarkably similar in general size and structure, and consequently function. Of the total 6.4 million acres of wetlands in the U.S. PPR, 88% are emergent wetlands (i.e., marshes), making up 93% of all wetland basins in the region (Dahl 2014). Open water ponds made up only 4% of the remaining acreage, while 8% had woody vegetation (forested and scrub-shrub wetland; Dahl 2014). Most of the latter are located along stream and river courses, and near large lakes. Because they are so similar in structure and function, the emergent marsh habitat that comprise the potholes are sometimes further classified by the amount of time that they typically contain water, although that classification is subject to change to some extent depending upon the dynamics of short and long-term precipitation and climatic regimes (Stewart and Kantrud 1971). Dahl (2014) documented that in 2009 almost 50% of the emergent wetland basins were temporarily flooded (temporary ponds, low prairie wetland), about 42% were seasonally flooded (seasonal ponds, shallow marsh), 6% were semi-permanently flooded (semipermanent ponds, dugouts, deep marsh), and about 2% were farmed wetlands. The agencies are encouraged to consult Dahl (2014) and others for more detailed information about prairie pothole wetland status and ecology.

In large part, the marked similarity among prairie potholes is due to the fact that they were all formed when large chunks of ice were dropped by the receding glaciers along with other materials that had been carried southward by the glaciers. The pothole basins are the depressions that remained after the chunks of ice melted amongst the other material left behind, thereby creating the knob and kettle and moraine landforms that dominate there.

We will provide a sense of the documentation and scientific literature that supports the determination that wetlands in the PPR, in the aggregate, generally possess a significant nexus with navigable waters as outlined by Justice Kennedy. The case is most convincingly, and efficiently, made at the ecoregional scale. There are several compilations of peer-reviewed literature and related information (e.g., Tiner et al. 2002;

several papers in the September 2003 special issue of the journal Wetlands) that provide an abundance of detail regarding the points we reference in these comments. (p. 37-39)

Agency Response: **See response 3.66.** **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.452 Prairie Potholes: Surface Water Storage and Flood Attenuation

Prairie pothole wetlands and their function of water retention might very well have been what Justice Kennedy had in mind when he wrote that, *"given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system," and that "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, [emphasis ours] significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"* The abundance and density of potholes on the PPR landscape in conjunction with their general lack of direct surface water connection to streams and rivers is most important in creating the basis for an especially significant nexus between these wetlands and large navigable waters like the Red, Missouri, and Mississippi rivers.

The proposed rule states: "*Tributaries serve to store water, thereby reducing flooding, provide biogeochemical functions that help maintain water quality, trap and transport sediments, transport, store and modify pollutants, provide habitat for plants and animals, and sustain the biological productivity of downstream rivers, lakes and estuaries*." We submit that, based on the body of the available science, the same can be said for prairie pothole wetlands and some other wetland subcategories. Just as water during storm events moves through the multitude of small tributaries and eventually affects the integrity of downstream "waters of the U.S.," the same thing occurs with prairie potholes although in the case of the potholes, it is more common for them to serve the function of storing water that would otherwise flow to downstream waters and thereby affect the downstream navigable waters by decreasing flood flow. However, in many cases, a "fill and spill" type of connectivity is exhibited when the wetland fills to capacity and then spills over into other wetlands and/or to downstream waters (Kahara et al. 2009; Shaw et al. 2012; Shaw et al. 2013; Winter and LaBaugh 2003). During wet periods, there might actually be a smaller number of wetlands on the landscape as a result of nearby wetlands becoming "aggregated" (Kahara et al. 2009) as a result of the magnitude of stored water in areas of high pothole density.

Their nature and position on the landscape is the primary reason that potholes serve so well the function of capturing runoff and storing it in intact "non-contributing" basins, i.e., wetlands and lakes (Winter et al. 1984). In general, the presence of many isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows, e.g., runoff of spring thaws, and releasing water (such as through groundwater and evaporation) over an extended period (Carter 1996; Carroll et al. 2005). The net effect of this important wetland function is to abate flooding by lowering and

moderating the peaks of flood stages, thereby reducing flood damages (Mitsch and Gosselink 1986). Prairie potholes store surface water and attenuate flood flows (Hubbard and Linder 1986; Gleason and Tangen 2008; Minke et al. 2009), and potholes in North Dakota have been estimated to hold roughly half the surface water within the state (Ripley 1990). Winter (1989) stated that for selected watersheds in Minnesota, mean annual flood increases were inversely related to the percentage of lakes and wetlands within the watersheds. Stated another way, the flood increases in the watersheds Winter (1989) studied are directly proportional to the amount of drainage of lakes and wetlands within the watersheds. Other work (Kantrud et al. 1989; Hayashi et al. 2003; Huang et al. 2011) concluded that small pothole wetlands retained most of the runoff from spring snow melt within their respective watersheds, thereby moderating snow melt input to regional drainage systems. Miller and Nudds (1996) compared U.S. and Canadian rivers and landscape changes on each side of the international border to provide further evidence that wetland drainage in the upper reaches of the Mississippi River watershed has increased flooding in the Cannonball and Sheyenne rivers in North Dakota, and the Moreau and Big Sioux rivers in South Dakota.

Vining (2002) demonstrated the importance of storage by wetlands and impacts on stream flow of Starkweather Coulee in North Dakota, stating that his findings were likely similar to the situation found in other drainage basins. Vining (2004) also studied two watersheds in the Red River Basin of North Dakota and Minnesota with results indicating that total stream flow from a flood event was reduced due to storage in wetlands. And although the Red River basin of northwest Minnesota has only 25% of its wetlands remaining, Pomeroy et al. (2014) demonstrated that even in PPR watersheds that have been subjected to extensive drainage, downstream flows can nevertheless be "strongly impacted by further drainage." For a Minnesota watershed, Wang et al. (2010) estimated that the loss of the first 10-20% of its wetlands resulted in up to a 40% increase in the peak discharge to downstream waters.

Much recent research on potholes and water storage has been conducted just across the border in Canada. Ecologically, the PPR of southern Canada is simply an extension of and similar to the ecoregions in the U.S., with only the political border of the two countries separating the two areas. Thus, these Canadian studies are directly relevant to significant nexus evaluation on the U.S. side of the border. In the absence of federal wetland legislation and weakly enforced provincial regulation, prairie potholes in Canada are being drained at an even faster rate than those in the U.S. For example, it was recently estimated (Ducks Unlimited Canada, unpubl. data) that Saskatchewan alone had lost about 617,750 ac of pothole wetlands over the last 60 years, and was losing about 15,000 ac of wetlands annually. The volume of water estimated to have been contained within those basins was approximately 400,000 ac ft. The extent of the cumulative changes to the regional hydrology stemming from the cumulative loss of "other waters" is evident at even a cursory look at satellite images of the region (Fig. 7) when coupled with an understanding that all the water once contained within those potholes now drains quickly to streams and rivers via the artificial connections created by the drainage activities.

Hayashi et al. (1998) found that approximately 30-60% of the water in the potholes entered as runoff from spring snowmelt. Thus, when considered in the context of wetland densities and the total storage capacity of the wetlands in the region, this

represents a huge volume of water that would otherwise move through artificial ditches until ultimately reaching a navigable waterway and increasing flood flows in the river. Fang et al. (2014) and Pomeroy et al. (2014) studied water storage in wetlands and the relationship to downstream flood flows in the 150 mi2 Smith Creek watershed in Saskatchewan. Pomeroy et al. (2014) demonstrated that the annual volume of streamflow, as well as peak daily discharge, had a "remarkably strong sensitivity" to historic wetland drainage over the 1958 to 2008 period. They demonstrated that wetland drainage had a strong impact on stream flood flows associated with both snow melt and rainfall. They also estimated that continued drainage of the remaining geographically isolated pothole wetlands would increase annual flow by up to 32%. The extent of the artificial connectivity created, and related impacts to the hydrology of the region, is evident in examining a representative portion of that particular landscape (Fig. 8). Other analyses they conducted resulted in similar findings, and were ultimately demonstrably important to the quality of water in downstream Lake Winnipeg (Pomeroy et al. 2014), the third largest lake contained within the borders of Canada.

Specifically, in the Red River basin which delivers the majority of the nutrients to Lake Winnipeg, over 50% of the wetlands have been eliminated in the U.S. portion of the watershed (Schindler et al. 2012), with as much as 90% or more loss in the portion of the Red River watershed in Canada (Hanuta 2001). Over this same time frame and looking at a number of watersheds in the PPR of central Saskatchewan and in the Lake Winnipeg watershed, the runoff: precipitation ratio has increased dramatically (Ehsanzadeh et al. 2011), likely due to the synergistic interaction of increased drainage (i.e., increased hydrologic connectivity) and precipitation. Increases in flooding and water yield have been directly linked to increased phosphorus export in the Lake Winnipeg watershed (Environment Canada and Manitoba Water Stewardship, State of the Lake Report 2011) and demonstrate the ability for isolated wetlands, in the aggregate and at the level of the watershed, to affect the integrity of one of the world's largest lakes.

Wetland drainage has significantly decreased the cumulative storage capacity of wetlands (Dahl 1990; Dahl and Johnson 1991; see Fig. 9 for example), and this decrease has been linked to increases in the frequency of flooding in and around the PPR (Miller and Frink 1984; Miller and Nudds 1996; Manale 2000). In most cases, as previously stated, when a pothole is drained or filled, the water that would have otherwise been retained in the basin is diverted to a ditch or other conveyance and makes its way to a navigable waterway much more rapidly than when the wetland was intact. The significant nexus between the intact pothole and the nearest navigable water, described by Justice Kennedy as the "absence of [direct] hydrologic connection," then becomes apparent as the altered flow pattern (see Fig. 10 for example) brings more water, carrying more sediment, nutrients and other pollutants, much more rapidly, to the navigable water and downstream communities, farms, and other landowners.

For example, a recent study of the Broughton Creek watershed in the Red River Valley in the northeastern PPR (Yang et al. 2008), which also provides water to Lake Winnipeg, documented that 70% of the wetlands had been lost or degraded due to drainage between 1968 and 2005. These wetland losses were associated with a 31% increase in the contributing area draining downstream, which was associated with a 30% increase in stream flow and an 18% increase in peak flow. Further work on Broughton's Creek

(Yang et al. 2010) showed that if the wetlands in the watershed could be restored to 1968 levels, peak creek discharge could be reduced by 23.4%, similarly demonstrating the significant impact of these wetlands on flowing waters. If protected and left intact, they store water, but when unprotected and drained, the potholes contribute significantly increased flood flows to the downstream receiving waters, thereby affecting their integrity (see Fig. 11 for example). This impact is even more significant when the sediment and chemicals carried in this additional discharge are also considered (as discussed in a later section). Similarly, Johnson et al. (1997) reported that about 33% of the drained wetlands in the floodprone Vermillion River watershed (southeast South Dakota) flowed into artificial drainage ditches, and that a quantity of water equivalent to about half of the river's annual flow could be stored by restoring those wetlands. Pomeroy et al. (2014) pointed out that artificial drainage of prairie potholes has the effect of adding permanent surface connections, thereby reducing the ability of the watershed to store water, even under wet conditions, with the consequences being increased stream flood frequencies and magnitudes (Gleason et al. 2007; Yang et al. 2010). Brun et al. (1981) also found that increased stream flows in the Red River Valley were strongly correlated with the extent to which a watershed's wetlands had been drained. Jahn (1981), also in the context of the Red River system, stated that wetlands there significantly reduced flood levels in major metropolitan areas downstream.

Hey (1992) estimated that as a result of approximately two-thirds of the original potholes having been lost to drainage, the region has lost 20-30 million acre-feet (0.87-2.2 trillion cubic feet) of water storage capacity. A number of studies have concluded that loss of pothole wetlands has contributed significantly to flooding and increases in associated damages along the Red River of North Dakota and in portions of Minnesota and Iowa (e.g., Campbell and Johnson 1975; Moore and Larson 1979; Brun et al. 1981). Ludden et al. (1983) found that small basins in the Devil's Lake watershed in North Dakota could store 72% of the total runoff from a two-year frequency flood and approximately 41% of the total runoff from a 100-year frequency flood, with Malcolm (1979) and Gleason et al. (2007) and others reporting impacts of similar magnitude for north central North Dakota and western Minnesota, respectively. Hann and Johnson (1968) found that depressional areas in north central Iowa had the ability to store more than one-half inch of precipitation runoff within their individual watersheds.

The results of several studies shed light on the issue from the converse perspective of evaluating the water retention benefits to downstream waters of restored wetlands, and strongly support the same general finding that a significant nexus exists between prairie potholes, in the aggregate, and nearby (viewed from a regional, ecologically valid scale) navigable waterways. Gleason et al. (2008), based on a study covering almost 500 wetlands across Iowa, North Dakota, South Dakota, Minnesota, and Montana, conservatively estimated wetland catchments covering ~1.1 million acres on USDA Conservation Reserve Program and Wetland Reserve Program lands can capture and store an average of 1.1 acre-feet of water per acre of wetland (a total of more than 1.2 million acre-feet [52.2 billion cubic feet] of water). This estimate did not account for the additional water that would further reduce water flowing to the navigable waters as a result of infiltration to groundwater and evapotranspiration. Although these particular areas represented pothole wetlands that were restored to the landscape as a result of a voluntary government incentive program, the clear inference that can be drawn is that if

this quantity of natural wetlands were lost because of a lack of CWA protection, there would be significant impacts from the more than 1.2 million acre-feet of water that would otherwise flow more directly and rapidly to the downslope navigable waters.

Gleason et al. (2007) simulated the effects of wetland restoration in the upper Mustinka subbasin (Red River valley of west central Minnesota) and found that restoring 25% of the restorable wetlands there would increase flood storage by 27-32%, and a 50% restoration would increase storage by 53-63%. Similarly, if viewed as if those wetlands were natural wetlands remaining on the landscape and the impacts of their removal were under consideration, these results provide a sense of the magnitude of the impacts on downstream waters, i.e., the significance of the nexus, as a result of that lost flood storage capacity.

Kurz et al. (2007) modeled peak flow reductions associated with artificial storage of precipitation on flooded agricultural lands in the Red River valley of the north central PPR, and estimated that with both conservative (259,000 acre-feet) and moderate (2,188,400 acre-feet) storage volumes placed on the landscape, flood stages like those of the flood of 1997 on the Red River could have been reduced by 2-5 feet at Grand Forks. Thus, it is reasonable to predict that similar impacts of flood attenuation would be associated with similar storage volumes in natural wetlands, again demonstrating the significant nexus that exists between the aggregate of the pothole wetlands with navigable waters.

Although potholes typically are not directly hydrologically connected to other waters via surface connections, during wet periods water tables rise and surface water levels reach outlet elevations of most potholes (Sloan 1972; LaBaugh et al. 1998; Winter et al. 1998; USGS 1999). This "fill and spill" phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region, with associated impacts on regional water regimes in navigable waters and their tributaries (Stichling and Blackwell 1957; Sloan 1972; Leitch 1981; Winter 1989; USGS 1999; Leibowitz and Vining 2003).

Lenhart et al. (2011) studied the wetlands in the Minnesota River Basin, which covers much of central and western Minnesota and some of Wisconsin. Their significant findings are most applicable to the eastern portion of the PPR, where the topographic relief is generally lower and there is a more integrated drainage system. They noted that over the last 30 years stream flows at less than bank full elevation had increased, and that while large floods had not significantly increased, the larger, longer duration flow volumes had a significant impact on the movement of sediment and nutrients, with clear implications for total daily maximum loads and nutrient management issues. Odgaard (1987) found average daily flows only one-third bank full were associated with increased bank erosion, streambank collapse and downstream sedimentation. Looking broadly at agricultural watersheds in two time periods (1940-70 versus 1980-2009), Lenhart et al. (2011) found streamflow had increased in the agricultural landscapes due to increased stormwater runoff and base flows, both of which are associated with wetland drainage. They stated mean annual flows had increased in most of the Minnesota River basin and Red River basin, as well as in the Des Moines, Sugar and Root rivers.

In an important recent study of 21 southern Minnesota watersheds, all contributing flow via tributaries to the Mississippi River, Schottler et al. (2013) showed surface drainage of wetlands was a significantly greater driver of increased downstream river flow than was land conversion to crops, precipitation, or subsurface tile drainage. They demonstrated drainage (depressions lost as a percentage of watershed area over a range of about 3% to 19%) was highly correlated with increases in water yield across the 21 watersheds. Importantly, the consequences of the increased flows extended to increased erosion and widening of stream channels which in turn causes increased turbidity and sediment loading and transport (Wolman and Miller 1960; Doyle et al. 2005; Simon and Rinaldi 2006). Schottler et al. (2013) quantified six watersheds and also found a direct relationship with channel widening (up to 10-40%) with drainage of wetland basins, stating that that their findings were broadly applicable to the region. (p. 39-45)

Agency Response: **See response 3.66. The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.453 Prairie Potholes: Surface-Groundwater Interrelationships

Prairie potholes, as well as other types of "other waters," can, and very often do, contribute to groundwater recharge, and this groundwater often continues to move downslope toward intermittent or flowing streams ultimately discharging into navigable waters or their tributaries (Winter et al. 1998). For prairie potholes, where the water table tends to be a subdued image of the topography and is generally very near the land surface (Sloan 1972), pothole wetlands can serve as groundwater recharge sites (Euliss et al. 1999). Winter and LaBaugh (2003) stated that prairie potholes are commonly connected via groundwater flow systems, and water that seeps from the wetland into shallow gravel aquifers can annually travel many kilometers, while movement through clay or silt layers can be much slower. A study of the water balance of potholes in southern Saskatchewan found that subsurface flow out of study wetlands was relatively minor in a clay-rich deposit (Conly and van der Kamp 2001), but given the extremely large number and high density of potholes in the region even minor contributions from each one (Hayashi et al. [1998] estimated 1%) represents a significant contribution to groundwater resources in the aggregate. In some areas, such as Cottonwood Lake, North Dakota on the edge of the Missouri Coteau, 16% of the outflow from potholes in the study area was discharge to the underlying aquifer (Carroll et al. 2005). Van der Kamp and Hayashi (1998) stated that there is little groundwater recharge from dry uplands outside depressions, and that groundwater recharge from small depressions constitutes a large proportion of the total recharge in many areas.

Winter and Rosenberry (1998) stated that some water seeping from potholes into groundwater passes beneath local flow systems and discharges to wetlands at lower elevations, commenting on the complexity of the connections between potholes and groundwater while recognizing that the fundamental connections are nevertheless common. Some of the complexity results from the dynamic climatic and related water conditions on the prairies (LaBaugh et al. 1996; Rosenberry and Winter 1997; Winter and Rosenberry 1998), underscoring the importance of using a weight of the evidence approach to determining significant nexus in such systems. Short-term, scientifically

verified determinations are not only costly and largely impractical to apply, they can also lead to conclusions that are incorrect in the long-term due to their short-term nature and inability to account for variation over time.

A number of studies have shown that connections between the groundwater and the water contained within potholes occur mainly at the shoreline zones where more impermeable soils of the basin grade into more permeable soils in transition zones, or through fractures in the basins' substrate (Williams and Farvolden 1967; Millar 1971; Eisenlohr and Sloan 1972; Sloan 1972; Weller 1981). Furthermore, because seepage contributions to groundwater are greatest where wetland shoreline is largest relative to the water volume (Millar 1971), the smallest pothole wetlands are proportionately more important to groundwater connectivity. Sloan (1972) stated that surface water seepage to groundwater was greater for ephemeral and temporary wetlands than for other wetland types. These are the very types of wetlands that are currently being drained at the greatest rates (Dahl 2014), and are most at risk of degradation or loss absent CWA jurisdiction. Woo and Rowsell (1993) examined recharge from potholes and adjacent land in southern Saskatchewan and found that the inundated zone of the pothole itself contributed much more to recharge of the shallow subsurface aquifer (three orders of magnitude) than the adjacent non-inundated zone.

Some potholes have a net seepage outflow (groundwater recharge basins), others have a net seepage inflow (groundwater discharge basins), and many basins function alternately – at times having a net outflow into the groundwater and at other times having a net inflow (Sloan 1972; Swanson et al. 1988; LaBaugh et al. 1998; Johnson et al. 2004). Hubbard and Linder (1986) concluded that approximately 12% of the total storage capacity of wetlands in an area in northeast South Dakota infiltrated to groundwater as recharge, and that drainage of potholes therefore significantly reduces ground water recharge rates. Net seepage outflow into the groundwater can more typically amount to 20-30 percent of the total water loss for prairie wetlands (Eisenlohr and Sloan 1968; Shjeflo 1968; Eisenlohr and Sloan 1972; Winter and Rosenberry 1995).

Pothole wetlands are generally connected to and continuous with the groundwater in the surrounding area in relatively local groundwater flows (van der Kamp and Hayashi 2008), but these surficial aquifers can extend up to several miles. Regional aquifers are located deeper than the surface aquifers, and water flow into and through these deeper aquifers can be significant in locations in which they underlay an extensive area, and often flow to distant discharge areas (van der Kamp and Hayashi 2008). While a relatively small portion of recharge water flows to these deeper, geographically more expansive regional aquifers, this portion of the groundwater recharge from wetlands is important for sustaining groundwater resources (van der Kamp and Hayashi 2008). Input from wetlands on the topographically higher parts of the landscape (such as the Missouri Coteau and Prairie Coteau in North and South Dakota and Minnesota, where wetland densities are often highest) most commonly recharge regional aquifers. Hayashi et al. (1998) documented for one wetland that approximately 4% of infiltration reached a regional aquifer, so this clearly can be a significant volume of recharge water to aquifers when multiplied by tens or hundreds of thousands of similarly situated wetlands within a region.

To support CWA jurisdiction, it is important to note that the groundwater to which the pothole wetlands are linked subsequently provides input to lower-lying wetlands and stream valleys (van der Kamp and Hayashi 1998). Numerical simulation of regional groundwater flow systems in Stutsman and Kidder counties, North Dakota, portrayed lateral movement of groundwater flow over 16 miles to discharge into Pipestem Creek, a prominent stream in the region (Winter and Carr 1980). In another area of the PPR in northwest Minnesota, Cowdery et al. (2008) demonstrated that horizontal hydraulic conductivity in shallow aquifers was high and that these aquifers can extend tens of miles in the region and interact with deep aquifers in some areas. Surface aquifers were recharged in significant part from surface waters, particularly from at-risk seasonal and ephemeral wetlands. Notably, discharge areas for the water from these shallow aquifers included surface waters, as well as withdrawal from wells. In fact, 17-41% of the water from the surface aquifers was discharged to surface waters that left the study area, and groundwater discharge comprised 30-71% of all surface drainage flow, helping to maintain base flow. Van Voast and Novitzki (1968) concluded that groundwater and surface water interconnections (including flowing waters) were typical in the Yellow Medicine River watershed in the PPR region of southwest Minnesota. (p. 45-47)

Agency Response: **See response 3.66. The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.454 Prairie Potholes: Water Quality Relationships

Potholes act as sinks for nutrients and other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water (van der Valk 1989; Davis et al. 1981; Crumpton and Goldsborough 1998; Whigham and Jordan 2003). Ditches draining potholes create new surface connections between previously geographically isolated wetlands and tributaries and rivers (Brunet and Westbrook 2011). With pothole wetlands being the landscape's primary storage area for nutrients and salts, these solutes (along with increased sediment loads) are transported via these new surface connections downstream when the potholes are drained (Brunet and Westbrook 2011; Lenhart et al. 2011). Yang et al.'s (2008) study of the Broughton Creek watershed estimated that a 31% increase in nitrogen and phosphorus load from the watershed and a 41% increase in sediment loading were associated with wetland loss in the watershed. Yang et al. (2010) looked at this issue using an alternate approach, providing additional support to their earlier conclusions regarding both nutrients and sediment. Thus, when as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers, as described earlier.

Goldhaber et al. (2011) indicated that oxygenated groundwater in the region interacts with soil constituents and focuses sulfate-bearing water from topographically higher to lower areas. Of course, drainage courses that ultimately flow to navigable waters are the

topographically lowest areas in the landscape, and would therefore be chemically altered as a consequence of changes to the connections between wetlands, groundwater, and the flowing waters. In addition, Cowdery et al. (2008) pointed out that one of the discharges of aquifers was withdrawal from wells for domestic and farm/ranch use. Therefore, filling or draining of pothole wetlands so that infiltration is reduced or water quality affected, or the addition of pollutants to the wetland from any source, would likely ultimately affect the well water quality (as well as the quality of navigable waters receiving discharges from the affected aquifer from either surface or subsurface flows).

Ginting et al. (2000), working in the Minnesota River watershed, also showed that draining wetlands there led to increased runoff, thereby carrying elevated levels of solids and nutrients into downstream waterways. The findings of Lenhart et al. (2011) and Odgaard (1987) described earlier clearly demonstrated that the physical impacts of increased downstream flows resulting from drainage of potholes were also accompanied by degradation of the physical and chemical integrity (increased sediment movement and nutrient transport and concentration) of downstream waters in the PPR. The increased stream flows that result from draining potholes and reducing the retention time of water on the landscape causes increased stream flow, which in turn increases river erosion, bank sloughing and widening, and reduces water quality by increasing turbidity and sediment loads (Schottler et al. 2013). All of these significant impacts to the integrity of downstream waters are the direct consequence of the drainage or filling of pothole wetlands across the landscape.

Water captured and retained within pothole wetlands has been shown to have elevated levels of pesticides. In a portion of the Canadian PPR containing almost 1.8 million potholes, up to 60% of the wetlands examined exceeded Canadian guidelines for the protection of aquatic life for at least one pesticide (Donald et al. 1999). Squillace et al. (1996) found that in the Cedar River basin of Iowa a number of agricultural chemicals moved from surface water bodies into the groundwater, and subsequent movement and discharge of that groundwater served as the primary source of these chemicals entering the Cedar River and thereby impacting its chemical integrity. Concentration of pesticides in wetlands across broad areas in other landscapes with an important wetland component, e.g., the High Plains with its playas, has also been demonstrated (Belden et al. 2012), thus drainage would mean these waters with elevated pesticide levels would flow to and impact the chemical integrity of downstream waters if drained.

Blann et al. (2009) provided an important and comprehensive review of the effects of agricultural drainage in the southern PPR on the aquatic ecosystems of the region. Their work provides an excellent overview of the inter-relationships between predominately geographically isolated wetlands, groundwater, and flowing waters that would be jurisdictional under the proposed rule. (p. 47-48)

Agency Response: **See response 3.66.** **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.455 Prairie Potholes: Biological Nexus

Although prairie potholes are biologically significant on a continental scale due to their continental importance as a breeding landscape for waterfowl and other migratory birds, because of the relative paucity of internal drainage networks there has to date been little research on the biological connections between this category of "other waters" and navigable waters in the context most useful to the proposed rule. In one important study, however, Lannoo (1996) demonstrated that where PPR wetlands have been connected to navigable waters (e.g., in the Iowa Great Plains region), amphibian populations in the formerly isolated wetlands have decreased significantly. Thus, in an instance such as this, the creation (by draining and ditching) of a surface hydrological nexus where none previously existed between the wetland and navigable water had a significant negative effect on the biological integrity of the waters involved.

In addition, several waterfowl species require or use both saline lakes and freshwater wetlands and rivers in North Dakota (Windingstad et al. 1987; Swanson et al. 1984), with the freshwater wetlands being necessary for purposes of osmoregulation. In addition, the cumulative impacts of pothole drainage to downstream waters, including increased pesticide levels (Donald et al. 1999) and increased turbidity and sedimentation (Gleason et al. 2003; Schottler et al. 2013), would clearly impact the biological integrity of downstream waters. Gleason et al. (2003) found that sediment deposition of only 0.5 cm resulted in a 99.7% reduction in total invertebrate emergence and 91.7% reduction in seedling emergence in an experiment conducted in the context of the PPR. The increased flows in downstream waters resulting from drainage or filling of potholes (see previous section and citations) would also affect the capability of those waters to sustain populations of organisms more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters not impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion. (p. 48-49)

Agency Response: **See response 3.66.** **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.456 Prairie Potholes: Economics

Some of the greatest economic impacts associated with the alteration of the significant nexus between pothole wetlands and navigable waters in the PPR are those associated with increased flood damages resulting from lost flood attenuation functions. For example, the estimated net benefit of artificially storing water in the Red River valley as described by Kurz et al. (2007) exceeded $800 million over 50 years in some scenarios as a result of reduced flood stages in the Red River and avoided damages and other benefits. Hey and Phillipi (1995) documented that mean annual flood damage in the Upper Mississippi River basin had increased 140% over the previous 90 years (in adjusted dollars). Given the extent of increasingly frequent damaging floods along rivers in and flowing out of the PPR (as well as in other areas around the country), the economics associated with avoided damages through wetland protection and maintenance of flood

water storage functions should also be an important component of significant nexus analyses. One recent study (Yang et al. 2008) also estimated the value of the nutrient removal and carbon sequestration services lost due to draining or altering potholes in the Broughton's Creek watershed since 1968 to be $430 million.

In summary, we believe that the weight of the existing scientific evidence clearly demonstrates that when prairie potholes are drained or filled such that they can no longer fulfill functions such as water storage and water quality maintenance. As such, the physical, chemical and biological integrity of the receiving downstream navigable waters is negatively affected. The significant nexus they have as a result of "geographic isolation" is fundamentally altered when the basins are filled or drained via ditches and more directly linked to the downstream waters. The extent to which navigable waters are impaired depends upon the scale of the altered inputs, thereby reinforcing the importance of using an appropriate watershed, groupings of watersheds, and/or ecoregional scales to assess aggregate impacts. Again, we believe that 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. While we do not believe that he would consider the entire Mississippi River watershed as a reasonable basis for such determinations, we firmly believe that a single point of entry watershed is not only unwarranted on the basis of the science available for the PPR as a whole, this scale 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. Thus, we again suggest that the level of the ecoregion is the best scale at which to examine many aggregated wetlands, such as the prairie potholes. (p. 49-50)

Agency Response: **See response 3.66. The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

While the agencies considered aggregation at the ecoregion scale, the final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See response 4.316 (Doc. #13074) and Technical Support Document for a more detailed discussion of the agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court.

4.3.4.1.1 Supporting Approach

Montana Audubon (Doc. #14755)

4.457 We understand that under current Supreme Court decisions, all wetlands that are protected under the Clean Water Act need to be associated with streams. However, there is scientific evidence that pothole wetlands, well outside of riparian or floodplain areas, can affect streamflows—and therefore should also be considered "waters of the United States." The types of functions that potholes can provide for streams include:

- Water storage that allows prairie streams to flow longer into the summer;

- Water storage that prevents downstream flooding and filters out pollutants that might otherwise flow into streams; and
- Provide ecological functions that connect wildlife (especially birds and aquatic insects) to streams.

Montana Audubon supports designating potholes, to the maximum extent possible, as WOUS. (p. 4-5)

Agency Response: **The Science Report and Technical Support Document describe the various functions performed by prairie potholes. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Orleans Audubon Society (Doc. #2113)

4.458 Without this rule, our water quality will suffer, fish and wildlife populations will diminish, and economic benefits from recreation will plummet. By some estimates, 76 percent of prairie pothole wetlands and 90 percent of the remaining wetlands in the Great Lakes could go unprotected, resulting in up to $30 billion in annual flooding damages and the loss of $122 billion in fish and wildlife recreation.

The continental U.S. has already lost over half its original wetlands and there has been an alarming 140 percent increase in the rate of wetland loss between 2004 and 2009. Millions of ducks, geese, and other waterfowl utilize the prairie pothole region in the Midwest alone – for breeding and migratory stopover habitat. Mainly because of agricultural practices, the pothole region is the most threatened wetland system in North America. Under current CWA guidance, prairie potholes are considered 'isolated' because they do not have direct overland connections to navigable waters. However, it has been shown that prairie potholes provide important surface water storage and flood attenuation functions and are connected to navigable waters via groundwater flow. In this case, as in others, it is vitally important that the proposed rule allow the prairie

pothole region to be considered an ecoregion of similarly situated waters when evaluating for a significant nexus. (p. 1)

Agency Response: See Agency Summary Response Essay 7. The response 4.369 (Doc. #2113)

North Dakota Chapter of the Wildlife Society (Doc. #4828)

4.459 The NDCTWS congratulates the Department of Defense and the Environmental Protection Agency for preparing a thoughtful, science-based analysis of wetlands that should be considered jurisdictional under the Clean Water Act. We found the "Background on Scientific Review and Significant Nexus Analysis" to be particularly well done with respect to prairie pothole wetlands, and have little additional information to add at this time. The NDCTWS agrees with the following, specific conclusions reached with respect to prairie pothole wetlands:

- Owing in large part to their spatial and temporal variability, prairie potholes span the entire continuum of connectivity to, and isolation from, the river network and other bodies of water.
- Potholes generally accumulate and retain water effectively due to the low permeability of their underlying soil, which can modulate flow characteristics of nearby streams and rivers. Potholes also can accumulate chemicals in overland flow, thereby reducing chemical loading to other bodies of water.
- When potholes are artificially connected to streams and lakes through drainage, isolation is eliminated and they become sources of water and chemicals.
- Potholes support a community of highly mobile organisms, from plants to invertebrates that move among potholes and that can biologically connect the entire complex to the river network.

Based on these conclusions and other information presented in the Federal Register, the NDCTWS believes that there is overwhelming scientific evidence that prairie potholes are connected to navigable waters. We therefore urge the agencies to determine by rule that prairie potholes, either alone or in combination with "other waters" of the same type in a single point of entry watershed, have a significant nexus and fall under the jurisdiction of the Clean Water Act. (p. 1-2)

Agency Response: In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that

science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

America's Great Waters Coalition (Doc. #4957)

4.460 The proposed rule should be strengthened in one key respect. The rule should categorically define as Waters of the U.S. at least some prairie potholes and other depressional, non-floodplain waters where the scientific evidence demonstrates connectivity to downstream traditionally navigable waters or interstate waters. If the administrative record for this rulemaking includes such scientific evidence, the agencies should to modify the rule to restore protections for these important waters consistent with the science. (p. 2-3)

Agency Response: See Response to 4.371 (Doc. #4957)

Wisconsin Wildlife Federation (Doc. #5468)

4.461 The WWF very, very strongly encourages the EPA to restore "prairie potholes" into the definition of Waters of the United States since it will protect the prairie potholes in northwest Wisconsin and in the states to the west of Wisconsin. These prairie potholes are critical habitat for migratory waterfowl and many other important migratory bird species. This habitat is critical for these species on which sportsmen and women have voluntarily contributed hundreds of millions of dollars for habitat restoration. (p. 1-2)

Agency Response: See response 4.371 (Doc. #4957)

American Rivers (Doc. #15372)

4.462 Prairie potholes are shallow depressions in the land that have low-permeability and are therefore able to capture and hold precipitation and snow-melt.[346] They are found in the north-central part of the United States and can vary from 200 ha to less than 0.5 ha in surface area.[347] The significance of prairie potholes is related to the collective effect these densely clustered waterways (5 to 90km2) have on jurisdictional waters.[348]

The hydrologic dynamics of prairies potholes vary. Prairie potholes receive most of their inflow from precipitation and their primary form of outflow is evapotranspiration.[349] Some prairie potholes are hydraulically connected to groundwater so that they can receive groundwater discharge or they can contribute to groundwater recharge.[350] By storing water and releasing sheet-flow, depending on the amount of precipitation, prairie

[346] EPA Draft Connectivity Report, supra note 22, at 5-58.
[347] Id.
[348] Id.
[349] Id.
[350] Id.

potholes can affect the flow of nearby streams and rivers.[351] Prairie potholes are collectively able to hold a vast amount of water. It is estimated that prairie potholes in the federal Conservation Reserve Program and the Wetland Reserve Program retain more than 555 million m3 of precipitation.[352] In areas where prairie potholes have been connected through ditches or drainage total stream-flow in 'waters of the U.S.' have been increased, affecting stream geomorphology and habitat, as well as other ecological factors.[353]

Hydrologic isolation of prairie potholes can provide water quality benefits to nearby jurisdictional waters. Isolated potholes (i.e., those without a surface outlet) serve as excellent temporary sinks, or locations of permanent removal, for nutrients, sediment, and other chemicals they collect from runoff.[354] For example, prairie potholes, located on or near agricultural lands serve as sinks for nitrogen delivered via surface runoff, and can transform nitrogen into nitrous oxide or dinitrogen gas (i.e., via denitrification) under anaerobic conditions.[355] Denitrification can permanently remove up to 80% of the nitrate that runs off into the potholes.[356] Alternatively, potholes drained for farming practices – and therefore connected to jurisdictional waters – can contribute nitrogen, phosphorus, sediment, pesticides, and herbicides into 'waters of the U.S..'

In addition to the benefits that they confer to jurisdictional waters, prairie potholes also provide ecological benefits in the form of resting, nesting, breeding and feeding habitat for waterfowl, particularly ducks.[357] Eighty percent of the continent's waterfowl game are found in the prairie pothole region.[358]

Potholes are also biologically connected to other ecosystems. Organisms and seeds can travel to and from potholes via wind, water, land, or hitchhiking on other more mobile species, such as waterfowl.[359] Some potholes contain fish, which likely colonize during spillover events or through manmade ditches.[360]

In aggregate, prairie potholes have the requisite chemical, physical, and biological connection to warrant categorical protection under the CWA. (p. 26-27)

Agency Response: The information provided regarding the various functions provided by prairie potholes, which is contained in the Science Report, has been considered in the development of the final rule.

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

4.463 Prairie potholes are a complex of glacially formed wetlands, usually occurring in depressions that lack permanent natural outlets, that are found in the central United States

[351] Definition of WOTUS, 79 Fed. Reg. at 22250.
[352] EPA Draft Connectivity Report, supra note 22, at 5-61.
[353] Id. at 5-61, 5-62.
[354] Id. at 5-63.
[355] Id. at 5-60, 5-64.
[356] Id. at 5-64.
[357] Id. at 5-60.
[358] Id.
[359] Id. at 5-64.
[360] Id. at 5-65.

and Canada. The Connectivity Report emphasizes the variability of both the area they occupy and their range of hydrologic permanence, and states that "individual prairie potholes span the entire continuum of connectivity to and isolation from the river network and other bodies of water."[361]

Yet the Report also notes significant features common to many prairie potholes that demonstrate connectivity:

> Potholes generally accumulate and retain water effectively due to the low permeability of their underlying soil, which can modulate flow characteristics of nearby streams and rivers. Potholes also can accumulate chemicals in overland flow, thereby reducing chemical loading to other bodies of water. When potholes are artificially connected to streams and lakes through drainage, isolation is eliminated and they become sources of water and chemicals. Potholes also support a community of highly mobile organisms, from plants to invertebrates to birds, that travel among potholes and that can biologically connect the entire complex to the river network.[362]

And the Report ultimately concludes that, "when proper climatic or topographic conditions occur, or biotic communities are present that promote potential or observed connections, measurable influence on the physical, chemical, and biological condition and function of downstream waters is highly likely."[363] In its review of the proposed rule, the SAB specifically identified prairie potholes as a type of "other water" warranting treatment as "waters of the United States."[364]

An independent review of the scientific literature by Ducks Unlimited shows that, in fact, wetlands in the prairie pothole region (PPR), in the aggregate, possess a significant nexus with navigable waters. Prairie potholes are connected to downstream waters primarily due to the abundance and density of potholes on the PPR landscape, in conjunction with their general lack of direct surface water connection to streams and rivers. Prairie potholes "serve the function of storing water that would otherwise flow to downstream waters and thereby affect the downstream navigable waters by decreasing flood flow."[365] Ducks Unlimited documents many studies finding that the presence of these isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows and releasing water through groundwater and evaporation over an extended period.[366] In addition, studies of areas where prairie potholes have been drained have demonstrated the decrease in the cumulative storage capacity of the wetlands, and this decease has been linked to increases in the frequency of flooding in and around the PPR. As Ducks Unlimited observes:

In most cases, … when a pothole is drained or filled, the water that would have otherwise been retained in the basin is diverted to a ditch or other conveyance and makes its way to

[361] Connectivity Report at 5-57.
[362] Id. at 5-57 to 5-58.
[363] Id. at 5-66.
[364] SAB Rule Review at 3.
[365] Ducks Unlimited at 40.
[366] Id. at 40-42.

a navigable waterway much more rapidly than when the wetland was intact. The significant nexus between the intact pothole and the nearest navigable water, described by Justice Kennedy as the 'absence of [direct] hydrologic connection,' then becomes apparent as the altered flow pattern … brings more water, carrying more sediment, nutrients and other pollutants, much more rapidly, to the navigable water and downstream communities, farms, and other landowners.[367]

In contrast to the nexus created by the lack of direct connection, sometimes "a 'fill and spill' type of connectivity is exhibited when the wetland fills to capacity and then spills over into other wetlands and/or to downstream waters."[368] This phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region, with associated impacts on regional water regimes in navigable waters and their tributaries.

Ducks Unlimited also reviews several scientific studies demonstrating that prairie potholes "can, and very often do, contribute to groundwater recharge, and this groundwater often continues to move downslope toward intermittent or flowing streams ultimately discharging into navigable waters or their tributaries."[369] Some potholes have a net seepage outflow (groundwater recharge basins), others have a net seepage inflow (groundwater discharge basins), and many basins function alternately, at times having a net outflow into the groundwater and at other times having a net inflow. Critically, Ducks Unlimited notes, "the groundwater to which the pothole wetlands are linked subsequently provides input to lower-lying wetlands and stream valleys."[370]

Prairie potholes also have significant chemical connections with navigable waters. According to Ducks Unlimited's literature review, "Potholes act as sinks for nutrients and other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water."[371] That review discusses multiple studies showing the impact on downstream water quality when prairie potholes are drained:

> [W]hen as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers….[372]

Finally, prairie potholes have a significant biological nexus to traditional navigable waters. These wetlands are biologically significant on a continental scale due to their

[367] Id. at 42.
[368] Id. at 40.
[369] Id. at 45.
[370] Id. at 46.
[371] Id. at 47.
[372] Id.

importance as a breeding landscape for waterfowl and other migratory birds. Additionally, Ducks Unlimited discusses studies showing that:

The increased flows in downstream waters resulting from drainage or filling of potholes … would also affect the capability of those waters to sustain populations of organisms more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters not impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion."[373]

This evidence shows that prairie potholes have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 51-54)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Endangered Habitats League (Doc. #3384.2)

4.464 We urge the agencies to strengthen the proposed rule in one key respect: the failure to categorically define as Waters of the U.S. at least some prairie potholes and other depressional, non-floodplain waters where the scientific evidence demonstrates connectivity to downstream TNW or interstate waters. We expect that the administrative record for this rulemaking will include such scientific evidence, and we urge the agencies to modify the rule to restore protections for these important waters consistent with the science. (p. 2)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and**

[373] Id. at 49.

the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

North Dakota Wildlife Federation (Doc. #13569)

4.465 We strongly urge the EPA aggregate prairie potholes as a distinct class of "other waters" and consider them as a single case rather than a case by case basis for jurisdictional purposes. (p. 1)

Agency Response: In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.

Tulane Environmental Law Clinic; and Tennessee Clean Water Network; et al (Doc. #15123)

4.466 THE RULE SHOULD CATEGORICALLY PROTECT PRAIRIE POTHOLES, VERNAL POOLS AND KARST SINK HOLE WETLANDS AS WATERS OF THE UNITED STATES.

Prairie Potholes

Prairie potholes are a complex of glacially formed wetlands, usually occurring in depressions that lack permanent natural outlets, found in the central United States, including Mississippi River Basin states Iowa and Minnesota. The Connectivity Report notes significant features common to many prairie potholes that demonstrate connectivity:

> Potholes generally accumulate and retain water effectively due to the low permeability of their underlying soil, which can modulate flow characteristics of nearby streams and rivers. Potholes also can accumulate chemicals in overland flow, thereby reducing chemical loading to other bodies of water. When potholes are artificially connected to streams and lakes through drainage, isolation is

> eliminated and they become sources of water and chemicals. Potholes also support a community of highly mobile organisms, from plants to invertebrates to birds, that travel among potholes and that can biologically connect the entire complex to the river network.[374]

The Connectivity Report ultimately concludes that, "when proper climatic or topographic conditions occur, or biotic communities are present that promote potential or observed connections, measurable influence on the physical, chemical, and biological condition and function of downstream waters is highly likely."[375]

In fact, an independent review of the scientific literature by Ducks Unlimited shows that in the aggregate, wetlands in the prairie pothole region (PPR) generally possess a significant nexus with navigable waters. The most important nexus arises due to the abundance and density of potholes on the PPR landscape, in conjunction with their general lack of direct surface water connection to streams and rivers. Prairie potholes "serve the function of storing water that would otherwise flow to downstream waters and thereby affect the downstream navigable waters by decreasing flood flow."[376] Ducks Unlimited documents many studies finding that the presence of these isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows and releasing water through groundwater and evaporation over an extended period.[377] In addition, studies of areas where prairie potholes have been drained have demonstrated the decrease in the cumulative storage capacity of the wetlands, and this decrease has been linked to increases in the frequency of flooding in and around the PPR.

> In most cases, … when a pothole is drained or filled, the water that would have otherwise been retained in the basin is diverted to a ditch or other conveyance and makes its way to a navigable waterway much more rapidly than when the wetland was intact. The significant nexus between the intact pothole and the nearest navigable water, then becomes apparent as the altered flow pattern … brings more water, carrying more sediment, nutrients and other pollutants, much more rapidly, to the navigable water and downstream communities, farms, and other landowners."[378]

In addition, sometimes "a 'fill and spill' type of connectivity is exhibited when the pothole fills to capacity and then spills over into other wetlands and/or to downstream waters.[379] This phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region.

Prairie potholes also have significant chemical connections with navigable waters. According to Ducks Unlimited's literature review, "Potholes act as sinks for nutrients and

[374] Id. at 5-57 to 5-58.
[375] Id. at 5-66.
[376] Ducks Unlimited, Comment Letter to EPA & Army Corps of Engineers, Docket ID No. EPA-HQ-OW-2011-0880 at 40 (Nov. 5, 2014)
[377] Id. at 40-42.
[378] Id. at 42.
[379] Id. at 40.

other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water."[380] That review discusses multiple studies showing the impact on downstream water quality when prairie potholes are drained. "[W]hen as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers…."[381]

Finally, prairie potholes have a significant biological nexus to traditional navigable waters. These wetlands are biologically significant on a continental scale due to their importance as a breeding landscape for waterfowl and other migratory birds. Additionally, Ducks Unlimited discusses studies showing that: "The increased flows in downstream waters resulting from drainage or filling of potholes … would also affect the capability of those waters to sustain populations of organisms more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters not impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion."[382]

Because the science clearly demonstrates that prairie potholes have a significant nexus to traditionally navigable waters, they should be categorically protected as Waters of the U.S. (p. 8-9)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The**

[380] Id. at 47.
[381] Id.
[382] Id. at 49.

agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Kentucky Waterways Alliance (Doc. #16581)

4.467 We also support the need for categorical protection of other similar wetlands, such as prairie potholes, though Kentucky is not specifically home to any such waters. The Mississippi River Basin hosts millions of acres of prairie pothole wetlands. As noted by the National Wildlife Federation, "prairie potholes are important natural resources for people as well as waterfowl. They provide valuable, but often underappreciated, ecosystem services that help people commercially, ecologically and economically.

- They serve as natural sponges that hold excess water that helps reduce the severity and risk of downstream flooding.
- They recharge groundwater systems that supply water to farmlands and wells in the region.
- The potholes also provide water and forage for livestock. Birders, as well as hunters, use the prairie potholes region as a destination for finding birds."[383]

Likewise, the Connectivity Report notes significant features common to many prairie potholes that demonstrate connectivity:

> "Potholes generally accumulate and retain water effectively due to the low permeability of their underlying soil, which can modulate flow characteristics of nearby streams and rivers. Potholes also can accumulate chemicals in overland flow, thereby reducing chemical loading to other bodies of water. When potholes are artificially connected to streams and lakes through drainage, isolation is eliminated and they become sources of water and chemicals. Potholes also support a community of highly mobile organisms, from plants to invertebrates to birds, that travel among potholes and that can biologically connect the entire complex to the river network."[384]

Because the science clearly demonstrates that prairie potholes have a significant nexus to traditionally navigable waters, they should be categorically protected as Waters of the U.S. (p. 10-11)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8)**

[383] http://www.nwf.org/wildlife/wild-places/prairie-potholes.aspx
[384] Id. at 5-57 to 5-58.

where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

North Dakota Wildlife Federation (Doc. #16638)

4.468 The North Dakota Wildlife Federation and our 1,300 farmer, rancher, and outdoor recreation members want to provide the following comments about the proposed rules. Wetlands, particularly prairie potholes, are a critical resource to North Dakota. The ecosystem services provided by these wetlands include water storage, groundwater recharge, contaminant removal and storage, carbon sequestration, sediment removal and habitat for wildlife. The proposed rule, within section 6, "other waters", does not adequately address our concerns for either hydrological connectivity or biological connectivity (nexus) for prairie potholes or the need for jurisdictional oversight to prevent alteration and drainage of these vital resources. As noted in the proposed rule, ''when potholes are artificially connected to streams and lakes through drainage, isolation is eliminated and they become sources of water and chemicals." Within North Dakota, an estimated 50% of prairie potholes have already been drained[385][386][387][388] and the proposed rule provides neither protection, jurisdictional authority or recognizes the significant nexus and connectivity for the remaining 50%. We strongly urge the EPA aggregate prairie potholes as a distinct class of "other waters" and consider them as a single case rather than a case by case basis for jurisdictional purposes.

Hydrological connectivity:

In North Dakota, prairie potholes comprise 8% of the state land area (1,452,628 ha)[389]. A conservative estimate of water storage for prairie potholes is 1.1 acre feet of water per acre of wetland area.[390][391] Based on this estimate, prairie potholes in North Dakota

[385] http://water.epa.gov/type/wetlands/potholes.cfm
[386] http://usfws.tumblr.com/post/90475376839/new-report-on-prairie-potholes-announced
[387] Gleason R.A., Euliss-Jr. N.H., Tangen B.A., Laubhan M.K., and Browne B.A. 2009. USDA Conservation Program and Practice Effects on Wetland Ecosystem Services in the Prairie Pothole Region. Ecological Applications: 21(3) Supplement 2011: S65-S81. Accessed online at http://www.esajournals.org/doi/pdf/ 1 0.1890/09-0216.1.
[388] Dahl, T. E. 1990. Wetlands losses in the United States 1780's to 1980's. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C., USA.
[389] http://www.npwrc.usgs.gov/projects/ndgap/
[390] http://pubs.usgs.gov/pp/1745/pdf/ppI745web.pdf

conservatively store 3,589,394 acre feet of water. Preservation of this storage capacity is vital to reducing flooding and downstream effects during spring runoff and during heavy precipitation events. Up to 10% of this water may go to recharging shallow ground water and 116,960,785,355 gallons being added annually to the ground water supply of North Dakota.[392] Wetland complexes are hydrologically connected through these ground water supplies as well as spillover effects in times of snow melt and heavy precipitation events.[393394395396] Research has shown that 28% of the wetlands within an area in North Dakota had temporary surface-water connections during high water.[397]

Biological Connectivity:

Individual wetlands like the prairie potholes are not biologically isolated biota transfer and movement from wetland to wetland within complexes as well as to navigable waters or across the state are common. The wetlands of North Dakota are home to 26 of the 112 state designated species of special concern including 3 ESA listed threatened and endangered bird species[398], over 70 species of wetland dependent birds[399], 313 obligate plant species[400], as well as numerous invertebrates and upland game such as pheasants and white tailed deer. Birds in particular, move often between the prairie potholes and navigable waters. (p. 1-2)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding prairie potholes. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7) In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.**

[391] Gleason, RA., Laubhan, M.K., and Euliss, N.H., Jr., eds., 2008, Ecosystem services derived from wetland conservation practices in the United States Prairie Pothole Region with an emphasis on the U.S. Department of Agriculture Conservation Reserve and Wetlands Reserve Programs: U.S. Geological Professional Paper 1745, 58 p.
[392] http://pubstorage.sdstate.edu/wfs/161-W.pdf
[393] Winter, T.C. 1989. Hydrologic studies ofwetlands in the northern prairie. Pages 16-54 in A.G. van der Valk, ed. Northern prairie wetlands. Iowa State University Press, Ames.
[394] Winter,T.C.,andRosenberry,D.O.,1995,The interaction of ground water with prairie pothole wetlands in the Cottonwood Lake area, east-centraINorthDakota,1979- 1990:Wetlands,v.5,no.3,p.193-211.
[395] Winter, T.C., and J.W. LaBaugh. 2003. Hydrologic considerations in defining isolated wetlands. 22 Wetlands 23:532-540.
[396] Tiner, R W. 2003b. Geographically isolated wetlands of the United States. Wetlands 23:494516.
[397] Leibowitz, S. G. and K. C. Vining. 2003. Temporal connectivity in a prairie pothole complex. Wetlands 23:13-25
[398] http://www.and.gov/gnfJpublications/magazine/june 2014.pdf
[399] http://www.fws.gov/mountain-prairie/pfw/nd/nd21.htm
[400] http://plants.usda.gov/core/wetiandReport?coreSearch=&categorv=sciname&selectcategories=alI&selectdurations=all&selectgrowthhabits=all&selectnativeStatus=all&selectdistribution=US38&selectregion=any&selectindicator=OBL&sortKey=sciname&pageNum=O&numltemsPerPage=1OO&submit.x=49&submit.y=9Iu

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

4.469 Millions of ducks, geese and migratory birds depend on the shallow wetlands, i.e. prairie potholes that are found over wide areas stretching from Montana to portions of Iowa and Minnesota.xii But there have been alarming declines. "Nancy Stoner, acting assistant administrator of U.S. EPA's Office of Water, said the decline represents 'alarming losses' that signal the need to expand private, state and *federal efforts* (emphasis added) to conserve Pothole wetlands'" "The prairie pothole region is considered the most valuable breeding ground for ducks in North and South America".xiii

"Isolated wetlands also contribute significant amounts of water to underground aquifers. In the High Plains, playa wetlands and sandhill wetlands recharge the Ogallala Aquifer, the largest in North America…The Ogallala Aquifer is essential for the irrigation of food crops – a multi billion dollar industry. These isolated wetlands serve as carbon sinks. In addition, they do also have a connection to navigable rivers…migrating birds do move frequently between isolated wetlands and adjacent navigable rivers throughout North America… Moreover, the production of waterfowl on an isolated wetland in northern regions may affect the harvest of waterfowl in navigable lakes, rivers, or coastal waters much further south, demonstrating that isolated wetlands connect disjunct regions of the Western Hemisphere. This then impacts those individuals who…derive income from this regional activity".xiv

Thus, under its broad Commerce Clause authority, Congress has been able to address environmental problems (among many others) by "invoking a general constitutional provision that deals with commerce".xv (p. 7)

Agency Response: The agencies appreciate this contribution to the body of knowledge regarding prairie potholes. Such information may prove to be useful in the significant nexus analysis under paragraph (a)(7). In the final rule, the agencies have identified by rule that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.

Missouri Chapter, Sierra Club (Doc. #18814)

4.470 We support the proposed rule as a significant step to clarify the jurisdictional scope of the CWA. However, we recommend greater coverage for waters such as prairie potholes than is reflected in the current proposed rule. Such potholes are a regularly occurring feature that provide significant wildlife habitat and often have a connection to floodplain function. But agriculture practices have destroyed nearly half of our prairie potholes and have artificially separated some of those remaining from a functioning floodplain. Thus it is especially important that the remaining prairie potholes be protected. (p. 1)

Agency Response: In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to

identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Society of Wetland Scientists (Doc. #12846)

4.471 The following *Prairie Pothole Region* (PPR) case study illustrates one clear finding from the EPA/COE science review and proposed rule, namely, there is great complexity in the ways that upstream wetlands influence downstream waters. The complexity of processes involved and their highly variable influence in space and time make it difficult to assign level or degree of connectivity to any given wetland, wetland complex, or even watershed. This difficulty in turn makes the regulatory mission challenging.

Four *main functions of wetlands in the PPR produce interconnectedness: fill and spill; recharge/discharge; biodiversity inoculum; groundwater flux.* As detailed below, three of these functional connections (fill-spill; recharge-discharge; biodiversity inoculum) between pothole wetlands and downstream waters are supported by solid, peer-reviewed, science. All functional pothole wetlands fill with water and contribute biodiversity inoculum; a large percentage of pothole wetlands spill water that often joins downstream waters; virtually all functional pothole wetland complexes contribute to recharge and discharge that lengthens the hydroperiod of more permanent wetlands and increases the chance that surface water spills and enters downstream waters; movement of water from pothole wetlands to deep groundwater that then enters downstream surface waters is likely to occur but is difficult to determine from field studies. Parsing out which pothole wetland provides each of the four functions and documenting how often each occurs is not tractable from a research perspective. The few uncertainties should not be the enemy of the far more numerous certainties. The dominant message from the EPA science review and this SWS assessment is that connections between pothole wetlands and downstream waters are strong and undeniable.

1. *Fill and spill*. Perhaps the clearest hydrological connection between prairie wetlands and downstream waters is their capture and storage of rainstorm and snow pack runoff (*fill function*). Calculations presented in the science review show that substantial amounts of water can be held back from streams and rivers by pothole wetlands, thus reducing flood magnitude and frequency. In a large

proportion of prairie wetlands, however, especially in easterly parts of the prairie pothole region (PPR) with moderate to high rainfall (Millett et al. 2009), wetlands cannot capture and hold all water inputs. In these areas, integrated drainage networks have formed over time from spilled water (spill function), and connectivity between wetland basins and downstream waters is direct and observable. While spilling is more likely and voluminous in wetter regions, it can occur in drier, more westerly PPR regions during periods of deluge such as those observed in the 1990s (Winter and Rosenberry 1998). Most of the ten wetlands at Orchid Meadows, a long-studied wetland complex in eastern South Dakota (central PPR), overflowed frequently and contributed substantial volumes of water via channel outflow to a deep, recreational lake (Johnson et al. 2004, van der Kamp and Hayashi 2009). *Both fill and spill functions occur in prairie wetlands across the PPR*; the spill function is more evident in the integrated drainage network of the central and eastern PPR.

2. Recharge/discharge. A second well-studied process identified in the science review, termed recharge/discharge, connects members of a wetland complex to each other hydrologically. *However, the physical connection between less permanent pothole wetlands and downstream waters was not identified or discussed in the EPA science review*. In the PPR, topographically higher wetlands (usually those classified as temporary or seasonal in permanence category) recharge shallow groundwater that discharges into lower semi-permanent wetlands. This topographically driven, regional-local flow system functions when water percolates through fracture cracks in the glacial till beneath wetland basins. The permeability of the tills depends on the degree of fracturing that is best developed in surface soils. The amount of water that discharges from higher wetlands into lower ones can be sufficient to lengthen the hydroperiod of receiving wetlands and to shift them from seasonal to semi-permanent. The water budgets of wetlands in complexes do not balance in mathematical models without accounting for the recharge function (Johnson et al. 2010). In this way, investigators have found a link between the more ephemeral wetlands, often occurring in higher landscape positions, and downstream water. More specifically, recharge maintains deeper semi-permanent wetlands increasing the frequency and volume of spilling into downstream waters after snow melt and rain storms. *This physical connection between less permanent pothole wetlands and downstream waters is a useful addition to the EPA science review.*

3. Groundwater flux. Major questions raised in the EPA science review were: How connected are pothole wetlands to deeper groundwater? Do pothole wetlands directly recharge downstream streams, river, and lakes via deeper ground water? *It is well established that water movement among wetlands is part of the shallow groundwater system* (van der Kamp and Hayashi 2009). Deeper tills, however, generally have low hydraulic conductivity allowing only very slow movement of water. But there are exceptions. In the more rugged parts of the PPR, where most functional wetlands remain, the till underlying or adjacent to wetlands includes materials varying in coarseness and permeability, ranging from cobble and gravel through sand to heavy clay. The sands and gravels occur as extensive sheets, long narrow buried-valley deposits, and many small deposits of local extent (van der

Kamp and Hayashi 2009). The deposits can function as aquifers that distribute recharge water from "leaky" wetlands to deeper groundwater, and then possibly to down gradient surface waters. Because aquifers are encountered frequently when coring, it is likely that some wetlands do feed surface waters through deeper groundwater pathways. Research into the complex "black box" of groundwater movement in the glacial tills in the PPR has yet to prove and quantify the occurrence of such flow paths. However, known passage of salts from wetlands into deep groundwater storage has been determined (van der Kamp and Hayashi 2009).

4. Biodiversity inoculum. The EPA science review lays out a clear case that pothole wetlands contribute biodiversity inoculum to downstream waters. Some forms of the inoculum, such as seeds and whole plants, are transported directly by water that spills to downstream streams, rivers, and lakes. Other organisms, such as amphibians that live and reproduce in pothole wetlands, depend on spillage flow pathways and other surface water sources to disperse and recolonize new sites downslope. Still others, such as migratory waterfowl that breed in pothole wetlands, complete their breeding cycle in late summer by moving to more permanent downstream waters. A countless number of species from single celled organisms to vertebrates move from pothole wetlands to downstream waters in a myriad of ways in time and space to complete their life cycles and to colonize new sites as a means to maintain and expand their populations. Pothole wetlands play a major role in the ability of plants, animals, and microbial communities to remain functional and diverse in glaciated prairie landscapes. (p. 3-5)

Agency Response: The agencies appreciate the contribution of this prairie pothole case study to the body of knowledge regarding prairie potholes. This study may prove to be useful in the case-specific significant nexus analysis under paragraph (a)(7).

K. Mantay (Doc. #15192.1)

4.472 In addition, the troubling and bizarre omission of prairie pothole wetlands, by their very nature failing Justice Kennedy's "significant nexus" test, will remain wholly unregulated by the Clean Water Act even under the Proposed Rule – an outcome which I personally and professionally find unacceptable. Unlike many types of wetlands, restoration of prairie potholes is exceedingly difficult, as proper soils take hundreds or thousands of years to develop in that region. More so than most regions in the country, the Missouri Coteau has wetlands that simply cannot easily be replaced or mitigated. EPA knows this, yet chose to omit prairie pothole wetlands from jurisdiction under the Proposed Rule, while choosing to regulate highway ditches with seasonally high flow, instead. This is an aberration of science, not a rule based on it. (p. 2)

Agency Response: In the proposed rule, the agencies considered multiple approaches and options for how best to address whether "other waters" were jurisdictional under the CWA. One alternative in the proposed rule specifically recognized prairie potholes in the Missouri Coteau as an example of the physical capacity of "other waters" to provide flood and sediment retention and as "a case where several small wetlands together may have a different effect than a large

wetland providing the same function" (79 Fed. Reg. 22,216). In the final rule, prairie potholes wetlands will not "remain wholly unregulated by the Clean Water Act". The agencies have identified by rule under paragraph (a)(7) that prairie potholes are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies will assert jurisdiction when that connection and the downstream effects are significant and more than speculative and insubstantial. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters.

4.3.4.1.2 Opposing Approach

North Dakota Office of the Governor, et al. (Doc. #15365)

4.473 The Prairie Pothole Region (PPR) experiences wide climactic swings that lead to variability of water levels and more uncertainty under this rule.

a. Prairie potholes should not be considered per se federally jurisdictional.

Under the proposed rule, small, ephemeral, prairie pothole wetlands are considered per se federally jurisdictional. In the PPR, these wetlands are situated throughout agricultural land, as well as the rest of the landscape. They pose a federal jurisdictional problem because of their variable nature. The proposed rule is not clear on how depressional prairie pothole wetlands that fill and spill into jurisdictional waters would be regulated by the Corps and how the Corps will determine if prairie pothole wetlands have subsurface flow to federal jurisdictional waters. The preamble states, "[w]ater connected to such flows originate from adjacent wetland or open water, travels to the downstream jurisdictional water, and is connected to those downstream waters by swales or other directional flowpaths on the surface. Surface hydrologic connections via physical features or discrete features described above allow for confined, direct hydrologic flow between adjacent water and (a)(1) through (a)(5) water that it neighbors."[401] This verbiage captures many prairie pothole wetlands as federally jurisdictional. The preamble cites research conducted on prairie pothole wetlands in North Dakota to support the decision.

[401] Fed. Reg. 22188, 22208.

The wide climatic swings and trends of the central plains, including an approximate 200-year cycle, causes conditions where many surface depressions are functionally dry uplands[402] or isolated wetlands for most of the period of record, but then connect and coalesce during extended wet periods. Many of these are remote from currently jurisdictional waters and connect only through a series of water bodies. The attenuated connections render the probability of water quality effects on the federally jurisdictional water negligible.

North Dakota does not accept federal jurisdiction over water bodies only remotely and indirectly connected to waters navigable in the traditional sense based on the concept of fill and spill. Only those wetlands that are abutting or adjacent to navigable waters as defined by Rapanos should be considered federally jurisdictional. Prairie pothole wetlands that fill and spill or have a subsurface hydrological connection are currently not considered jurisdictional by the North Dakota Corps Regulatory Office. The proposed rule will dramatically increase the wetland acreage and basins considered jurisdictional in the PPR of North Dakota and throughout the United States.

The hydrologic expansion and contraction, spillage, flooding, and disappearance of prairie potholes has a large influence on farming. Prairie potholes require special management, and making these wetlands per se federally jurisdictional will prevent farmers from managing these waters on their land. This will prevent weed control, pest control, and could impede input applications. Prairie potholes are abundant in this region, and during the extremely wet climate cycles that we are currently experiencing - this rule will only compound existing management problems.

b. The rule's inclusion of recreational use or potential future recreational use as jurisdictional will have unduly large effects in the PPR.

Virtually any pothole that could float a duck boat could be claimed as a potential future commercial waterborne recreation resource. Although EPA specifies that claims must be substantial, the mere filing of claims for federal jurisdiction would provide a tool for special interests to interfere with local water and land management. Further, there is inherent ambiguity in the term substantial. (p. 6-7)

<u>Agency Response:</u> In the final rule, prairie potholes have not been considered "per se federally jurisdictional." The agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or

[402] Ex. Tappen Slough in Kidder County was hayland with dugouts for horse watering during the 1930s – it is several feet underwater today. Many converted lands, farmed as dryland for many years, have wetlands on them since the mid-1990s.

in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

Continental Resources, Inc. (Doc. #14655)

4.474 Continental is particularly concerned that geographic areas characterized by isolated prairie potholes in North Dakota, which have not been considered jurisdictional to date, could be combined into a single landscape unit and found jurisdictional based on attenuated "similarities." As described in Section IV, Continental conducted an analysis of the Bakken play and determined that defining subsurface connections for "other waters" was difficult given limited data and information. (p. 14)

Agency Response: **See response 4.448 (Doc. #8674). In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified prairie potholes in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered 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. The agencies have not determined that prairie potholes are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

4.3.4.2 Vernal Pools

Tulane Environmental Law Clinic; and Tennessee Clean Water Network; et al (Doc. #15123)

4.475 THE RULE SHOULD CATEGORICALLY PROTECT PRAIRIE POTHOLES, VERNAL POOLS AND KARST SINK HOLE WETLANDS AS WATERS OF THE UNITED STATES.

Vernal Pools

Vernal pools are shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, drier months.[403] They typically do not have surface water connections to permanent waters and are usually situated on underlying substrate that impedes water infiltration. Vernal pools provide optimal breeding habitat for many species of Minnesota amphibians. Likewise, vernal pools in Kentucky, particularly in Appalachia, are host to rare amphibians like the wood frog, spadefoot toad, and four-toed salamander.[404]

The Connectivity Report acknowledges several common features of vernal pools that provide scientific evidence of hydrologic connectivity to other waters: temporary or permanent outlets, frequent filling and spilling of higher pools into lower elevation swales and stream channels, and conditions supporting subsurface flows through pools without perched aquifers to nearby streams.[405] Temporary storage of rainfall and snowmelt in vernal pool systems can attenuate flooding, provide a reservoir for adjacent vegetation during the spring growth period, and increase nutrient availability.[406] It also highlights evidence of biological connections to downstream waters, including the fact that insects and amphibians use glaciated vernal pools as breeding habitat, refuge from predators or other stressors, hunting or foraging habitat, or stepping-stone corridors for dispersal and migration.

A University of Georgia report titled Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on waters of the United States" finds that vernal pools in the western United States also have a variety of significant impacts on navigable waters, for several reasons. Western vernal pools typically have predictable hydrologic cycles that regulate runoff flow and volume; nutrient, carbon, and salt export; and facilitate nutrient cycling among uplands, wetlands, and navigable waterways. Storage of stormwater and sediment in vernal pools limits erosion and runoff that would otherwise reduce water quality of navigable waters. Animals migrating between western vernal pools and navigable waters carry invertebrate species to navigable waters, where they help maintain genetic diversity.[407]

This evidence shows that vernal pools have a significant nexus to traditionally navigable waters and should be categorically protected by the law. (p. 10)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on**

[403] Connectivity Report at 5-66.
[404] Tom Biegbighauser, found Eastern Kentucky Pride webpage at http://kypride.org/educate/wetlands/
[405] Id. at 5-67.
[406] Id. at 5-72.
[407] Id. at 12-15.

downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified western vernal pools in California in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that western vernal pools in California are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. At this time, the agencies are not able to determine that the available science supports that vernal pools outside of California as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual vernals pools outside of California are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

4.3.4.2.1 Supporting Approach

Audubon Society of Rhode Island (Doc. #5480)

4.476 Here in the glacial soils of the northeast, small isolated wetlands, known as kettle holes or ponds and that are critical to amphibian breeding, are not connected by surface water. These depressions, left by melting chunks of glacial ice in an outwash plain, are dependent on the water table in the surrounding sand arid gravel deposits for any water that creates a small pond. Their water levels rise with the storage of groundwater from rain and snowfall over the winter, and fish do not live in them because they are generally dry from July- November. The absence of fish makes them prime habitat for survival of amphibian eggs and young.

These groundwater connections in glacially deposited soils would seem one nexus for consideration of kettle ponds and other glacial depressions in the category of "other waters" to be protected. Since these have historically provided wildlife habitat in the form of breeding and nursery grounds for frogs, toads, and salamanders, they should be protected under section 404 and other pertinent sections of the Clean Water Act/ Federal Water Pollution Control Act. (p. 1)

Agency Response: **The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. However, individual waters are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.**

National Wildlife Federation (Doc. #15020)

4.477 Northern Vernal Pools[408]

Northern vernal pools have many physical, chemical, and biological impacts on navigable waters:

- During high precipitation events or in specific landscape positions, northern vernal pools can have surface water connections to adjacent or nearby navigable waters and may provide groundwater input to adjacent waters, shallow aquifers, ephemeral streams, and river networks.
- Northern vernal pools that do not share surface or groundwater connections to navigable waters impact hydrology in river networks by intercepting and storing water before either discharging it slowly or exporting it via evapotranspiration.
- Vernal pool hydrology allows for nutrient retention and nitrogen transformation, and vernal pools likely retain pollutants and toxins and prevent these compounds from entering downstream waters. Soluble compounds, alternative, may be delivered to nearby navigable waters through groundwater connections.
- Many types of cyclic colonizing invertebrates adapted to migrate between ephemeral wetlands and permanent water are found in northern vernal pools, and represent an important flow of energy and nutrients into navigable waterways flowing vernal pool dry down.

Western Vernal Pools[409]

Western vernal pools are unique wetland ecosystems have a variety of significant physical, chemical, and biological impacts on downstream waters due to their hydrology, isolation, and landscape context. These include:

- Western vernal pools typically have predictable hydrologic cycles that regulated run-off flow and volume, nutrient, carbon, and salt export, and facilitate nutrient cycling among uplands, wetlands, and navigable waterways.
- Storage of stormwater and sediment in vernal pools limits erosion and run-off that would otherwise reduce water quality of navigable waters.
- Many western vernal pools are connected to other wetlands as a complex during the wettest season, and may be connected to navigable waters through ephemeral streams, swales, or overland sheet flow, facilitating nutrient, sediment, and organic matter transfer.
- Animals migrating between western vernal pools and navigable waters carry passively dispersing propagules and invertebrates to navigable waters, where they help maintain species and genetic diversity. (p. 86-87)

Agency Response: The agencies appreciate the contribution of this information to the body of knowledge regarding northern vernal pools and western vernal pools.

[408] This section is excerpted and summarized from Woolford et al (October 2014) at 11-12.
[409] This section is excerpted and summarized from Woolford et al (October 2014) at 15.

Such information may prove to be useful in the significant nexus analysis under paragraph (a)(7) for western vernal pools in California or under paragraph (a)(8) for northern vernal pools. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. In the final rule, the agencies have identified western vernal pools in California in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. However, individual vernals pools outside of California are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

American Rivers (Doc. #15372)

4.478 Western vernal pools are shallow, seasonal wetlands that have relatively consistent hydrologic cycles with, "winter rains and spring snowmelt, maximal inundation in the early spring aquatic phase, receding waters due to evapotranspiration in mid-spring, and drying by late spring or early summer."[410] There is evidence for the connectedness of western vernal pools, found in California and Oregon, to traditional waters of the US.[411] Western vernal pools exist in a landscape whereby many pools are connected to each other and to streams by swales or subsurface flow.[412] Some vernal pools are connected to groundwater and can recharge the groundwater or receive discharge from the groundwater.[413] Western vernal pools are mainly filled by precipitation and serve as an important storage of water during wet seasons, thereby preventing flooding which in turn limits erosion.[414] Their storage capacity prevents nutrients and contaminants from reaching navigable waterways.[415]

Due to their shallow water and lack of fish, vernal pools provide a great environment for insects and amphibians. The consistent hydraulic cycle of western vernal pools produces an ephemeral ecosystem. This ecosystem "allows for higher productivity compared to non-seasonal wetland habitats, due in part to aerobic microbial activities in the dry phase."[416] The dispersal of vernal pool organisms happens on a local scale when they move to adjacent pools, a neighborhood scale when they move to pools within the

[410] Sam Wolford, Shannon Bonney, and Ross Pringle, Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States 12 (River Basin Center at the University of Georgia, Oct. 2014). Submitted to the docket by NRDC, ID: EPA-HQ-OW-2011-0880-10578.
[411] EPA Draft Connectivity Report, supra note 22, at 5-67.
[412] Id. at 5-68.
[413] Id. at 5-70.
[414] Id. at 5-74.
[415] Wolford, Bonney &Pringle, supra note 155, at 13.
[416] Id. at 14.

landscape, or a regional scale when they move beyond the landscape into different ecosystems.[417] Organisms move on their own accord, are lifted by the wind, are carried in water flow, or are attached to other organisms.[418]

It is likely that western vernal pools have served as an evolutionary refuge for species since the Mesozoic times.[419] Species have been transported great distances and then colonized the western vernal pools and by adapting to their new home have overtime created new endemic species.[420] This has resulted in western vernal pools being, "rich reservoirs of genetic and species diversity connected to other locations and aquatic habitats through continuing dispersal."[421] The adaptations that these species have to decreased inundation at certain times of the year is an important trait to carry with changing climatic conditions likely changing stream flows and decreasing wetland inundations.[422]

Aggregately, western vernal pools have the significant nexus required to be categorically jurisdictional under the CWA. (p. 27-28)

Agency Response: **Much of the information provided regarding the various functions provided by western vernal pools in California is contained in the Science Report, which has been considered in the development of the final rule. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified western vernal pools in California in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that western vernal pools in California are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

[417] EPA Draft Connectivity Report, supra note 22, at 5-72.
[418] Id.
[419] Id.
[420] Id.
[421] EPA Draft Connectivity Report, supra note 22, at 5-73.
[422] Id.

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

4.479 Vernal pools are shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, drier months.[423] They typically do not have surface water connections to permanent waters and are usually situated on underlying substrate that impedes water infiltration.

The Connectivity Report acknowledges several common features of vernal pools that provide scientific evidence of hydrologic connectivity to other waters: temporary or permanent outlets, frequent filling and spilling of higher pools into lower elevation swales and stream channels, and conditions supporting subsurface flows through pools without perched aquifers to nearby streams.[424] The Report cites studies showing that western vernal pools were connected via surface flows 10-60% of the time, and that surface water flowed through swales connecting low-elevation vernal pools to streams during 60% of inundation periods.[425] Additionally, temporary storage of rainfall and snowmelt in vernal pool systems can attenuate flooding, provide a reservoir for adjacent vegetation during the spring growth period, and increase nutrient availability.[426] The Report concludes: "Documented evidence of surface flows connecting western vernal pool complexes to the river network via swales and seasonal streams is available in the literature. Indirect evidence indicates that surface and subsurface flows connect northern pools without perched aquifers to shallow groundwater and thus to nearby streams."[427]

The Report also highlights evidence of biological connections to downstream waters, including the fact that insects and amphibians use glaciated vernal pools as breeding habitat, refuge from predators or other stressors, hunting or foraging habitat, or stepping-stone corridors for dispersal and migration. The Report concludes that nonglaciated vernal pools in western states "are current reservoirs of biodiversity connected genetically to other locations and aquatic habitats through continuing dispersal."[428] Consistent with this evidence, as noted above, the SAB specifically identified western vernal pools as deserving of treatment as "waters of the United States."[429]

The UGA report titled "Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States" echoes and confirms these findings.[430] It concludes that vernal pools in the northeastern United States have many physical, chemical, and biological impacts on navigable waters, based on the following facts. During high precipitation events, northeastern vernal pools can have surface water connections to nearby navigable waters and may provide groundwater input to adjacent waters or aquifers. Those that do not share connections to navigable waters impact

[423] Connectivity Report at 5-66.
[424] Id. at 5-67.
[425] Id. at 5-70.
[426] Id. at 5-72.
[427] Id. at 5-74.
[428] Id.
[429] SAB Rule Review at 3.
[430] Sam Woolford, Shannon Bonney, & Ross Pringle, Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States (October 2014), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578 (hereinafter "Isolated Wetlands").

hydrology in river networks by intercepting and storing water before either discharging it slowly or exporting it via evapotranspiration. Northern vernal pools likely retain pollutants and toxins and prevent them from entering downstream waters. Many migratory invertebrates are also found in northern vernal pools, along with birds, reptiles and mammals that transfer nutrients, energy, and genetic material between vernal pools and navigable waters.[431]

Likewise, the same UGA report finds that vernal pools in the western United States also have a variety of significant impacts on navigable waters, for several reasons. Western vernal pools typically have predictable hydrologic cycles that regulate runoff flow and volume; nutrient, carbon, and salt export; and facilitate nutrient cycling among uplands, wetlands, and navigable waterways. Storage of stormwater and sediment in vernal pools limits erosion and runoff that would otherwise reduce water quality of navigable waters. Animals migrating between western vernal pools and navigable waters carry invertebrate species to navigable waters, where they help maintain genetic diversity.[432]

This evidence shows that vernal pools have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 41-42)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified western vernal pools in California in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered 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. The agencies have not determined that western vernal pools in California are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Other types of vernal pools are jurisdictional when they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.**

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

4.480 Vernal pools are highly specialized seasonal wetlands restricted almost entirely to California. Vernal pool habitat, of which over 90 percent has been lost in California, is

[431] Id. at 5-12.
[432] Id. at 12-15.

home to 20 federally listed species, including 10 endangered plants, 5 threatened plants, 3 endangered animals, and 2 threatened animals. (p. 10)

Agency Response: In developing the final rule, the agencies have considered the various functions of western vernal pools including that of wildlife habitat. These functions are documented in the Science Report.

Banning Ranch Conservancy (Doc. #14603)

4.481 The protection of vernal pools serves the purpose of the Act. For instance, the EPA itself states, "Vernal pools are a valuable and increasingly threatened ecosystem, often smaller than the bulldozer that threatens to destroy them. More than 90% of California's vernal pools have already been lost." (See http://water.epa.gov/type/wetlands/vernal.cfm). The remaining 10% of California vernal pools are at risk. This is exemplified by the case of the vernal pool complex at Banning Ranch. This vernal pool complex, which is one of only two coastal vernal pool complexes in Orange County recognized by the USFWS, and the only vernal pool complex containing critical habitat for the endangered San Diego Fairy Shrimp (Branchinecta sandiegonensis), contains up to 50 separate vernal pools. Over 35 of these pools have been documented to contain either listed or non-listed branchiopods. During overflow periods, these vernal pools drain into arroyos on the property, which, in turn, drain into immediately adjacent coastal tidal marsh wetlands. Coveted by developers for its flat terrain and ocean views, the Banning Ranch vernal pool complex is under the very real threat of development. Clarification of rules on vernal pools is therefore urgently needed.

The agencies have specifically requested comment on expanding the list of waters that are jurisdictional by rule. It is my position that said list of waters should be expanded to include vernal pools that are established to be reservoirs of biodiversity, connected genetically to other locations, and aquatic habitats through wind and animal mediated dispersal. Such vernal pools include those found in Banning Ranch. By establishing that such vernal pools are waters jurisdictional by rule, protection of vernal pools will be more feasible and clear under the law. (p. 1-2)

Agency Response: In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified western vernal pools in California in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The

agencies have not determined that western vernal pools in California are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Other vernal pools are jurisdictional when they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

Citizens Committee to Complete the Refuge (Doc. #14738.1)

4.482 We also wish to express our concern with the categorical deletion of "other waters." What happens to "mudflats" and "sandflats"? Will they be reinstated as "other waters" with significant nexus to a (1)-(3) waters of the U.S.? The 404 (b)(1) Guidelines identify the category of "mudflats" as special aquatic sites. The new definition thus creates an internal contradiction.

With regard to other subcategories of aquatic sites previously identified as "other waters," the aforementioned letter from the SAB argues:

> There is also adequate scientific evidence to support a determination that certain subcategories and types of "other waters" 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." The Board notes, however, that the existing science does not support excluding groups of "other waters" or subcategories thereof.

We urge EPA to identify the regions mentioned above as regulated "other waters."

In California, we have lost more than 90% of our vernal pool habitat, the remaining 10% is at risk due to intense development and agricultural pressure. Ruffolo[433] reported that within California, at least 82 threatened, endangered, or candidate species are restricted to vernal pools.

Rains et al[434] observe:

> In many vernal-pool landscapes, surface water flows through integrated ephemeral or seasonal swales to other vernal pools and ultimately to seasonal streams. Therefore, vernal-pool landscapes comprise the upper watershed position of many stream systems. Due to the integrated hydrologic nature of vernal-pool landscapes, disturbance of upgradient vernal pools may have appreciable impacts on hydrological and biogeochemical processes in all downgradient vernal pools and streams.

[433] Ruffolo, Jennifer. "The U.S. Supreme Court Limits Federal Regulations of Wetlands: Implications of the SWANNC Decision." California Research Bureau. CRB 02-003. 2002

[434] Rains MC, Dahlgren RA, Fogg G, Harter T, Williamson RJ. "Geological control of physical and chemical hydrology in California vernal pools." Wetlands. Vol. 28 pp 347-362. 2008

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon[435] states:

> In California, aerial photo studies indicate that as much as 80 to 90 percent of historic habitat has been lost and that the loss continues unabated (Holland 1978, 1998). The few wetlands that remain, or that have been re- created, in the Central Valley are among the most valuable and biologically productive ecosystems in the state, fulfilling a variety of beneficial needs that include protecting and improving water quality by absorbing and storing floodwaters, filtering pollutants, and maintaining surface water flows during dry periods; providing fish and wildlife habitats; and offering recreational opportunities to millions of Americans annually. Because of their productivity, wetlands support a great diversity of plants and animals, both aquatic and terrestrial, including both federally and State listed threatened and endangered species.

There is clearly an adequate scientific rationale to designate California vernal pools as regulated "other waters." And as discussed above, "other waters" needs to be put back into the definition of waters of the United States. (p. 3-4)

Agency Response: **The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have not determined that the five subcategories of waters listed under paragraph (a)(7), which includes western vernal pools in California, are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Waters not analyzed under (a)(7) are jurisdictional when they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not otherwise excluded.**

[435] U.S. Fish and Wildlife Service. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon. xxvi + 606 pages.

4.3.4.2.2 Opposing Approach

The Agencies did not identify substantive comments that addressed this topic.

4.3.4.3 Carolina Bays

4.3.4.3.1 Supporting Approach

Southern Environmental Law Center et al. (Doc. #13610)

4.483 The Environmental Protection Agency's Office of Research and Development concluded in its Connectivity Report[436] that it almost had enough scientific evidence to support defining coastal depressional wetlands, such as Carolina Bays and Delmarva bays, as waters of the United States by rule. The attached report reveals that there is a substantial additional body of scientific studies that more than adequately establishes that these depressional wetlands are connected in a significant way to traditional navigable waters. Thus, the final rule should find coastal depressional wetlands are waters of the United States by rule. (p. 4)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding Carolina Bays and Delmarva Bays. Such studies may prove to be useful in the significant nexus analysis under paragraph (a)(7). In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Carolina and Delmarva Bays in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina and Delmarva Bays are**

[436] U.S. Environmental Protection Agency, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, 2013. [hereinafter Connectivity Report].

jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

4.484 Some of the wetlands most in danger of losing protection under the CWA are wetlands found in the southeastern United States like pocosins and Carolina bay wetlands. Pocosins, from the Algonquin word meaning "swamp on a hill," occur in the southeastern Coastal Plain from Virginia to North Florida.[437] Seventy percent of the nation's 3.14 million acres[438] of pocosins are found in North Carolina, where they comprise approximately 50 percent of the state's freshwater wetlands.[439] Broadly defined, pocosins encompass all shrub and forested bogs, Atlantic white cedar stands, and some loblolly pine stands on flooded soils. They are rainfall-driven and are usually not connected by streams to major rivers. However, they are often found adjacent to estuaries and have surface hydraulic connections have been linked to water quality and salinity gradients in these estuaries. Scientists suggest that because of this connection and because pocosins cover vast areas on the coast that "these wetlands are connected to regulated waters of the United States."[440]

Carolina or Delmarva bays are depressional wetlands found throughout the southeastern United States from Delaware to Florida, with most bays located in southeastern North Carolina, South Carolina, and northeastern Georgia. They occur in topographic depressions and are shallow and oval shaped, and their shape allows for surface water accumulation. Water sources may be precipitation, surface water flow, streams, or groundwater, and water may exit bays through evapotranspiration, outlets, or to groundwater recharge.[441] Many bays hold water only during part of the year. These bays are home to a wide variety of plants and wildlife, including frogs, salamanders, turtles, snakes and alligators. Migratory waterfowl and mammals like deer, raccoons, and opossums also use the bays. Salamanders and frogs are prolific in the bays and are dependent on these wetlands for use as breeding sites.[442]

A. Chemical Connection

From a water quality perspective, so-called isolated wetlands are rarely completely isolated from other wetlands or traditionally navigable waters. Indeed, wetlands biologist Dennis Whigham suggests that "isolation is a term that is not very useful from an ecological perspective."[443] Geographically isolated wetlands are at times connected to

[437] Curtis J. Richardson, Pocosins: Hydrologically Isolated or Integrated Wetlands on the Landscape?, 23 Wetlands 563, 563-76 (2003).
[438] Friends of Pocosin Lakes National Wildlife Refuge: A Helping Hand to Wildlife. (Apr. 4 2008). http://www.noolf.com/index.cfm/sid.356/nid.2218/do.s/p.2?action=&PageNum_get=2. (last visited Nov. 10, 2014).
[439] U.S. Department of the Interior, The Impact of Federal Programs on Wetlands , Vol. II,. North Carolina: The Pocosins and Other Freshwater Wetlands, http://www.doi.gov/oepc/wetlands2/v2ch16.html last visited Nov. 10, 2014).
[440] Richardson, supra note 41.
[441] Savannah River Ecology Laboratory, University of Georgia, Carolina Bays Fact Sheet (2007), srel.uga.edu/outreach/factsheet/CarolinaBaysFS.pdf (last visited Nov. 10, 2014).
[442] *Id*.
[443] Dennis F. Whigham and Thomas E. Jordan, *Isolated Wetlands and Water Quality*, 23 Wetlands 541, 541-49 (2003).

other waters by groundwater flows, intermittent streams, or overland flows.[444] This connection has been found in bays,[445] pocosins,[446] and limesink wetlands.[447] Because of this hydrological connection, wetlands can have significant effects on the chemical quality of downstream waters. Wetlands can capture and store large amounts of water, acting as sponges. As they absorb flood water, run-off and rain, they filter pesticides, excess nutrients, sediment and other pollutants, protecting the health of downstream tributaries, rivers and wetlands.[448] For example, a 2010 assessment prepared for the U.S. EPA of geographically isolated wetlands in 88 counties of the Carolinas showed that these isolated wetlands stored significant amounts of water and in doing so captured heavy metals, nutrients, and carbon.[449] Accordingly, the loss of geographically isolated wetlands would potentially have negative effects on the quality of downstream waters and the ecological and human communities that rely on them.[450]

Another important example of chemical connectivity between upland wetlands and downstream estuaries and other traditionally navigable waters is the flow of primary production between them.[451] Because of this flow, many species that utilize estuaries benefit from the production of tidal marshes and wetlands even though they never occupy these areas. One study demonstrated that there was rarely a time when the estuarine taxa surveyed did not contain isotopic signatures of all primary producers in the region, including primary producers from distant marshes. The results indicate significant material flow from areas of primary production in marshes to estuarine and open water environments and that wetlands do not function in isolation when supporting estuarine secondary production, but rather are integrated components of larger systems.[452] (p. 20-22)

Agency Response: **The agencies appreciate the contribution of this information to the body of knowledge regarding Pocosins and Carolina Bays. Such information may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.485 Physical Connection

As with chemical connectivity, some wetland biologists regard the term "isolated" to be inappropriate to describe wetlands, because many are hydrologically connected to other

[444] *Id*.
[445] Ge Sun, et al., *Modeling the Climatic and Subsurface Stratigraphy Controls on the Hydrology of a Carolina Bay Wetland in South Carolina*, USA, 26 Wetlands 567, 567-80 (2006).
[446] Richardson, supra note 41.
[447] Stephen P. Ogsahl, *Organic Carbon Composition and Oxygen Metabolism Across a Gradient of Seasonally Inundated Limesink and Riparian Wetlands in the Southeast Coastal Plain, USA*, 76 Biochemistry 47, 47-68 (2004).
[448] Letter from Society of Wetland Scientists to Donna Downing, U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds (April 16, 2003), http://www.sws.org/regional/northcentral/documents/swscommentsisolatedwetlands.pdf (last visited Nov. 10, 2014).
[449] *Assessing Geographically Isolated Wetlands in North and South Carolina: The Southeast Isolated Wetlands Assessment (SEIWA)*, Final Report, Prepared for U.S. Environmental Protection Agency (Feb. 11, 2011).
[450] Whigham, supra note 47.
[451] Michael P. Weinstein et al., *Considerations of Habitat Linkages, Estuarine Landscapes, and the Tropic Spectrum in Wetland Restoration Design*, 40 Journal of Coastal Research 51, 51-63 (2005).
[452] *Id*.

wetlands or TNWs through groundwater flows or intermittent overflows.[453] Hydrologic models of Carolina bay wetlands indicate that the bays are a flow-through wetland system, receiving ground water from the adjacent upland, but recharging the groundwater to lower topographic areas, especially during wet periods in winter months.[454] A later study of a similar area concluded that "the dynamic nature of the hydrology in this Carolina bay clearly indicates it is not an isolated system as previously believed."[455]

Pocosins demonstrate similar physical connections to downstream waters. Pocosins are both important water storage systems and a source of water for the Coastal plains, connecting them to downstream and coastal waters.[456] Because of surface overflow and because pocosins cover vast areas on the coast, wetland biologists consider these wetlands to be connected to regulated waters of the United States.[457] In fact, a survey of U.S. Army Corps of Engineers personnel in North Carolina indicates that most pocosins are considered hydrologically connected to regional waters because they are the primary source of surface water flow on landscapes where they dominate.[458] In accordance with this understanding of physical connectivity, wetlands scientists urge the entire hydrologic system needs to be considered in establishing a definition of hydrologic isolation.[459]

Because of this physical connectivity, many of the ecological functions and benefits attributed to non-isolated wetlands are also accomplished by geographically isolated wetlands.[460] Geographically isolated wetlands perform extremely valuable ecosystem services by trapping and storing flood waters, and in doing so, protect our communities from the effects in severe storms and floods. Healthy wetlands have proven to be effective and natural ways to control floods. One study credits wetlands with $7.7 – 31 billion per year in flood control.[461] A single acre of wetland can store approximately 1 million gallons of flood water.[462] EPA has reported that it would cost $1.5 million annually to replace the natural flood control functions of a 5,000 acre tract of drained Minnesota wetlands alone.[463] Executive Order 11988, issued by President Carter directed federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts

[453] Ralph W. Tiner, Geographically Isolated Wetlands of the United States, 494, 494-516 (2003).
[454] Sun, supra note 49.
[455] Jennifer E. Pyzoha et al., *A Conceptual Hydrologic Model for a Forested Carolina Bay Depressional Wetland on the Coastal Plain of South Carolina*, 22 USA Hydrol. Process 2689 (2008).
[456] Richardson, supra note 41.
[457] *Id.*
[458] *Id.*
[459] Thomas Winter and James W. LaBaugh, *Hydrologic Considerations in Defining Isolated Wetlands*, 23 Wetlands 532, 532-40 (2003).
[460] Tiner, supra note 57.
[461] R. Jan Stevenson, *Protection of Small, Isolated Wetlands in Michigan* (Nov. 30, 2003), https://www.msu.edu/~bakerbe4/portfolio/writing/wetlandspaper.pdf (Last viewed June 2011).
[462] U.S. Environmental Protection Agency, Wetlands: Protecting Life and Property from Flooding, at 1 (May 2006),available at www.water.epa.gov/type/wetlands/outreach/upload/Flooding.pdf (last visited Nov. 10, 2014).
[463] U.S. EPA Wetlands Fact Sheet, EPA842–F–95–001 (Feb. 1995).

associated with modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.[464] (p. 22-23)

Agency Response: **The agencies appreciate the contribution of this information to the body of knowledge regarding Pocosins and Carolina Bays. Such information may prove to be useful in the significant nexus analysis under paragraph (a)(7).**

4.486 Biological Connection

Geographically isolated wetlands, including pocosins and Carolina bays, are biologically diverse ecosystems. The loss of such wetland habitats could have a serious impact on the survival of the species that depend on them. By protecting these wetlands, the Clean Water Act provided one of the few federal safeguards for the protection of these biodiversity resources. Out of the total of 274 at-risk plant and animal species supported by geographically isolated wetlands, 35 percent of species are not known to be supported by any other type of habitat.[465] Additionally, 86 plant and animal species listed as "threatened," "endangered," or "candidate" under the Endangered Species Act are found in geographically isolated wetland habitats.[466] Geographically isolated wetlands support biodiversity in two primary ways: by providing unique habitats that numerous organisms require to complete portions of their lifecycle, such as breeding or overwintering, and by supporting metapopulations on a regional scale.

Numerous species are dependent on geographically isolated wetlands in the southeast. Importantly, because all of these species travel between wetlands, they serve to link wetlands to one another and to other waters. The following are examples of studies that document the presence and movements of species of ducks, frogs, turtles, salamanders, fish, newts, and snakes in southeastern wetlands.

- Wood ducks living in the riverine wetlands of the Tennessee-Tombigbee Rivers and Waterway in Alabama and at Noxubee National Wildlife Refuge (NNWR) in Mississippi traveled to geographically isolated wetlands from these TNWs to geographically isolated scrub-shrub wetlands to breed.[467]
- Green treefrogs, which typically occur in permanent lakes, ponds, swamps and occasionally temporary ponds, were shown to interbreed with barking frogs, which dwell entirely in geographically isolated wetlands. Their hybrids will return to these geographically isolated wetlands to breed.[468]

[464] The provisions of Executive Order 11988 of May 24, 1977, appear at 42 Fed. Reg. 26951, 3 CFR, 1977 Comp., p.117. http://www.archives.gov/federal-register/codification/executive-order/11988.html (last visited on Nov. 11, 2014).
[465] P. Comer et al., *Biodiversity Values of Geographically Isolated Wetlands in the United States*. Nature Serve, Arlington, VA. (2005), http://www.natureserve.org/library/isolated_wetlands_05/isolated_wetlands.pdf (last visited Nov. 11, 2014).
[466] *Id.*
[467] Brian Davis et al., *Survival of Wood Duck Ducklings and Broods in Mississippi and Alabama*. 71 Journal of Wildlife Management 507, 507-517 (2007).
[468] Margaret S. Gunzburger, *Differential Predation on Tadpoles Influences the Potential Effects of Hybridization between Hyla cinerea and Hyla gratiosa*, 39 Journal of Herpetology 682, 682-87 (2005).

- The semi-aquatic Eastern Mud Turtle is a bottom-dweller of shallow, slow moving water bodies and geographically isolated wetlands, but during the late summer and fall, individuals leave their aquatic habitat for extended periods to overwinter on land. Movement between aquatic water bodies is common.[469]
- Chicken turtles, which are found primarily in shallow and seasonally fluctuating wetlands in the southeastern United States but are rare in permanent wetlands, have been documented to move distances of several hundred meters between geographically isolated wetlands.[470]
- Sirens and Amphiumas (salamanders) in the Savannah River Site in South Carolina colonize geographically isolated wetlands through temporary aquatic connections to other bodies of water.[471]
- Fish found in geographically isolated Carolina bay wetlands in the Savannah River Site confirm surface water connections between the wetlands and the Savannah River during times of wetland overflow flooding.[472]
- Red-spotted newts in a series of mountain ponds in the Shenandoah Mountains of Virginia were documented to migrate "en masse" every August and September, moving to and from ponds to breed.[473]
- Several species of aquatic and semi-aquatic worm snakes, found primarily in geographically isolated wetlands formed metapopulations in the Lower Atlantic Coastal Plain of South Carolina during periods of inundation when wetland boundaries expanded and the wetland system became more interconnected.[474]
- Alligators in southern Georgia were shown to form a functional connectivity among the seasonal wetland, terrestrial, and creek–river systems, and that this connectivity is a consequence of the ontogenetic niche shift in habitat use and results in significant movement of energy and biomass. As alligators progress from juvenile life stages to adulthood, they shift from using wetland habitat to using riverine habitat. Females also return to wetlands to breed.[475]

[469] Leigh Anne Harden et al., *Terrestrial Activity and Habitat Selection of Eastern Mud Turtles (Kinosternon subrubrum) in a Fragmented Landscape: Implications for Habitat Management of Golf Courses and Other Suburban Environments*, 1 Copeia 78, 78-84 (2009).
[470] Kurt A. Buhlmann et al., *Ecology of Chicken Turtles (Deirochelys Reticularia) in a Seasonal Wetland Ecosystem:*
Exploiting Resource and Refuge Environments, 65 Herpetologica 39, 39-53 (2009).
[471] Joel W. Snograss et al., *Influence of Hydroperiod, Isolation, and Heterospecifics on the Distribution of Aquatic Salamanders (Siren and Amphiuma) among Depression Wetland*, 53 Can. J. Fish. Aquat. Sci. 443 (1999).
[472] Joel W. Snodgrass et al., *Factors Affecting the Occurrence and Structure of Fish Assemblages in Isolated Wetlands of the Upper Coastal Plain, U.S.A.*, 53 Can. J. Fish. Aquat. Sci. 443, 443-454 (1996).
[473] Douglas E. Gill, *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque)*, 48 Ecological Monographs, 145, 145-166 (1978).
[474] Kevin R. Russell, *Aspects of the Ecology of Worm Snakes (Carphophis amoenus) Associated with Small Isolated Wetlands in South Carolina*, 33 Journal of Herpetology 339, 339-344 (1999).
[475] Amanda L. Subalusky et al., *Ontogenetic Niche Shifts in the American Alligator Establish Functional Connectivity Between Aquatic Systems*, 142 Biological Conservation 1507, 1507-1514 (2008).

In addition to providing essential habitat for a variety of species, the second way geographically isolated wetlands preserve biodiversity is by allowing the formation of metapopulations of organisms on a regional scale.[476] Individuals migrate between geographically isolated wetlands and TNWs via overland corridors that connect them, allowing local populations to form metapopulations, which are essential to maintaining the integrity of local and regional populations.[477] This is called the "rescue effect," a central component of metapopulation theory, which asserts that immigration and recolonization of separate patches of habitat increase the persistence of local populations, and the rate of local extinctions increases as the distance between local populations increases.[478]

Decreasing the amount of geographically isolated wetlands has been shown to reduce the population of species in larger wetlands.[479] This phenomenon has been documented extensively in populations of pond-breeding amphibians like newts.[480] The loss or alteration of any wetland, large or small, reduces the total number of sites at which pond-breeding individuals can reproduce and successfully recruit juveniles into the breeding population.[481] Decreasing the amounts of geographically isolated wetlands reduces the number of individuals dispersing and increases the distance individuals must travel between wetlands, decreasing the species' ability to maintain larger and more viable meta-populations.[482]

For all the reasons stated immediately above, geographically isolated wetlands such as Carolina bays and pocosins need to come under the protections of the CWA. Fortunately, we now have the science to establish the connections between these waters and downstream traditional navigable waters allowing these waters to be defined as waters of the United States by rule. (p. 24-27)

Agency Response: **The agencies appreciate the contribution of this information to the body of knowledge regarding Pocosins and Carolina Bays. Such information may prove to be useful in the significant nexus analysis under paragraph (a)(7). In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates**

[476] J. Whitfield Gibbons, *Terrestrial Habitat: A Vital Component for Herpetofauna of Isolated Wetlands*, 23 Wetlands, 630, 630-635 (2003).
[477] *Id*.
[478] Per, Sjogren, *Extinction and Isolation Gradients in Metapopulations: the Case of the Pool frog (Rana lessonae),* 42 Biological Journal of the Linnean Society 135, 135-147 (1991).
[479] Raymond D. Semlitsch, and J. Russell Bodie, *Are Small, Isolated Wetlands Expendable*? 12 Conservation Biology 1129, 1129-33 (1998).
[480] Gill, supra note 77.
[481] Semlitsch, supra note 83.
[482] *Id*.

that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified pocosins and Carolina Bays in paragraph (a)(7) as two of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that pocosins and Carolina Bays are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

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

4.487 Carolina and Delmarva bays are ponded depressional wetlands that occur along the Atlantic coastal plain from northern Florida to New Jersey. Most bays receive water through precipitation, lose water through evapotranspiration, and lack natural surface outlets. The Connectivity Report identifies several features of these bays that provide evidence of significant physical, chemical, and biological connections with traditionally navigable waters. As the Report states:

> Both mineral-based and peat-based bays have shown connections to shallow groundwater. Bays typically are in proximity to each other or to permanent waters, providing the potential for surface water connections in large rain events via overland flow. Fish are reported in bays that are known to dry out, indirectly demonstrating surficial connections. Amphibians and reptiles use bays extensively for breeding and for rearing young. These animals can disperse many meters on the landscape and can colonize, or serve as a food source to, downstream waters. Similarly, bays foster abundant insects that have the potential to become part of the downstream food chain. Humans have ditched and channelized a high percentage of bays, creating new surface connections to other waters and allowing transfer of nutrients, sediment, and methylmercury.[483]

However, despite acknowledging these connections, the Report goes on to state that "the literature that we reviewed does not provide sufficient information to fully evaluate the impact of Carolina and Delmarva bays on rivers and estuaries at this time."[484] By contrast, the SAB identifies Carolina and Delmarva Bays as "other waters" that should be protected as "waters of the United States."[485]

The UGA report titled "Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters" finds, to the contrary: "While no specific type of significant nexus can be assumed to exist between every [Coastal Plain Depressional Wetland, a category including Carolina and Delmarva bays] and navigable waters, enough evidence exists to presuppose that each CPDW, individually and/or as part of a

[483] Connectivity Report at 5-49.
[484] Id. at 5-57.
[485] SAB Rule Review at 3.

wetland complex, significantly affects the biological, chemical, and/or physical integrity of federally jurisdictional waters."[486]

Throughout most of the year Carolina and Delmarva Bays exhibit limited physical connections to downstream navigable waterways, but several studies have shown groundwater and potential surface water connections during extreme weather events. When neither of these connections exist, Carolina and Delmarva Bays influence the physical integrity of downstream waters by acting as water and sediment storage on the landscape, and often as "water pumps" by allowing water entering the wetlands to leave through evapotranspiration. Whether serving as water and sediment sources or sinks, Carolina and Delmarva Bays have a significant effect on the integrity of downstream navigable waters.[487] Because most Carolina Bays are linked through groundwater interactions or periodic, high surface water flows, these connections allow depressional wetlands to function as a high quality water source, important water storage, and/or significant nutrient sink to navigable waters downstream. Ephemeral wetland hydrology supports the bacteria necessary for denitrifcation; thus, ephemeral Carolina Bays likely reduce ammonia and nitrate levels in navigable waters and maintain ecosystem health. Studies have also shown that Carolina Bay soils retain excess nutrients and heavy metals from long-term additions of agricultural water.[488]

Evidence of biological connections is also abundant. Many invertebrates have specific evolutionary adaptations that cause a significant transfer of energy and nutrients between isolated ephemeral wetlands and navigable waters. Cyclic colonizer insects, common in Carolina bays, can play an important role in the trophic dynamics, nutrient cycling, and ecological stability of the permanent waters they inhabit during a portion of the year, including large rivers and their tributaries, interstate waters, navigable lakes, and their adjacent wetlands. Carolina and Delmarva bays also have a substantial impact on the biological integrity of permanent waters due to the production of other insects such as midges and the migration of birds, including several duck species. Amphibians use Carolina and Delmarva bays, upland, and river networks for breeding, foraging, dispersal, and overwintering. Because they move among these habitats, they facilitate critical flows of nutrients, energy, and genetic information, and serve as links in an interconnected food web. The same is true of numerous birds and mammals.[489]

Additionally, other coastal plain depressional wetlands beyond Carolina and Delmarva bays significantly affect downstream navigable waters. The UGA report evaluating coastal wetland science finds "that Carolina and Delmarva Bays should be grouped with other depressional wetlands of the Coastal Plain to form a broader class of wetlands called Coastal Plain Depressional Wetlands."[490] Limiting the evaluation of coastal depressional wetlands to merely Carolina and Delmarva Bays excludes many

[486] Sam Woolford & Matt Carroll, Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters (July 2014), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578 at 3-4 (hereinafter "Coastal Wetlands").
[487] Id. at 4-5.
[488] Id. at 6-8.
[489] Id. at10-14.
[490] Id. at 2.

depressional wetlands on the southeastern coastal plain that are similar ecologically, and perhaps more importantly, share similar connections to downstream waters. Wetlands that have regional names such as limesinks, citronelle ponds, cypress domes, oak domes, grady ponds, and flat-bottom ponds have been considered by many researchers as some variant of "Southeastern Depressional Wetlands" due to their ecological similarity. The UGA report references numerous scientific studies explaining the physical, chemical, and biological connections that these other wetlands have with traditional navigable waters, similar to the connections found in Carolina and Delmarva bays.[491]

The UGA report concludes, "we posit that geographically isolated depressional wetlands on the southeastern coastal plain, including those called Carolina and Delmarva bays, clearly impact the physical, chemical, and biological processes and functions in river networks, lakes, and coastal waters. Thus, they should be considered a class of Waters of the United States."[492]

This evidence shows that depressional wetlands on the southeastern coastal plain have a significant nexus to downstream waters and should be categorically protected in the final rule. (p. 49-51)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Carolina and Delmarva Bays in paragraph (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina and Delmarva Bays are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Georgia Water Coalition (Doc. #13844)

4.488 There are also other categories of waterways, such as Carolina bays, that deserve regulatory protection without the need to undertake a case-by-case determination of

[491] See id. at 5-6, 8-9, 14-18.
[492] Id. at iii.

whether they qualify as "waters of the United States" for purposes of the Clean Water Act. (p. 2)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Carolina Bays in paragraph (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina Bays are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Atlanta Audubon Society (Doc. #14281)

4.489 Carolina Bays and other depressional wetlands on the coastal plain should be defined as waters of the United States as a class. (p. 1)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Carolina Bays in paragraph (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina Bays are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. At this time, the agencies are not able to determine that the available science supports that depressional**

wetlands on the coastal plain, other than Carolina Bays, Delmarva Bays, and pocosins, as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, individual waters are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

4.490 The Environmental Protection Agency's Office of Research and Development concluded in its Connectivity Report l that it almost had enough scientific evidence to support defining coastal depressional wetlands, such as Carolina Bays and Delmarva bays, as waters of the United States by rule. The attached report reveals that there is a substantial additional body of scientific studies that more than adequately establishes that these depressional wetlands are connected in a significant way to traditional navigable waters. The final rule should find coastal depressional wetlands are waters of the United States by rule.

Such a finding is very important to Atlanta Audubon Society, because approximately 75 species of birds – many of current conservation concern – depend on the habitat that Carolina Bays and other coastal depressional wetlands in Georgia provide. This includes a dozen species of migratory waterfowl and several other species ranging from water birds to songbirds that overwinter in Carolina Bays. This the American Bittern, a high priority conservation species, and Sandhill Cranes. Wood Storks, recently upgraded from "endangered" to "threatened" by the U.S. Fish and Wildlife Service, depend on depressional wetlands for nesting and foraging. In fact, the upgrade of this species' status is due to its success in dispersal to depressional wetlands where the birds were afforded protection from predators and were able to provide enough fish to raise young that fledged. Protecting depressional wetlands would ensure that efforts put forth for this species, and hope for others that are threatened, remain intact.

Approximately 45 species of wading birds, shorebirds, woodpeckers, and songbirds use depressional and other wetlands as stopover habitat and breeding grounds in Georgia. Prothonotary Warbler and Red-headed Woodpecker are examples of species of concern that are dependent on specific features of such habitat for nesting. In addition to species that are already threatened by loss of habitat, National Audubon Society's groundbreaking Climate Report (2014) cites even more species that are at risk due to the effects of global warming. The loss of any native species negatively affects the balance and effectiveness of an ecosystem. Unless depressional wetlands are afforded the full protection of the Clean Water Act, they will continue to be altered and destroyed, adding to the permanent damage to wildlife and ultimately our larger ecosystems. (p. 2)

Agency Response: **See previous response (Response 4.489, Doc. #14281)**

Everglades Law Center and Center for Biological Diversity (Doc. #15545)

4.491 Florida has a number of "other waters," including geographically isolated wetlands that have a significant nexus with traditionally navigable waters and deserve protection under the proposed rule. These wetlands include Carolina Bays, which are ponded depressional wetlands that occur in Northern Florida. As the Corps and EPA explain in their proposed rulemaking, these bays have shown connections to shallow groundwater and are often in close proximity to each other or to open waters, providing the potential for surface water

connections in large rain events via overland flow (as evidenced at times by the presence of fish).[493] Amphibians and reptiles use bays extensively for breeding and for rearing young and as these species disperse and colonize across the landscape, they can serve as a food source to downstream waters.[494] These waters also foster abundant insects that have the potential to become part of the downstream food chain.[495] In some instances these bays have been ditched and channelized, creating new surface connections with other surface waters and allowing the transfer of nutrients, sediment and other pollutants.[496] *The EPA and Corps should conclude by rule that Carolina bays have a significant nexus and are jurisdictional based on these connections and the strengths of their effects, individually or in combination with other bays in the watershed*.[497] (p. 4-5)

Agency Response: **The information provided regarding the various functions provided by Carolina Bays, which is contained in the Science Report, has been considered in the development of the final rule. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Carolina Bays in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina Bays are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

4.492 These and other studies reveal the great importance small, geographically isolated wetlands have for biodiversity and endangered species in Florida. In addition, recent studies have revealed the connectivity many of these waters have with traditionally navigable waters. For example, the physical connectivity between geographically isolated wetlands and traditionally navigable waters was revealed last month, when a group of researchers at the University of Florida (McLaughlin, Kaplan and Cohen 2014) released a study finding a significant hydraulic nexus between geographically isolated

[493] 79 Fed. Reg. 22250-22251.
[494] Id.
[495] Id.
[496] Id.
[497] Id.

waters and more distant traditionally navigable waters via influence to the regional water table and ultimately regulation of downstream base flow.[498]

Agency Response: **The referenced study by McLaughlin, Kaplan, and Cohen (2014) is included in the Science Report.**

4.3.4.3.2 Opposing Approach

SC Chamber of Commerce Comments (Doc. #14535)

4.493 Of specific concern to our state is the fact that the Agencies are also considering the inclusion of other types of water as per se jurisdictional. Our group recognizes and agrees that some of the types of other waters, wetlands or feature s mentioned in the proposed rule are unique and important natural resources. To that end, we have worked with the South Carolina Legislature to evaluate whether such resources as isolated wetlands and Carolina Bays are covered by the CWA and to consider and implement measures to provide incentives for protection of these valuable resources.

However , given the isolated nature of many of these waters or features, they are outside any reason able understanding of jurisdiction under the CWA or even the broader authority of the federal government. Accordingly, we do not agree that the Agencies should, or even have the authority to, regulate such water s unless they are otherwise interstate waters or are physically connected to a traditional navigable water such that they impact those downstream waters. Instead, regulation and management of isolated and un connected waters such as this should be determined on a case by case basis or otherwise left to the States. (p. 3-4)

Agency Response: **The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8). In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or**

[498] McLaughlin, D.L., D. A. Kaplan, and M. J. Cohen. 2014. A significant nexus: geographically isolated wetlands influence landscape hydrology, Water Resour. Res., 50, doi:10.1002/2013WR015002.

in combination with similarly situated waters. Under paragraph (a)(7), the agencies have identified five specific types of waters in specific regions, which includes Carolina Bays, that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that these waters are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. That certain waters without a direct hydrologic connection nevertheless have a significant nexus is supported by the science and the Supreme Court's rulings. See the Technical Support Documentation for a discussion on the science and legal underpinnings of the rule.

Business Alliance for a Sound Economy (Doc. #14898)

4.494 The agencies specifically request comment on whether they should determine by rule that certain subcategories of "Other Waters" are, as a group, jurisdictional. See 79 Fed. Reg. at 22,216. The agencies identify Carolina bays and pocosins as two potential subcategories. Such an assertion of jurisdiction is not supported by the scientific literature. EPA's literature review specifically addresses Carolina bays, concluding that "the literature that we reviewed does not provide sufficient information to fully evaluate the impact of Carolina and Delmarva bays on rivers and estuaries at this time." Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (EPA/600/R-11/098B) at 5-57. The review does not address pocosins, but there is reason to think that the conclusion would be similar. Pocosins are typically "ombrotrophic." *See, e.g., Rapid Assessment Reference Condition Model, R9PCSN Pocosins (Sept. 30, 2005),* http://www.fs.fed.us/database/feis/pdfs/PNVGs/Southeast/R9PCSN.pdf. As the Science Advisory Board notes in its August 11, 2014 draft report, "ombrotophic bogs, which by definition are rain-fed, have minimal groundwater connections to downstream waters." On the spectrum of connectivity, pocosins located outside of floodplains are some of the least likely wetlands to be connected to jurisdictional waters. Accordingly, Carolina bays and pocosins should not be considered jurisdictional by rule and should be assessed on a case-by-case basis. (p. 3)

Agency Response: The final rule does not identify Carolina bays or pocosins as jurisdictional by rule. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified

Carolina Bays and pocosins in paragraph (a)(7) as two of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Carolina and pocosins are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.

4.3.4.4 Texas Coastal Prairie Wetlands

4.3.4.4.1 Supporting Approach

Galveston Bay Council (Doc. #0866)

4.495 A category of wetlands of particular hydrologic and ecological importance on the Texas coastal plain are the depressional wetlands, which are locally referred to as "coastal prairie pothole wetlands." (p. 2)

Agency Response: The agencies recognize the various functions provided by depressional wetlands on the Texas coastal plain. Specifically, the Technical Support Document discusses how these wetlands function together to cumulatively affect downstream waters. The agencies have identified Texas Coastal Prairie Wetlands in paragraph (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.

Ducks Unlimited (Doc. #11014)

4.496 The inland, freshwater wetlands of the coastal prairies of Texas and southwest Louisiana are contained within Level III ecoregion 34, "Western Gulf Coastal Plain." The region is a mosaic of low relief mounds, flats, and depressional wetlands (Moulton and Jacob 2000), and provides another good example of a situation in which it would make little sense to conduct significant nexus analyses for each single point of entry watershed. They are by-and-large aligned along the Gulf Coast, and are all very similar in their fundamental hydrogeomorphic and ecologic characteristics, strongly reinforcing the case for ecoregional analyses.

The wetlands across the region can be locally diverse, but their basic hydrology typically ranges from temporarily flooded to only rarely exposed, much like the prairie potholes. And, they typically occur in relatively high densities. Studying only a relatively small but typical portion of the ecoregion in a 200 mi2 area near Galveston Bay, researchers counted over 10,000 nonriverine palustrine wetlands, with a median size of only 0.9 ac

and 72% being less than 2.47 ac (Enwright et al. 2011). In the aggregate, the wetland basins and their catchments represented over 40% of the study area (Enwright et al. 2011). Like prairie potholes, most are geographically isolated, and are being lost relatively rapidly. In Harris County and the Houston area, 13% were drained or filled over a recent 10-year period (Jacob and Lopez 2005). This is a region and category of wetlands which the SAB September 30 letter to the EPA identified as being similarly situated "other waters" that in the aggregate have a significant nexus that affects the integrity of downstream navigable waters, and therefore should be considered jurisdictional waters of the United States. This landscape is also of considerable importance to waterfowl conservation, so we provide here a short review to highlight and complement the literature that appears in the draft Connectivity Report.

Gulf Coastal Prairie Wetlands: Hydrologic and Chemical Connectivity

In south Texas near Galveston Bay, coastal prairie wetlands are a prominent and important component of the landscape. Two recent studies (Forbes et al. 2010; Wilcox et al. 2011) showed that in the case of these coastal depressional wetlands that have often been considered "geographically isolated wetlands," intermittent surface water connections with the surrounding coastal jurisdictional waterways involved 17-18% of the precipitation falling on the watershed during the study period. Wilcox et al. (2011) demonstrated that the complexes of the wetlands that they studied here in fact exhibited a strong surface water connection with the waterways in the region, serving in effect as headwaters with intermittent but regular discharges to flowing waters and estuaries. Both studies concluded that much of the surface runoff entering the navigable Galveston Bay and other nearby waters likely passes through coastal prairie wetlands, and support the contention that their results can be generalized across the Texas Gulf Coastal Plain. Not only is the nexus between these wetlands and the coastal waters significant on the basis of the quantity of water flows, but Forbes et al. (2010) also found that these wetlands significantly affect the water quality of navigable waters by reducing incoming inorganic nitrogen by approximately 98%, and inorganic phosphorus by 92%. Thus, these wetlands are positioned within the hydrologic flow paths to serve as strong sinks for nitrogen and phosphorus and thereby provide substantial reduction of the pollution of runoff waters that ultimately enter the Galveston Bay estuary. The fixed carbon and nitrogen then exported from these wetlands to the navigable waters provides valuable food web support, thereby creating a biological nexus, as well. Forbes (2007) serves as a useful annotated bibliography for coastal prairie freshwater wetlands as the agencies synthesize the related science for the "other waters" within this ecoregion.

An important and broadly applicable point highlighted by these recent studies of Gulf coastal prairie wetlands is that in the case of at least some, and perhaps many, of the subcategories of "other waters" in ecoregions across the Nation, it is only recently that studies have been conducted to focus on the question of connectivity in the context of the legal issues raised by the recent Supreme Court cases. In the case of these Gulf coastal prairie wetlands, we have a relatively few focused studies that have nevertheless provided strong evidence of connectivity bearing upon their potential designation as "waters of the U.S." by rule. Based on the recent increased rate of research related to connectivity of the type necessary for evaluation of "significant nexus" determinations in the aggregate, we would anticipate a continued and important need to have a process through which new

science will be able to be continually incorporated into the decision making process for what are being termed "other waters." Furthermore, this situation provides additional support regarding the benefits of applying the "weight of the evidence" approach at this important stage of the regulatory process to assess subcategories of "other waters" that could or should be designated as jurisdictional by rule, thereby aiding in providing clarity, certainty and predictability to all parties, and in making the process as efficient and pragmatic as possible. (p. 50-52)

Agency Response: **While the agencies considered aggregation at the ecoregion scale, the final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See Agency Summary Response Essay 7. See response 4.316 (Doc. #13074) and Technical Support Document for a more detailed discussion of the agencies' determination to use the single point of entry watershed as "in the region" referenced by the Supreme Court. The agencies appreciate the contribution of this information to the body of knowledge regarding Texas Coastal Prairie Wetlands and recognize the various functions provided by depressional wetlands on the Texas coastal plain. The Technical Support Document has incorporated the referenced studies and describes how these waters function together to cumulatively affect downstream waters. The final rule does not identify Texas Coastal Prairie Wetlands as jurisdictional by rule. The agencies have identified Texas Coastal Prairie Wetlands in paragraph (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters.**

4.497 Gulf Coastal Prairie Wetlands: Biological Connectivity

This region contains one of the best examples in which migratory birds serve as a strong indicator of biological connectivity that is fully consistent with the findings of the SWANCC decision and Justice Kennedy's language in Rapanos with regards to birds, and does not in any way resurrect the so-called "migratory bird rule" or the way in which birds were used pre- SWANCC to justify CWA jurisdiction.

First, it must be clear that the SWANCC decision did not say or imply that migratory birds were irrelevant to jurisdiction, but rather it simply found that use by migratory birds (i.e., in the fashion of the "migratory bird rule") could not be the sole basis for determining CWA jurisdiction. We accept the interpretation of the SWANCC decision that makes use by a migrating bird essentially irrelevant (setting completely aside the importance of many or most of these wetland areas to interstate and international commerce). But, in the context of assessing the biological basis for significant nexus, a "migrating bird" and a "migratory bird" are two very different things. "Migratory birds" represents a legal categorization of bird taxa that reflects their tendency to migrate between a breeding area and a wintering area, sometimes distant from one another. The U.S. Fish and Wildlife Service is legally responsible for maintaining the list of bird taxa that are considered "migratory species." Other bird taxa are considered resident or nonmigratory species, and spend their entire annual life cycle within a relatively small region.

With the distinction between migrating and migratory birds in mind, we understand that, for example, the fact that a redhead duck (Athya americana) migrating from its breeding habitat in North Dakota stops for a short time at a wetland in central Iowa on its way to its wintering ground on the Texas Gulf Coast, cannot in and of itself be used to assert CWA jurisdiction over the Iowa wetland. However, when a migratory bird (a legal designation of a large category of birds, as opposed to resident or non-migratory species) like the redhead can be shown to be dependent upon both navigable waters and "other waters" within a season and within a relatively local or regional context, then the migratory birds should indeed contribute to the establishment of a significant biological nexus between the "other waters" and the navigable water.

Redheads and lesser scaup (A. affinis) during their wintering period provide excellent examples. Approximately 80% of the entire North American population of redheads winters in estuaries of the Gulf of Mexico, mostly in the Laguna Madre of Texas and Tamaulipas, Mexico (Adair et al. 1996; Ballard et al. 2010). They forage almost exclusively on shoalgrass (Halodule wrightii) in the hypersaline lagoon, which is a traditionally navigable waterway (Ballard et al. 2010). Large numbers of lesser scaup also winter in the Gulf Coast region, and generally forage on invertebrates in the saline and brackish marshes and offshore habitats of Texas and Louisiana (McMahan 1970). Large concentrations of diving ducks in the region, including these two species, must also make daily use of inland, coastal freshwater ponds in order to dilute and excrete the salt loads that are ingested while feeding in the saline habitats (Mitchell et al. 1992; Adair et al. 1996; Ballard et al. 2010). Activity budgets documented that redheads and scaup spent approximately 37% and 25% of their time, respectively, on the freshwater wetlands actively drinking (Adair et al. 1996). While both studies found that redheads and scaup tended to make greater use of wetlands in closer proximity to the coast when they were available, they flew farther inland when necessary during dry conditions to acquire freshwater because they require the freshwater to survive. Adair et al. (1996) found that redheads used wetlands up to 13 miles inland, and scaup used wetlands up to 33 miles from the coastal navigable waters. Thus, these researchers and others (e.g., Woodin 1994) concluded these migratory bird species are dependent upon both the navigable saline waters of the Laguna Madre and Gulf of Mexico, and the inland, geographically isolated freshwater wetlands, throughout the approximately 5-month wintering period. Therefore, if the inland freshwater wetland habitats, i.e., the "other waters," are adversely impacted because of a lack of CWA jurisdiction, the region's ability to support redhead, scaup and other diving duck populations is degraded, and the biological integrity of the traditionally navigable water of the Gulf of Mexico's Laguna Madre would therefore be impacted. The dependency upon both the "other waters" and the navigable waters involved here therefore clearly constitutes a significant nexus that is fully consistent with the legal framework laid out by Justice Kennedy. (p. 52-53)

Agency Response: **As discussed in the Significant Nexus compendium, the case specific analysis uses the modified definition of "significant nexus" in the rule that includes a list of nine functions that may be analyzed for their effect that is more than speculative or insubstantial. One of those functions, (c)(5)(I) includes "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 water identified in paragraphs (a)(1) through (3) of this section." While the agencies**

appreciate the contribution of information to the body of knowledge regarding the relationship between migratory birds and Texas Coastal Prairie wetlands, the (c)(5)(I) function encompasses far more than mere migration of species, and the preamble is explicit that migratory species are not a consideration. Evidence of effect on biological integrity 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 effect on biological integrity 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. This function ((c)(5)(I)) is consistent with both Congress' stated goal of restoring and maintaining the physical, chemical and biological integrity of the Nation's waters and appellate cases interpreting the significant nexus standard. See Technical Support Document for the agencies' scientific and legal interpretation of significant nexus.

4.498 Gulf Coastal Prairie Wetlands: Economic Consequences Related to Hydrologic Connectivity

A series of studies around the Gulf Coast documented the direct, significant impacts of wetland drainage on actual flood damages based on real insurance costs. This is particularly relevant to examine here because the state of Texas consistently has more flood damage than any other state.

Brody et al. (2014) looked at an individual watershed within this ecoregion near Houston, and found that the presence of wetlands was the second-most important land-use-land-cover factor related to flood damages totaling $356 million over 11 years. Of all variables, being surrounded by wetlands had the strongest influence on reducing flood damages. Looking more broadly at a 37-county area along the entire Gulf coast of Texas between 1997 and 2001, Brody et al. (2008) found that alteration of wetlands was strongly correlated with flood damages. They noted that in areas with greater degrees of wetland loss, flood damages increased with a given amount of precipitation. Brody et al. (2007a) conducted a similar examination of flood damage and wetland alteration between 1991 and 2002 over an even more expansive area that included all fourth-order HUCs within 100 miles of the coasts of Texas and Florida. Once again, they clearly demonstrated a strong relationship between wetland loss and alteration and increased flood damage. Importantly, they found that the cumulative effects of many small scale impacts to wetlands had a significantly greater effect on the level of flood damages than did larger, individual impacts. Brody et al. (2011) looked at more than $13 billion in

insured property losses across 144 coastal counties in all five Gulf coast states (plus several counties in extreme southwest Georgia) over the 2001-2005 period. They again found that wetland alteration was a significant factor in explaining flood damages. Similar studies in Florida (Highfield and Brody 2006; Brody et al. 2007b) also demonstrated that flood-caused property damages significantly increased as a consequence of the degree to which naturally occurring wetlands were altered. Thus, this series of powerful studies convincingly demonstrated the direct economic consequences of failure to recognize the connectivity of many "other waters," including geographically isolated wetlands, to downstream waters, and that the cumulative effect of many small, scattered wetland impacts to these wetlands are significant, oftentimes more so than individual larger impacts.

In summary, and in accordance with the conclusion expressed by the SAB in their September 30 letter to the EPA, the available science strongly supports the designation of the "other waters" classed as Gulf coastal prairie wetlands throughout this ecoregion, and in the aggregate, as jurisdictional by rule. (p. 53-54)

Agency Response: **The agencies appreciate the contribution of this information to the body of knowledge regarding Texas Coastal Prairie Wetlands. In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified Texas Coastal Prairie Wetlands in (a)(7) as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that Texas Coastal Prairie Wetlands are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial following a case-specific analysis.**

4.3.4.4.2 Opposing Approach

The Agencies did not identify substantive comments that addressed this topic.

4.3.4.5 Delmarva Bays

4.3.4.5.1 Supporting Approach

Delaware Department of Natural Resources and Environmental Control (Doc. #16558)

4.499 The Delaware DNREC supports the definition of 'other waters' categories on a regional basis. Specifically, Delaware contains many Delmarva Bays, noted among other unique wetland types such as Praire Potholes in the proposed rule, which are exceptional and ecologically diverse wetlands. Delmarva Bays contain many state and globally rare species, but unfortunately legal decisions have left wetland permitting practitioners guessing if Delmarva Bays are isolated wetlands, even though they contribute to the chemical, physical and biological integrity of the irreplaceable Delmarva Bays are protected by the CWA by and within clearly defined regionally specific 'other waters' categories for critically important waters and wetlands that are geomorphically similar. (p. 2)

Agency Response: **The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The final rule does not identify Delmarva Bays as jurisdictional by rule. In the final rule, the agencies have identified by rule that Delmarva Bays are one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial following a case-specific significant nexus analysis.**

Choose Clean Water Coalition, American Rivers, Anacostia Watershed Society, et al. (Doc. #11773.1)

4.500 The Chesapeake Bay watershed is home to several types of important and sensitive waters that are not currently covered by the rule as per se jurisdictional. Coastal plain depressional wetlands[499] are critical to protecting water quality in Maryland, Delaware, and Virginia and should be categorically protected by the Clean Water Act. As noted by University of Georgia scientists in their reports 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, coastal plain depressional wetlands significantly impact water quality of traditionally navigable waters. Specifically, "The chemical and physical impacts of isolated wetlands on downstream waters occur in part because their isolation allows for

[499] Coastal plain depressional wetlands, such as Delmarva bays, are found in the Chesapeake Bay watershed. See http://www.dnr.state.md.us/naturalresource/spring2001/delmarvabays.html

the retention of nutrients, sediment, and water, and the exclusion of these from river networks." In the Chesapeake Bay watershed, where we struggle with excess nutrients and sediment in the Chesapeake Bay and throughout the watershed, protection of these wetlands that capture nutrients and sediment is critical to meeting water quality goals and the Chesapeake Bay Total Maximum Daily Load – all under the Clean Water Act. (p. 3)

Agency Response: In the final rule, the agencies have identified by rule in (a)(7) two types of Coastal Plain Depressional Wetlands, Delmarva Bays and Carolina Bays, as specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. Waters not analyzed under (a)(7) are jurisdictional if they fall within any of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

4.3.4.5.2 Opposing Approach

The Agencies did not identify substantive comments that addressed this topic.

4.3.5 Aggregate in Ecoregion Basis

Ohio Department of Natural Resources, et al., State of Ohio (Doc. #15421)

4.501 It still remains unclear why numerous ecoregions were excluded from the list (including all the Level III ecoregions in Ohio). (p. 15)

Agency Response: The final rule uses the single point of entry watershed as a reasonable and technically appropriate scale to define "in the region." See response 4.316 (Doc. #13074), 4.272 (Doc. #14285) and Technical Support Document for rationale regarding "similarly situated" and "in the region".

4.502 Agency may want to consider reviewing certain landscapes, such as those already drastically disturbed by past (pre-law) mining practices, under a separate review process and approach. (p. 17)

Agency Response: By focusing on whether there is a significant nexus between a water alone or in combination with other similarly situated waters in the region and downstream traditional navigable waters, interstate waters, and territorial seas, the agencies believe the rule contains the necessary flexibility to take these landscape alterations into account.

California State Association of Counties (Doc. #9692)

4.503 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 set (NHD) mapping tool as a method to demarcate catchments surrounding the water. Marking all the relevant waters in the region appears to be a daunting task. The agencies should provide a better description of the method for the public to evaluate; marking in effect all the waters in a region will be very burdensome. (p. 4)

Agency Response: **See Technical Support Document. The final rule has been clarified to include a variety of available mapping tools, such as those based on the NHD, topographic maps, and elevation data, that can be used to demarcate boundaries of the single-point of entry watershed or arid West catchments. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices**
http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm

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

4.504 Significantly, EPA itself has developed detailed maps that indicate vastly expanded areas of federal Clean Water Act jurisdiction under the proposed WOTUS rule. These detailed maps, developed by EPA and the U.S. Geological Survey, were released to the public by the House Science Committee on August 27, 2014.[500] The maps indicate more than 8.1 million miles of rivers and streams across the 50 states could be included under the revised WOTUS definition.[501] This sharply contrasts with a January 2009 EPA report to Congress that estimated 3.5 million miles of rivers and streams categorized as WOTUS.[502] Based on these new EPA maps, the proposed rule represents a potential expansion in federally jurisdictional stream miles of at least130%. This increase is over and above the expansion of federal jurisdiction to "other" or "adjacent" waters under the proposal.

Likewise, analyses by the States of their own waters reveals that the revised definition would increase the amount of stream miles under federal jurisdiction by orders of magnitude. For example, the state of Kansas has estimated that the inclusion of "ephemeral" streams as "waters of the U.S." would increase the amount of jurisdictional stream miles from 32,000 miles to 134,000 miles, as shown below, an increase of more than 400%.[503]

[500] Press Release, House Committee on Science, Space & Technology, "Smith: Maps Show EPA Land Grab" (August 27, 2014) (the map hyperlink is embedded in the release).
[501] EPA and the Corps consider these revised maps to be good indicators of the extent of federal jurisdiction. The agencies noted that "[w]hen considering whether the tributary being evaluated eventually flows to [a navigable] water, the tributary connection may be traced using direct observation or U.S. Geological Survey maps, aerial photography or other reliable remote sensing information, or other appropriate information." 79 Fed. Reg. 22,202 (April 21, 2014) (emphasis added).
[502] EPA Office of Water, National Water Quality Inventory: Report to Congress, EPA 841-R-08-001 (January 2009).
[503] See Letter to Nancy Stoner, Acting Assistant Administrator for Water, U.S. Environmental Protection Agency from Sam Brownback, Governor of Kansas (July 14, 2011) ("For Kansas, we can easily see where this [the WOTUS definition] would bring up to 100,000 miles of ephemeral drainages under the purview of the Clean Water Act and subject those drainages to its numerous mandatory requirements – requirements producing little if any demonstrable improvement in water quality.").

The expanded jurisdictional areas depicted in maps prepared by EPA and the States, respectively, are based primarily on the Agencies' proposal to define "ephemeral" streams—those that only flow after rains, perhaps only once every few years—as waters of the U.S. Ephemeral streams are currently regulated in the majority of States as "waters of the State."16 Regulating these waters (which look more like land than "waters" to most people)—and any small wetlands and ponds "adjacent" to them—as WOTUS would be one of the largest regulatory expansions in history. (p. 6-7)

Agency Response: **The agencies disagree that the analysis of "significant nexus" to classify waters is imprudent expansion. See Tributaries compendium and the Technical Support Document outlines the agencies legal and scientific rationale supporting the use of "significant nexus." In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. The rule allows case-specific application of the significant nexus standard only in the limited circumstances described in (a)(7) and (a)(8).**

The rule definition of "tributary" requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not "waters of the United States." As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. *See, e.g.,* SAB 2014b. These significant effects on traditional navigable waters, interstate waters, and the territorial seas occur even when the tributary is small, intermittent, or ephemeral.

The agencies do not have a nationwide or statewide maps that identify waters subject to the scope of "waters of the United States." Sources of data, mapping tools and aerials are regularly updated by federal, state, local entities to ensure accurate information is available to the public. The development maps of jurisdictional waters requires site-specific knowledge of physical features of waters bodies the agencies have no plans to undertake such a task. This task would be cost prohibitive and require access to private lands. As set forth in the Preamble and the Technical Support Document, the agencies support the use of remote sensing of information and mapping as tools to identify waters and in particular tributaries as discussed in the preamble. These tools are helpful when site visits are not possible or in enforcement cases when the resource has been disturbed or no longer exists. Many commenters suggested the agencies produce database and map records of waters

once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

Water Advocacy Coalition (Doc. #17921.14)

4.505 The Proposed Rule solicits comment on whether the science supports identification of subcategories of "other waters" that could be found to be categorically jurisdictional. But the alternative "other waters" approaches described by the Agencies are flawed and not supported by the science. The Connectivity Report does not evaluate the alternatives of aggregating "other waters," either by Ecoregion or by hydrologic-landscape region. Some SAB panel members (Rodewald 2014) recommended against the use of Ecoregions, while some panel members suggested hydrologic-landscape regions as an alternative to identifying similar situated "other waters."

The categorical aggregation of multiple kinds of "other waters" by rule is not supported by the science. In large part, this is because the Ecoregion and hydrologic-landscape unit approaches both suffer from being too broad, and are not placed within a consistent framework of determining significance. First, the extent of area proposed to be covered using the Ecoregion concept covers nearly a quarter of the country. Although the Agencies did not specify which hydrologic-landscape units they intend to use for jurisdictional purposes, the areas again are too broad. In fact, Wolock et al. (2004) found evidence that although hydrologic-landscape regions were more strongly associated with water quality characteristics than Level II (not Level III) Ecoregions, the Ecoregions were more strongly associated with vegetation characteristics. Because potential natural vegetation is likely a key factor in wetlands, the hydrologic-landscape region concept may poorly protect wetlands if it cannot adequately characterize them. Thus, neither the Ecoregion nor the hydrologic landscape approach appear adequate to support categorical determinations of jurisdiction.

Second, the Agencies anticipate that if it can be determined that all "other waters" within an entire Ecoregion are similarly situated, then all "other waters" within the Ecoregion could be determined to have a significant nexus, and therefore would be jurisdictional. However, this would then apply to, and make categorically jurisdictional, multiple categories of "other waters," even those which would be classified differently and do not perform functions similar to those being examined. Again, this is not supported by the science.

Third, the list of factors that the Agencies provided (Proposed Rule at 22,216) as the basis for their proposed list of Ecoregions does not indicate how many of these requirements would be necessary for determining which Ecoregion would be included in the list. Several of the factors are subject to the gradient of connectedness that was discussed by the SAB (USEPA 2014) and recognized in Appendix A as a "continuum" (Proposed Rule at 22,250). For example, the West Coast vernal pools are considered to exist along a gradient of connectedness in that the further upland the pool is, the less it is "connected" to the tributary; yet, by the Agencies' aggregation theory, it would be considered as connected as a pool that is very close geographically. As another example, prairie potholes are considered to be important in retaining precipitation and reducing flooding from overland flows, yet there is rarely a surface connection to a tributary.

There are several other problems with the factors identified in the preamble, including the following:

- Factor b (soil permeability and surface or shallow subsurface flow) suggests that the wetlands may be hydrologically connected through surface or shallow subsurface flow. This would seem to make them "tributaries," per the Agencies' own tributary definition (Proposed Rule at 22,199).
- Factor c (water chemistry) considers the similarity of water chemistry to the receiving waters. It is unclear whether this factor can stand on its own, or what to do if it contradicts other factors. The nutrient concentrations in Texas coastal prairie wetlands are different from those in Galveston Bay and its tributaries (Forbes et al. 2012), yet it is assumed that their flood retention and nutrient transformation from that found in precipitation qualifies them as significantly connected to the receiving waters. Alternatively, the water chemistry in many small wetland systems (e.g., prairie potholes) changes naturally over time into conditions that would be considered impaired (e.g., low dissolved oxygen concentrations).
- Factor f (proximity) is particularly poorly worded, as it does not even assume that the species in question occurs in the tributaries or is even reliant upon the tributaries. As currently worded, a handful of neighboring wetlands a hundred kilometers from any tributaries could be considered to be waters of the United States because they support or provide an integrated habitat for a single species. We note that the SWANCC Supreme Court ruling already prohibits the use of migratory birds into and out of wetlands as a "connection."

For all of these reasons, the science does not support the use of the alternative Ecoregions or hydrologic-landscape unit approaches to assert categorical jurisdiction over certain "other waters."

Nor does the science cited by the Agencies support the establishment of subcategories of other waters (e.g., prairie potholes, vernal pools) that are jurisdictional by rule. The preamble cites case studies from the Connectivity Report to support a potential determination that certain "other waters" have a significant nexus and are thus categorically jurisdictional (Proposed Rule at 22,250-51). But these case studies, as explained below, do not support such categorical jurisdiction.

- From the case study on Carolina and Delmarva Bays, the Connectivity Report concluded that "the literature that we reviewed does not provide sufficient information to fully evaluate the impact of Carolina and Delmarva bays on rivers and estuaries at this time." Therefore, this case study does not provide support for categorical jurisdiction over Carolina and Delmarva Bays.
- From the case study on prairie potholes, the Connectivity Report concluded that, although the degree of influence on downstream water was variable, under some conditions, "measurable influence on the physical, chemical, and biological condition and function of downstream waters is highly likely." As discussed throughout this document, "measurable influence" does not necessarily rise to the

level of significant nexus. Therefore, this case study does not provide support for categorical jurisdiction over prairie potholes.

- From the case study on vernal pools, the Connectivity Report concluded that, although the degree of influence on downstream waters was variable, "evidence supports the existence of hydrologic and biological connection" between vernal pools and downstream waters. Again, the "existence" of a connection does not necessarily rise to the level of significant nexus and, therefore, this case study does not provide support for categorical jurisdiction over vernal pools.

Therefore, based on our review, most of the conclusions from the relevant case studies in the Connectivity Report were that "other waters" would have a connection, albeit of limited frequency, magnitude, duration, predictability, and/or consequences (i.e., strength) to downstream waters. However, the case studies do not provide – nor are they interpreted within – a consistent framework for evaluating significance on the integrity of downstream waters. These case studies thus suffer from the same flaw we discussed in Section 1.0 and have reiterated throughout this review: the Agencies treat any observable connection of any strength as "significant" and, therefore, as justification for jurisdiction by rule. The science presented in these case studies does not support assertions over these subcategories of "other waters."

The remaining options provided by the Agencies involve either including all "other waters" as jurisdictional by rule, or excluding all "other waters" as jurisdictional by rule. The former is too broad and potentially overreaching, since the Agencies themselves provide evidence that playa lakes, for example, lack the connectedness to make them jurisdictional, while the latter could allow for the possibility of making certain "other waters" jurisdictional on a case specific basis. (p. 177-180)

Agency Response: **See Agency Summary Response Essay 1. the Summary Response regarding limits that the rule places on which waters could be subject to a case-specific significant nexus determination and the limited subcategories of waters that are "similarly situated" for the purposes of a significant nexus analysis. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. Additionally, See response 4.1 (Doc. #16386), the Technical Support Document, the Preamble, and the Summary Response for rationale regarding why 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.**

ERO Resources Corporation (Doc. #14914)

4.506 If the agencies decide to use ecoregions or distinct areas to help evaluate other waters, they should also consider annual precipitation as a factor and the arid West as a "distinct area." The Corps defines the distinct area of "arid West" for its Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) as encompassing a wide variety of landforms and ecosystems, but is differentiated from the surrounding areas by its predominately dry climate and long summer dry season. (p. 29)

Agency Response: **See the preamble regarding an alternate catchment demarcation where the single point of entry watershed, such as in the arid West, may be very large.**

Continental Resources, Inc. (Doc. #14655)

4.507 Continental's SCOOP play is a large area in western and central Oklahoma where the topography ranges from the broad floodplains of large rivers to narrow and steep valley heads. The climate typically supports grasslands, with wooded areas limited to along streams and higher elevations with lower evaporation rates. The analysis of the Proposed Rule considered two distinct study areas denoted as Study Area A (500 acres) and Study Area B (1,500 acres) within Continental's larger SCOOP project area and lease holdings. Study Area A included the following: a named creek and its unnamed tributary, both classified as jurisdictional under current regulations; ponds and impoundments, only a portion of which are mapped as wetlands; isolated open water areas, none of which is currently classified as jurisdictional; and wetlands along the unnamed tributary which would likely be classified as jurisdictional under current regulations. Study Area B is characterized by steep ravines and ridge tops and includes the following: numerous unnamed streams and tributaries to named creeks that are likely classified as jurisdictional under current regulations (41,044 linear feet of jurisdictional stream); and multiple small diked or bermed impoundments some of which were wetlands, with only some assumed to be jurisdictional under the current regulations.

Within Continental's SCOOP play, these two study areas represent the greatest potential for expansion of jurisdiction under the Proposed Rule. Because most streams and wetlands within the floodplains of major rivers are already regulated, there is very little potential for jurisdiction in these areas to expand. The Report findings may be extrapolated to other regions in the SCOOP play. The applicability will vary depending on climate and topography. The analysis of the SCOOP play discussed below could reasonably be extrapolated to sub-mesic or semi-arid landscapes within the play, but the two study areas are not representative of areas where precipitation is greater than these landscapes. In areas where precipitation is greater than the study areas, there would be a greater likelihood for wetlands and an associated increase in the area of wetlands and "other waters" potentially subject to federal regulation under the Proposed Rule. It is likely that the specific ratios of increase in streams and wetlands would vary somewhat, but the results for the total area of the SCOOP play would likely display a similar composition of expanded jurisdictional waters, with the exception of areas along major rivers. The amount of adjacent land that could be subjected to increased stormwater controls would vary among locations within the play but also would likely be similar for similarly situated areas.

Principal results of the analyses within the SCOOP play are:

- Most wetlands in the SCOOP play occur along rivers and are jurisdictional under current regulations. There is limited potential for addition of jurisdictional wetland areas even under the broadest possible interpretation of a floodplain or a very broad interpretation of groundwater connectivity due to the relatively small number of wetlands in the region.

  - Due to the climate of the region, there are few wetlands within the SCOOP play that are not jurisdictional under current regulation. Approximately 5 acres of wetlands (approximately one-quarter of one percent ofthe total study area) would be added across the approximately 2,000 acres of the two study areas. While the absolute number is small, the potential increase in jurisdictional area of wetlands was approximately 40 percent in Study Area A and 100 percent in Study Area B.
  - These wetlands are generally widely scattered across the landscape and are not directly related to other waters.
  - Because of the limited amount of wetlands, there is little potential for increased permitting costs or permitting-associated schedule delays as a result of expanded federal jurisdiction over wetlands.

- There is substantial potential under the Proposed Rule for expansion of jurisdiction along headwater drainages through capture of additional lengths of streams. In Study Area B, there are 21,507 linear feet of additional headwater ephemeral streams (within the approximately 1,500 acres of the study area), a 52 percent increase in jurisdictional area, that may be jurisdictional under the Proposed Rule.
- The potential expansion of jurisdiction along headwater streams could result in increased permitting efforts.
  - Headwater areas may be classified as 'jurisdictional by rule" or could instead be placed in the class of "other waters" that would require a case-by-case determination of whether they are jurisdictional.
  - If individual analysis is required for these waters, increased field studies could be required to determine whether headwater streams are jurisdictional.
  - There also could be increased time for the Corps of Engineers to complete JDs on each headwater drainage. Currently there is no regulatory time limit for the Corps of Engineers to complete a JD. Some Corps of Engineers districts have placed substantial paperwork requirements on submission of JDs and eliminated presumptive JDs (i.e., assume water is jurisdictional and complete permit activity without formal JD), which would further lengthen the permit review and approval process.
  - The JD process can be more costly than the permit application process with a presumptive JD and could increase the time for getting a permit by a factor of 3.

The potential for expanded federal jurisdiction and associated case-by-case JDs would potentially have the following impacts:

- Selecting locations for pipeline corridors, either for transport of oil, gas or produced water, would likely become more at risk. The topography and length of any of these corridors would dictate potential delays and level of siting effort

required to mitigate potential delays. In any case, these activities would potentially require greater cost and time to complete JDs and receive permits.

- Siting access roads to pads, infrastructure, and pipelines would likely become more challenging. Because these access corridors are likely to be more extensive, wider, and prefer to follow least cost routes, establishing acceptable routes would be challenged to avoid crossings of headwater drainages with associated greater cost and time to acquire permits.
- Development of SPCC plans and stormwater controls would likely become more involved as there would potentially be an increased number of receiving waters. There may also be a new requirement to prepare resource-intensive FRPs for some facilities. The time to develop such measures also could be increased due to the need to wait for a JD.
- There would likely be minimal direct impacts on the siting and development of pads. Because of the narrow nature of these headwater drainages, the amount of land they encompass is not that large, and it should be possible to micro-site pads that would avoid direct encroachment into headwater drainages. (p. 25-27)

Agency Response: **See Agency Summary Response Essays 1, 2 and 3.**

County of San Diego (Doc. #14782)

4.508 The significant nexus determination should be retained for determining jurisdiction for "other waters." The new rule proposes to automatically consider "other waters" jurisdictional by definition based on the ecoregion or hydrologic landscape region. In the Federal Register posting, the agencies specifically request comment on alternate approaches to determining whether "other waters" are similarly situated and have a "significant nexus" to a traditionally navigable water, interstate water, or territorial seas. The discussion suggests alternative approaches such as evaluating significant nexus based on ecoregions or hydrologic landscape regions. However, considering "other waters'' jurisdictional by definition, based on an ecoregion or hydrologic-landscape unit, could result in "other waters" without actual connectivity being considered jurisdictional and requiring costly mitigation and permits. The County recommends that all "other waters" continue to be evaluated as potentially jurisdictional based on the "significant nexus determination" made in the context of on-the-ground conditions. (p. 8)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters.**

Xcel Energy (Doc. #18023)

4.509 EPA and cooperating federal agencies distributed to the House Committee on Science, Space, and Technology preliminary mapping that depicts an exhaustive, state-by-state inventory of watercourses/bodies. EPA should revise the Proposed Rule to specifically reference the nine watercourse/body classifications that are included on each map, including general guidance about which classifications are or would become jurisdictional, which may be jurisdictional under certain circumstances (and define those circumstances), and which will likely be excluded from jurisdiction. Improving the connection between the Proposed Rule and mapping will provide a basis for meaningful discussion of the Proposed Rule, including expansion of the rules to address important regional characteristics that should be considered by the regulating agencies. (p. 9)

Agency Response: The agencies do not have a nationwide or statewide maps that identify waters subject to the scope of "waters of the United States," sources of data, mapping tools and aerials are regularly updated by federal, state, local entities to ensure accurate information is available to the public. The development maps of jurisdictional waters requires site-specific knowledge of physical features of waters bodies the agencies have no plans to undertake such a task. This task would be cost prohibitive and require access to private lands. Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168) The agencies support the use of remote sensing of information and mapping as tools to identify waters and in particular tributaries as discussed in the preamble. These tools are helpful when site visits are not possible or in enforcement cases when the resource has been disturbed or no longer exists. See response 4.13 (Doc. #14602), 4.330 (Doc. #10196)

Environmental Defense Fund (Doc. #14946)

4.510 EDF strongly supports the agencies' recognition of the importance of protecting "other waters"[504] and their resulting request for comment and scientific, technical and scientific data to support categorical protection of similarly situated waters in an ecoregional or hydrologic landscape scale that have a significant nexus to downstream navigable waters. EDF urges the agencies to include protection in the final rule for as many types of waters, such as prairie potholes, at the ecoregional or other hydrologic landscape level as the administrative record supports as meeting the significant nexus test on a categorical basis at the ecoregional or hydrologic landscape level. This is critical to achieving the goals of the Clean Water Act as well as the agencies' goals to provide greater clarity, transparency, and predictability. We further suggest that as sufficient additional scientific information comes to light, the agencies periodically amend the rule to include additional categories of waters protected at the ecoregional or hydrologic landscape scale. (p. 5)

[504] "Other waters" are waters that do not fit into any of the proposed categories of waters of the U.S. in the proposed rule (79 Fed. Reg. 22189, 22211).

Agency Response: **The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters.**

The final rule identifies 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. 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 the specified subcategories are similarly situated by rule in the single point of entry watershed 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 agencies will continue a transparent review of the science, and gain 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.

Amigos Bravos (Doc. #14974)

4.511 We are concerned that the proposed Rule does not do enough to protect isolated waters like playa lakes and waters in closed basins. Waters within the closed basins in New Mexico (Tularosa, Mimbres, Estancia, San Augustine, Salt, Southwestern and North Plains Basins) cover up to one fifth of New Mexico and include 84 miles of perennial streams, 3,900 miles of intermittent waters, 4,000 playa wetlands, and numerous headwaters, springs, cienegas and isolated wetlands.[505] There are over 20,000 playa lakes in eastern New Mexico and west Texas, a region that supports some of the most concentrated areas of playa lakes in the country.[506] Playa lakes provide habitat for many New Mexican animal species. At least 37 mammal species use playas nationwide for some or all of their life cycle. In addition, there are 185 bird species in 41 families reported in playas.[507] In New Mexico, there are 131 species that are documented as using playas and closed basins which include 28 game species and 10 species that are considered culturally important to Pueblo Tribes (Exhibit 5) In addition, there are 3 federally endangered (Interior Least Crane, Whooping Crane, and the Brown Pelican) and 2 federally threatened species (Mountain Plover and Piping Plover) that are found in NM playa lakes (Exhibit 6). New Mexico playas are also a primary recharge for the

[505] Written Testimony of Ron Curry, Secretary of the New Mexico Environment Department, before the United States House of Representatives' Transportation and Infrastructure Committee Regarding the Clean Water Restoration Act (HR 2421) July 17, 2007

[506] Haukos, D. A. and L. M. Smith. 1994. The importance of playa wetlands to biodiversity of the Southern High Plains. Landscapeand Urban Planning 28:83–98.

[507] Id.

Ogallala aquifer of the southern high plains. Photos of many of New Mexico's playa lakes can be found in Exhibit 7. (p. 4)

Agency Response: **While playa lakes have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, as the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Playa lakes and other waters not analyzed under (a)(7) are jurisdictional where they fall within one of the a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Nebraska Wildlife Federation (Doc. #15034)

4.512 Although we were unable to find "Map A" on the EPA website related to the possible list of Level III ecoregions where waters are similarly situated and aggregation could be used, we agree that the Nebraska Sand Hills is an ecoregion where wetlands appear to be similarly situated and where aggregation could be used. We also believe the Prairie Potholes region (which could be included in one of the other named ecoregions) is such a region. (p. 2)

Agency Response: **While Nebraska Sandhills have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, as the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Nebraska Sandhills are jurisdictional where they meet fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. With respect to prairie potholes, 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 the specified subcategories are similarly situated by rule in the single point of entry watershed 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 agencies will continue a transparent review of the science, and gain 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.**

Friends of the Kalmiopsis (Doc. #16669)

4.513 The primary focus of our comments is a unique region of great national significance in northwest California and southwest Oregon. The area is watershed to three national wild and scenic rivers—the North Fork Smith, Chetco and Illinois— and host to one of the highest concentrations of rare and endemic plants in North America. The area's pure water and unusual serpentine geology are foundational elements driving its unique character and national, if not global, importance.

Our intention is to call EPA and the CORPS attention to the high value conservation waters of the region so they receive full protection under the Clean Water Act. This is of particular importance at this time because the area is facing unprecedented threat from a foreign owned mining company's intent to develop nickel laterite strip mines in mostly wilderness or inventoried roadless area watersheds. Our concern is that the region, with its unusual and unstudied hydrogeologic setting, rare wetlands and rivers with exceptionally pure waters, will fall through regulatory cracks.

We're unsure which, if any category, many of these waters will fall into. Do all meet the proposed definition of "waters of the United States" or are some in the category of "ecological regions" needing an "alternative approach" to identify the significant nexus between the springs, wetlands, tributaries, and navigable and interstate waters?

Those familiar with this singular area know a significant nexus exists, for example, between hill slope serpentine Darlingtonia wetlands and the river or tributary below. However, the connection is rarely apparent on the ground. While rare plant inventories have been conducted from many of the more accessible wetlands, and it's known that alterations in their hydrology have serious consequences, there has been no study or examination of the springs that are responsible for the formation of the wetlands and the presences of the rare and often endemic plants.

Of equal concern is lack of understanding and knowledge of how these often upland hydrologic features are connected to the tributaries and rivers flowing through this singular landscape.

Often what we know about the area is driven by proposals to exploit the area's mineral resources. The same geologic, climatic and evolutionary processes that developed the mineral concentrations are responsible for the extremely special and unique environment.[508] By their nature, these environmental documents provide only a cursory examination of the hydrogeologic processes responsible for the areas exceptional water quality, rare wetlands and great beauty.

In addition to seeking comments on the proposed definition of waters of the United States, the April 21, 2014 Federal Register Notice (FRN) states that:

> "The agencies seek comment on a number of alternative approaches. These alternatives include potentially determining waters in identified ecological regions (ecoregions) or hydrologic-landscape regions are similarly situated for purposes of evaluating a significant nexus, as well as the basis for determining which ecoregions or hydrologic-landscape regions should be so identified. The agencies also solicit comment on whether the legal, technical and scientific record would support determining limited specific subcategories of waters are similarly situated, or as having a significant nexus sufficient to establish jurisdiction."

Agencies and scientists have just scratched the surface of understanding this unique region and its exceptional waters. We try to present some of the available information

[508] US Forest Service, 1999, Nicore Mining Plan of Operations Record of Decision (R6-11-079-99), Siskiyou National Forest - http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/12297/NicoreMiningRecordDecision.pdf?sequence=1

below. In addition we raise concerns about some of the data or information on EPA's website for the Proposed Rule that specific to our area of interest.

Defining the landscape or region of concern

Throughout these comments we use the term serpentine or serpentine terrain to define a specific landscape or subregion. Following the tradition of the U.S. Forest Service and geoecologists we use the term "serpentine" to refer to the areas ultramafic rocks, soils developed from them, and plant's growing on them.[509] We would add that waters produced in these areas also need to be added to the list.

Ultramafic rocks are those with very high magnesium and iron concentrations. In our area of concern, there are also concentrations of toxic metals such as nickel, cobalt and chromium. In other words, we're using the term "serpentine" or "serpentine terrain" as the short code for a specific landscape and all its elements.

Serpentine environments are globally limited but not unique to our area of concern. However, of the western North American serpentine complexes, the largest contiguous areas of serpentine are found in the Klamath-Siskiyou Mountains.[510]

While the underlying geology may be similar, serpentine influenced areas vary greatly. The U.S. Forest Service in their analysis of serpentines in northwest California state that "vegetation on serpentine sites changes dramatically when examined throughout California."[511] For example in southern California serpentine areas are dominated by chaparral.

Within the general area of our interest—the Klamath-Siskiyou Region of southwest Oregon and northwest California—are four large ophiolites with significant expanses of serpentine terrain. Together, they're known as the Klamath- Siskiyou Serpentines.[512] Similar in many ways due to the underlying geology, each has very distinctive characteristics, dependent on age, climatic influences, isolation and size. The serpentine terrain of the Klamath-Siskiyou is responsible for much of regions plant diversity. The U.S. Forest Service writes that:

"The Klamath-Siskiyou Mountains are considered a center of diversity and endemism. Species or species assemblages occur in this geographic area and nowhereelse in the world. Much of the area's diversity is attributed to the extensiveness of serpentine landscapes and the endemic species they support."[513]

We go a step further in our analysis by adding in—as factors influencing the species richness, diversity and endemism—the high precipitation amounts, coastal influence and

[509] See for example - http://www.fs.fed.us/wildflowers/beauty/serpentines/ and Earl B. Alexander, et al in Serpentine Geoecology of Western North America - http://books.google.com/books?id=-3F5FAy8-VoC&pg=PA34&lpg=PA34&dq=Robert+G.+Coleman,+serpentine&source=bl&ots=vna9SaPavI&sig=laJH4OWoFmej0h7E8h8VqJLnG74&hl=e

[510] Robert G. Coleman and Arthur R. Kruckeberg, 1999, "Geology and Plant Life of the Klamath-Siskiyou Mountain Region," in Natural Areas Journal, Volume 19(4).

[511] USDA Forest Service, 1995, A Field Guide to Serpentine Plant Associations and Sensitive Plants in Northwestern California, Pacific Southwest Region, R5-ECOL-TP-006.

[512] http://www.fs.fed.us/wildflowers/beauty/serpentines/

[513] http://www.fs.fed.us/wildflowers/beauty/serpentines/center/index.shtml

size and continuity of the serpentine terrain of the Klamath-Siskiyou's Josephine ophiolite. These factors help drive this specific part of the region's uniqueness, high concentration of rare and endemic plants, concentrations of serpentine associated wetlands and the beautiful rivers, which we believe are one-of-kind. John Sawyer writes that the Josephine ophiolite boasts the highest number of endemic vascular plants (70) of any outcrop of serpentine substrates on the continent.[514]

While most studies of the area focus on serpentine's influence on plant associations, serpentine terrain also exerts a strong influence on the area's rivers and is responsible for the formation and species composition of one of the rarest vegetation types in North America—the Klamath-Siskiyou's serpentine Darlingtonia wetlands.[515] Figure 1 on page 3 shows the high concentration of these wetlands in area of the Josephine ophiolite and in particular on the west side of the Illinois Valley where Rough and Ready Creek and Josephine Creek are located.

Because of the unique hydrogeologic setting of watersheds that are heavily influenced by serpentine geology and the rare wetlands associated with the serpentine terrain of the Klamath-Siskyous, this region deserves special consideration by EPA and the CORPS in order to protect their nationally outstanding values and exceptional water quality.

Serpentine influenced wild and scenic rivers

Three national wild and scenic rivers may be unique in this regard. The Chetco, Illinois and North Fork Smith Rivers. We primarily discuss the North Fork Smith. Three tributaries of the above wild and scenic rivers, flow to a varying extent through serpentine terrain of the Josephine ophiolite in Oregon. Each has been found nationally outstanding by the U.S. Forest Service and as such eligible to be added to the National Wild and Scenic River System. The agency's wild and scenic eligibility studies provide a glimpse of the significant nexus between the springs and wetlands in their watershed and the streams themselves.

The North Fork Smith River of Oregon and California

Of the three the North Fork Smith has the highest area of serpentine within its watershed. Approximately half of the river's watershed is in Oregon and half in California. In California, all the major tributaries of the North Fork are designated wild and scenic rivers. The river and its tributaries are within the Smith River National Recreation Area and the North Fork Smith Botanical Area and flow through the southern extent of the Josephine ophiolite.

California's iconic Smith River is known for its beautiful clear waters. However, of all the river's tributaries, the North Fork Smith River is considered to have the most outstanding water clarity.[516]

The North Fork Smith River provides pure drinking water for the community of Gasquet, California where is joins the Middle Fork Smith. The Smith River is the drinking water

[514] Sawyer, John O. Northwest California: A Natural History, University of California Press, 2006.
[515] http://harvardforest.fas.harvard.edu/ellison/current-research/summary-mechanisms
[516] US Forest Service, 1995, Smith River Ecosystem Analysis, Smith River National Recreation Area and Six Rivers National Forest, October 1995, Version 1.0.

source for Crescent City and Hiouchi. The North Fork Smith flows out of the Kalmiopsis Wilderness and the South Kalmiopsis Roadless Area in Oregon. It's watershed is considered in near pristine condition. This is evident even at high water levels when the river remains relatively clear. Kayakers who run the river at high and lower flows provide photographic evidence of the North Fork Smith's water clarity.[517]

In Oregon, only the mainstem of the North Fork Smith is designated a wild and scenic river. It's outstanding values are: water quality, fisheries and scenery.[518] These values are dependent on the water and habitat provided by the rivers tributaries and associated wetlands.

Baldface Creek

The first eligible wild and scenic river we discuss is Baldface Creek, a tributary of the North Fork Smith. Eighty percent of the approximately 19,000 acre watershed is underlain by the serpentine geology of the Josephine ophiolite. The Creek and it's watershed are in reference condition according to a 2005 Level II Stream Survey. The U.S. Forest Service's Wild and Scenic River Eligibility Study for Baldface Creek and it Tributaries conclude that:

> Baldface Creek provides some of the best quality water and fisheries habitat known on the Siskiyou National Forest. The world-class fisheries on the Smith River depends on the water and fish produced in the Baldface Creek drainage.
>
> Numerous springs are fed by groundwater from the highly fractured ultramafic bedrock. The cold water from the seep and fens, although not great in quantity, contribute to cool summer stream temperatures.
>
> There are numerous small wetland seeps, Darlingtonia bogs and springs that aid in maintaining lower temperatures.
>
> At least six small lakes or pond are scattered throughout the drainage.

Baldface Creek contributes substantially to the world-class fishery of the North Fork Smith River. It provides near-pristine spawning and rearing habitat and is a source of high quality water on which the anadromous fishery of the Smith River depends.

These findings were from a relatively cursory study. We believe that further investigation of the watershed will show an even greater ground water/spring influence. For example, initial investigation by Forest Service botanists and stream surveyors have identified previously unmapped serpentine Darlingtonia wetlands along Taylor Creek. One appears quite large and made up of both hillslope and streamside spring fed wetlands.

An approximately 3,000 acre block of nickel laterite lode claims are located in the watershed of Baldface Creek and its tributary Taylor Creek. The mining company is in phase II of its mineral with the stated purpose of developing and operated a metal mine on its federal mining claims.

[517] See for example - http://roughandreadycreek.org/north-fork-smith-river/ and http://commons.wikimedia.org/wiki/File:North_Fork_of_the_Smith_River_near_Hiouchi_Ca...;.JPG
[518] http://www.rivers.gov/rivers/smith-nf.php

Rough and Ready Creek

The second eligible wild and scenic river is Rough and Ready Creek, a tributary of the Illinois River. Approximate 98% of the approximately 23,000 acre watershed is underlain by serpentine geology of the Josephine ophiolite. Rough and Ready Creek is unique regionally and perhaps globally in this respect.

The BLM's management plan for the Rough and Ready Creek Area of Critical Environmental Concern describes some of the hydrologic characteristics of the creek:

> Rough and Ready Creek presents a unique fluvial system characterized by exceptional water quality and clarity, very flashy flows, an unusual braided stream channel and a broad relatively undisturbed alluvium of cobbles which may support an extensive hyporheic zone with rare or sensitive invertebrates.[519]
>
> Winter flooding causes the channel of Rough and Read Creek to move from year to year. Ran and snow melt run off rapidly due to limited percolation and water holding capacity of the shallow soil.
>
> The fractured bedrock provides for numerous springs, many of which support Darlingtonia fens and maintain supper flows in the smaller tributaries.
>
> Wide unconsolidated streams such as Rough and Ready Creek have extensive hyporheic or intergravel zones which can be ecologically unique.
>
> The Rough and Ready Creek watershed is primarily underlain by serpentinize bedrock.

The U.S. Forest Service's Wild and Scenic River Eligibility Study for Rough and Ready Creek and its tributaries provides additional information about creek's outstandingly remarkable hydrologic/geologic value:[520]

> The Rough and Ready Creek fan is by far the largest fan of the group, occupying an area of two to four square miles.
>
> The fractured bedrock provides numerous springs, many of which support bogs and maintain summer flow in smaller tributaries.
>
> The Josephine peridotite sheet is thought to be the larges exposure of this kind of rock on a continental land mass. Soils derived from this rock type tend to be very shallow, are toxic to many plants, and support sparse by rare vegetation.
>
> Rough and Ready Creek drainage epitomizes serpentine/peridotite geology ... The bedrock geology is a major influence on the channel morphology and plant communities within the drainage.
>
> The unrestricted reaches of the mainstem Rough and Ready Creek have unusual channel morphology as evidenced by the large-sized substrate in the lower

[519] USDI/BLM, Rough and Ready Creek Area of Critical Environmental Concern, Management Plan and Environmental Assessment, March 1998.
[520] US Forest Service, 1993, Wild and Scenic River Eligibility Study: Rough and Ready Creek and its Tributaries, Siskiyou National Forest, May 1993,

> gradient sections. The alluvial fan at the mouth of Rough and Ready Creek is unique for streams of this size within the Klamath/Siskiyou Province.
>
> The relationship between the geology and botanical associations is striking in this area. The geomorphology and extensive hyporheic zone may contribute to the rare plant richness, and could provide habitat for rare or sensitive invertebrates.

The environmental impact statement and record of decision for the Nicore Mine Plan of Operation's give us additional information about the exceptional water quality and high scientific, social and ecological values of the Rough and Ready Creek area.[521] However, it's only through other sources of information that a more defined picture of the unique hydrologic regime of streams flowing through serpentine terrain in the Klamath-Siskiyou Region begin to form.

The nexus between wetland forming springs and tributary streams

In both Baldface Creek and Rough and Ready Creek the managing agency has found that the fractured bedrock of the serpentine terrain in their watersheds is a pathway for groundwater storage. The groundwater is discharged as numerous springs which often form serpentine Darlingtonia wetlands and help maintain summer stream flow and temperatures. Often there is no visible connection between the spring formed wetland it and the nearby stream.

One example can be found at one Rough and Ready Creek site where the serpentine wetland appears as an isolated discrete island in an otherwise xeric landscape. However, go downslope to the creek and there's a line of springs and seeps emanating from the creek bank forming a long streamside Darlingtonia wetland.

Using the newer higher resolution imagery on Google earth, the nexus between these springs/wetlands and stream courses can often be seen as areas of deeper green vegetation contrasting with the otherwise stark and xeric landscape.

The Nicore Claim Group Mineral Report and Gasquet Mountain Mine DEIS

Five thousand acres of federal mining claims at Rough and Ready Creek were subject to an extensive mining claim valid existing rights determination as a result of a 5th Amendment "takings" lawsuit. The subsequent mineral report is said to the one of the largest conducted. While the report focuses on mineral value the background discussion of the geology of the serpentine terrain in the watershed provides additional insight into the hydrogeologic regime of streams flowing these areas:

> The peridotite in this area is faulted and locally strongly fractured,
>
> Many serpentinites along fault zones are permeable, and springs are commonly localized along these structures.
>
> The strongly dissected mountainous terrain has a dendritic drainage pattern, and most of the area is traversed by several westward-flowing rivers fed by numerous small streams.

[521] http://ir.library.oregonstate.edu/xmlui/handle/1957/12297?show=full

> The thickest laterite development typically occurs over brecciated or highly fractured peridotite
>
> Cool springs and a few deep pools provide some potential refuge for fish ...[522]

This supports the Forest Service's findings in the wild and scenic river eligibility studies. In addition, it provides some insight into another aspect of the hydrologic regime of these watersheds. The highest point in their watersheds is around 4,000 feet. While snow melt contributes to stream flow, there is another factor—a complex and little understood groundwater regime. This is particularly noted in U.S Forest Service's 1984 draft environmental impact statement for the Gasquet Mountain Mine.[523]

> During October, November, and December when precipitation replenishes the groundwater supply, streamflows lag behind precipitation. By January, the soil is at maximum moisture capacity and any intense storms result in rapid increases in streamflows. From April through July, the rainfall diminished but streamflows remainrelatively high as water is released from shallow groundwater storage. Late summer stream flows are fed by deep groundwater drainage and exhibit little fluctuation from year to year.
>
> And,
>
> Field data indicate the the unconfined aquifer is far from uniform. Therefore, the groundwater regime is inferred to be complex and not well understood from the sparse observations and measurements available. The ground water flow pattern cannot be described with any precision because no detailed information exists on subsurface hydraulic properties. The unconfined aquifer experiences major seasonal fluctuations and is recharged by rainfall infiltration throughout the project area.
>
> It discharges at lower elevation into streams and at midslope locations as perennial seeps where the flow intersects a partial groundwater barrier or a pervious fracture zone. These bog and seeps are found at various elevations from near the mountain crest to somewhat below midslope. Some are associated with the margins of mapped landslides or shear zones, while others are related to terrain characteristics. Flow commonly increases down-gradient, suggesting a lateral zone of emerging groundwater instead of a discrete, horizontal seepage line.

The Nicore Mineral Report notes that the thickest laterite development typically occurs over brecciated or highly fractured peridotite. The deepest deposits of nickel laterite soils on the Josephine ophiolite are mostly found on the tops of the area's low rounded erosional surfaces or plateaus known as the Klamath peneplain.

As indicated in the Gasquet Mountain Mine DEIS, rainfall infiltration into these areas of deeper laterite soils which are underlain by highly fractured peridotite are essentially the

[522] USDI, BLM, Mineral Report: Nicore Claims Group, January 31, 2005.
[523] U.S. Forest Service, 1984, Draft Environmental Impact Statement Gasquet Mountain Mining Project, Del Norte County, California Nickel Corporation, Six Rivers National Forest, County of Del Norte.

recharge areas for the complex groundwater regime. These broad rounded plateaus are also the target for mineral development.

The serpentine Darlingtonia wetlands

One of the most distinctive features of the Klamath-Siskiyou Serpentines are its serpentine Darlingtonia wetlands. While Darlingtonia are not restricted to serpentine, serpentine Darlingtonia wetlands are. Five rare taxa associated with the serpentine wetlands are subject to a conservation agreement between the U.S. Fish and Wildlife Service, U. S. Forest Service and the Bureau of Land Management where the wetlands are concentrated.[524]

One of the requirements of the conservation agreement is that the agencies develop a conservation strategy. A draft management strategy provides the most complete picture of these unique wetlands. We provide some excerpts from the strategy:

Darlingtonia wetlands, commonly referred to as serpentine fens or bogs, are unique natural communities characterized by a perennial flow of cold water that is either surface or sub- surface, and soils that are derived from ultramafic (e.g. serpentine, peridotite) parent materials. Serpentine-derived substrates cover large, continuous areas in the Siskiyou Mountains and support a diverse vascular flora. The mineral and chemical composition of serpentine-derived soils is unusual and extreme, leading to high levels of plant speciation and endemism. Darlingtonia wetlands are particularly noteworthy in this regard and occur as disjunct, relatively small green "islands" surrounded by xeric communities that support strikingly different types of vegetation. A number of plant species are essentially restricted to this system, including the five rare taxa of which this Conservation Strategy is focused...

Water flows are perennial, averaging one to three cubic feet per second at both wetland inlets (usually springs or seeps) and outlets. Because the underlying substrate is ultramafic, surface water tends to have neutral to slightly alkaline pH. Water temperatures, particularly where groundwater is being discharged, are generally cold to cool (range 9.3 – 25.2° C; mean = 16.1° C; Frost et al. 2004)...

Hill slope wetlands, sometimes referred to as "hanging fens" (Borgias 1993), are generally formed by wet seeps or springs originating from concave landslides or slumps on moderate to steep slopes underlain by serpentine bedrock (Lang & McDonald 1987). They appear to be associated with fractures in the serpentine or peridotite that allows the lateral movement of ground water to the surface. Hillside wetlands are frequently interrupted by areas of dry soil and surface rock, each supporting strikingly different types of vegetation. As a result, fine-scale habitat diversity is often high...

Terrace wetlands occur where water from smaller serpentine seeps and springs runs across streamside terraces or benches...

In a more recent study of serpentine wetland communities, Frost et al. (2004) identified three distinct wetland groups in the western Siskiyous that differ in terms of geography,

[524] http://www.fws.gov/oregonfwo/toolsforlandowners/HabitatConservationPlans/ConsvAgreements/SerpentineFen-CA_6-2006.pdf

community composition and presence of special-status species. The largest and most diverse group is referred to as "Illinois Valley / inland wetlands", in reference to their location along the western side of the Illinois River valley in Josephine County, OR...

The "Josephine Creek group" is similar to the "Illinois Valley / inland" group in terms of elevation, geographic location and moisture regime but is comprised almost exclusively of streamside and terrace wetlands found along the valley bottom of Josephine Creek, a tributary of the Illinois River west of Cave Junction, OR...

Any alteration of the hydrology of a Darlingtonia wetland has the potential to drain water away from the wetland and its associated plant community. Several studies and general field observation indicates that the hydrological regime of the wetland environment is probably the most critical component of serpentine wetland communities and their associated rare plant habitat (Becking, 1982, Borgias 1993, Borgias & Biegel 1996, Frost et al. 2004). All of the rare target species discussed in this Conservation Strategy are associated with high soil moisture or flowing water. Mining and its related activities, Off Highway Vehicle (OHV) usage, road construction and maintenance, fire suppression activities, and domestic water diversions all have the potential to adversely affect hydrologic processes by accelerating or diverting water flows. These activities represent significant threats to serpentine wetland biodiversity because many species are sensitive to small changes in hydrology and water chemistry...

Finally, the U.S. Forest Service's Celebrating Wildflowers website also provides information on serpentine wetland hydrology:

> "Hydrology is an important driver of these wetland communities. Variables related to geomorphic setting, water inflow and outflow, and water temperature provide for a diversity of plant communities. Hillslope springs, streamsides, and terraces are three broad categories of Darlingtonia plant communities.
>
> Where hillslope springs occur, groundwater finds its way to the surface through fracture serpentine rock at sites subject to slumping. Streamside wetlands develop on gravel bars along stream channels. Terrace wetlands occur as a complex of seeps that run together on broad, low gradient slopes of former stream benches."[525]

Seasonal and rain dependent streams in Oregon's Illinois River Basin

We also looked the map showing "seasonal and rain dependent streams" at - http://water.epa.gov/lawsregs/guidance/wetlands/upload/IE_Stream_Percentage_high.jpg. For the Illinois River Basin in southwest Oregon and northwest California it show "0" as the percentage of the "intermittent stream length as a percentage of total stream length." This must be incorrect. There is no reason for the Illinois River Basin to be an anomaly among the other river basins of region in this respect.

The Illinois River Basin is an anomaly is another respect, however. It is one of the few river basins of similar size on the West Coast where there's been no program of hatchery supplementation of its salmon, steelhead and cutthroat trout populations. Their genetic

[525] http://www.fs.fed.us/wildflowers/beauty/serpentines/communities/darlingtonia.shtml

integrity, along with the high percentage of federal public lands in its watershed (81 percent) and the absence of high dams that block fish passage, makes the Illinois Basin an important West Coast salmon stronghold.

We're not sure of the implications of this mapping error but we emphasis that the Illinois River Basin receive the highest level of protection afforded by the Clean Water Act.[526] (p. 1-12)

Agency Response: **The agencies appreciate the information provided regarding this region. At this time, the agencies are not able to determine that the available science supports identifying all waters within the referenced ecoregion as jurisdictional by rule or as similarly situated by rule.**

Waters in the region, such as serpentine Darlingtonia wetlands, are jurisdictional where they fall within of the (a)(1) through (a)(6) or (a)(8) categories if they are not excluded by rule. The information provided may be useful when conducting a case-specific significant nexus analysis pursuant to (a)(8).

4.3.5.1 Supporting Approach

New Mexico Department of Agriculture (Doc. #13024)

4.514 The Federal Register notice requests comment on how better to categorize the other waters category. EPA has already composed a list of scientifically designated ecoregions for the state of New Mexico[527] and for the rest of the United States. This list is far more comprehensive than the proposed new list on page 22215 of the Federal Register. Starting the process of creating a new list of ecoregions would require a duplication of effort for no scientific purpose. Therefore, NMDA recommends using the existing ecoregions as a more robust and descriptive starting point in better categorizing the other waters definition. (p. 6)

Agency Response: **After considering the science and the public comment, the agencies have 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. See response 4.316 (Doc. #13074) and the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard.**

Arizona Game and Fish Department (Doc. #15197)

4.515 The predominant channel types in Arizona are ephemeral and intermittent waters, such as desert washes. According to the proposed Rule, these types of waters may be determined

[526] More information is available on the Illinois River Basin here - http://kalmiopsiswild.org/explorekalmiopsis-wildlands/the-rivers/illinois-river-basin/

[527] U.S. Environmental Protection Agency. "Ecoregions of New Mexico," Accessed September 26. 2014. http://www.epa.gov/wed/pages/ecoregions/nm_eco.htm.

to be "tributaries" if the waterway has a defined bed, bank or high water mark. However, as noted in *Survey of OHWM Indicator Distribution Patterns across Arid West Landscapes* (U.S. Army Corps of Engineers, January 2013), flows in intermittent and ephemeral channels are unstable and migrate within the boundaries of the active channel. The Survey identified six "flow indicators" across mountain, foothill and basin landscapes: change in vegetation cover, bed and bank, change in vegetation species, drift, slope and change in texture. The *Survey* concludes these flow indicators are randomly distributed in all locations across a channel and cannot be used to delineate the lateral extent of the OHWM. The *Survey* concludes that a geomorphic approach that identifies the hydrogeomorphic floodplain units of the channel, linking vegetation and sediment texture patters to changes in channel morphology, and identifying the break in slope associated with the geomorphically effective event is necessary. *Survey* at 17. For this reason, intermittent and ephemeral channels in Arizona do not readily fit into the jurisdictional category of a "tributary" and may require case-specific evaluations of significant nexus. This regulatory uncertainty will create burdens for the Department in the management of its properties. The Department supports the development of an ecoregional approach to determine which ephemeral channels might be better defined as tributaries with a significant nexus to waters of the U.S. (p. 1-2)

Agency Response: The methods for identifying bed and banks and ordinary high water mark in various regions are beyond the scope of the final rule. See Implementation Compendium and Tributaries Compendium.

Lac du Flambeau Band of Lake Superior Chippewa Indians (Doc. #16538)

4.516 The Lac du Flambeau Reservation is located in Level III Ecoregion number 50 Northern Lakesand Forest, which is defined by glacial soils, coniferous and northern hardwood forests, undulating till plains, morainal hills, broad lacustrine basins, and extensive sandy outwash plains. The soils and ecology are the same as the soils and ecology as the above mentioned report. Based on the unique geology, EPA should assign all waters in the Northern Lakes and Forest Ecoregion including pothole seepage lakes and non-adjacent wetlands as described as "other waters" as Jurisdictional and afford them protections under the Clean Water Act.

The images below illustrate the similarities between Ecoregion 50 and the Treaty reserved areas. This similarity is based on the fact that Tribal leaders sought to protect the ecologically significant area that supports a subsistence life way founded on hunting, fishing and gathering. These Treaties[528] protecting hunting, fishing, and gathering legally show historic and modern commerce for all waters within this region. Giving another reason to assign all waters in the Northern Lakes and Forest Ecoregion including pothole seepage lakes and non-adjacent wetlands as described as "other waters" as Jurisdictional and afford them protections under the Clean Water Act. (p. 2)

Agency Response: At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of

[528] http://www.glifwc.orglTreatyRights/treaties.html

waters other than those identified in (a)(7) as similarly situated by rule. Waters not analyzed under (a)(7) are jurisdictional when they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

Southern Nevada Water Authority (Doc. #14580)

4.517 SNWA concurs with the exclusion from that list of the Central Basin and Range and Mojave Basin and Range ecoregions of Nevada (as depicted on EPA's Level III Ecoregions of the Continental United States, revised April 2013). Most of these regions are internally drained due to the basin and range topography characteristic of the Great Basin; in the southeastern part of the state, including the Las Vegas Valley, tributaries and rivers are part of the Colorado River system and are thus jurisdictional. SNWA recommends the Central Basin and Range and Mojave Basin and Range ecoregions be specifically excluded from consideration under the category of "other waters". Other than tributaries to the Colorado River system and interstate waters, other waters in these areas have not previously been considered jurisdictional. It would enhance clarity and certainty under the Proposed Rule if "other waters" in these regions were specifically excluded from jurisdiction. (p. 4)

Agency Response: The final rule does not categorically exclude waters based on geographic or ecoregion. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not specifically excluded.

Southwest Section of the Wildlife Society (Doc. #6257.1)

4.518 Fluctuating water levels found in playas contribute to biological productivity and nutrient cycling (Bohen et al. 1989). Playas are important wintering grounds for waterfowl. Depending on the year, 600,000 to over 3 million ducks and geese (more than 90 percent of the overwintering waterfowl in the Central Flyway) depend on the playas in the Southern High Plains (Nelson et al. 1983; U.S Fish and Wildlife Service 1988). Almost all (90%) of the mid-continental population of sandhill cranes (Grus canadensis) overwinter here (Iverson et al. 1985). Additionally, playas are vital habitats for amphibians (Anderson and Haukos 1997).

In the Southern Great Plains, playas provide 230 to 250 thousand surface acres of aquatic habitat in wet years. Playas are found in southeast Colorado, southwest Texas, the Oklahoma panhandle, eastern New Mexico and north-central Texas. However, playas are threatened by sedimentation, reduced runoff from adjacent areas, water withdrawals, and conversion to agriculture (Steiert and Meinzer 1995). Over half of all playas may have been buried by sedimentation (http://www.pljv.org/about). During a study of playa lakes in the southern Great Plains (mostly in north Texas), the U.S. Fish and Wildlife Service found that of 634,958 acres studies, 363,248 acres were playas, and 22% of the playas had human impacts caused by excavation or drainage (Dick and McHale 2007). Additionally, playas can be adversely affected by contamination (Tiner et al. 2002). According to The Playa Lakes Joint Venture, over 50 percent of the original High Plains landscape has been altered in some form (http://www.pljv.org/about).

We feel that there is sufficient justification to add the High Plains Level III Ecoregion to the list of ecoregions described on FR page 22215 and to support the adoption of the

approach described as Alternative (Option) 1. There is a good rationale to designate playa lakes as "other waters" similarly situated for purposes of aggregation for a significant nexus in watersheds within the High Plains. Playas can be a recharge source for the High Plains (Ogallala) aquifer that is used extensively by agriculture (U.S. Environmental Protection Agency 2014; Steiert and Meinzer 1995). For more information, based upon a review of more than 175 scientific publications, Gurdak and Roe (2002) provide a detailed description of the role playa lakes play in recharge of the High Plains aquifer. Tiner et al. (2002) state that many isolated wetlands are connected hyrologically via ground water to rivers and streams. Further, Kresic and Mikszewski (2013) state that the Ogallala aquifer has direct hydraulic connection to the alluvial aquifers of major rivers flowing above it. Regulation of these wetlands under the Clean Water Act would provide vital oversight to ensure the essential ecological services they provide are not overlooked.

Where there may be questions as to any nexus to waters of the United States, we feel the most prudent action is for the Agencies to treat playa lakes as "other waters" while funding research to further document hydrologic connections. (p. 1-2)

Agency Response: The agencies appreciate the contribution of this information to the body of knowledge regarding playas. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

Ducks Unlimited (Doc. #11014)

4.519 While we certainly understand that not all "other waters" possess the significant nexus required by the judicial rulings, our reading of the science indicates that more likely do have such nexuses than do not. We strongly suggest that during the finalization of the rule, the agencies evaluate these "other waters" on an ecoregional basis and, based on the available science and judgments of wetland and hydrologic experts, determine for which regions of the country the wetlands that exist therein should be designated as jurisdictional by rule. The special SAB panel on connectivity appears to agree that the available science supports such an approach, and the SAB's September 30 letter explicitly states that, "There is also adequate scientific evidence to support a determination that certain subcategories and types of "other waters" 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, biological, and chemical 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." Our comments will examine the circumstances and science related to a few such regions, including related science from other regions that we believe is broadly applicable to the regions in question, putting particular emphasis on the Prairie Pothole Region of the northern Great Plains. (p. 21-22)

Agency Response: The agencies have determined that waters in the five subcategories of waters (including prairie potholes) identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed

that drains to the nearest (a)(1) through (a)(3) water. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. See Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard.

4.520 We disagree, however, that wetlands in other regions would necessarily have to "be determined to not be similarly situated." Some ecoregions, for example, could contain a wide diversity of landforms, range of altitudes, and other geologic and climatic attributes and could indeed include a broad range of wetland types that could not reasonably be considered to be "similarly situated." In such cases, a single point of entry watershed would perhaps be the best approach. However, other ecoregions might simply contain a lower density of wetlands, but they could very well be relatively similar in terms of their type, functions, and distribution across the landscape. The wetlands, in the aggregate, in some of these kinds of ecoregions might fail to rise to the level of being found jurisdictional by rule. However, given that the relevant science continues to emerge, these wetlands could in the future be found to be jurisdictional as a result of a case-specific significant nexus analysis. Therefore, those wetlands should by no means "be determined to be not similarly situated" if not included as jurisdictional by rule, and as a consequence have future case-specific analyses unnecessarily constrained in a way that could potentially eliminate any role for emerging science. We do agree that the a priori analyses of ecoregions would have to consider the variability across the regions and the extent to which each has "distinguishing factors." (p. 30)

Agency Response: **See response 4.316 (Doc. #13074), 4.272 (Doc. #14285). With respect to determinations as to particular waters where the determination is based upon the significant nexus of the water together with similarly situated waters in the region, the agencies note that approved jurisdictional determinations is of limited duration and would expire after five years. See RGL 08-02. An approved jurisdictional determination may be superceded by a second approved jurisdictional determination based upon new information. 33 C.F.R. § 331.5(b)(7). The agencies will continue a transparent review of the science, and gain 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.**

4.521 The preamble contains a series of questions related to the issue of where and how to apply aggregation such that the "other waters" in some regions would be considered together for a case-specific analysis, or considered as individual wetlands. We strongly suggest that unless there are clear ecological regions for separating wetlands within the landscape under consideration, aggregation should be the rule. A predominance of case-specific analyses of "other waters" would tend to maximize uncertainty, unpredictability, and the regulatory burdens on both regulators and the regulated community. Every scientifically and legally justifiable reason to support aggregation should be explored before resorting to case-specific analyses of individual wetlands. The selection and use of the appropriate scale of regions for these analyses is a critically important part of the scientific rationale for taking the above approach to aggregation. Careful selection and

application of the appropriate scale for analysis of the "other waters" in each geographic unit helps:

- ensure a scientifically valid scale is consistently applied across all areas of the country;
- ensure each area's topography, geology, climatic conditions, soils and other physical, chemical, and biological features are reasonably similar;
- ensure the scale minimizes the diversity of "other waters" within its boundary and thereby supports aggregation of these waters for significant nexus analyses;
- promote regulatory clarity, certainty, and predictability across reasonably broad but scientifically valid landscapes; and,
- ensure the final rule is pragmatic to understand and administer, while remaining consistent with the available science and case law.

We agree with the agencies' suggestion that Level III ecoregions as described by Omernik (2004) represents the most appropriate scale for such analyses. Omernik articulated the need for and benefits of a more common geographic framework for management purposes, and described the accepted scientific basis for these geographically distinct landscapes. An indication of their widely accepted scientific validity is that Level III ecoregions have increasingly been adopted as the basis for science-based geographic systems for managing a variety of natural resources (e.g., the development of Bird Conservation Regions [NABCI 2001]). A review of the map of Level III ecoregions shows the contiguous U.S. is divided into 85 such regions, and combined with our knowledge of and field experience with many of the key wetlands areas contained within these ecoregions, they appear to be an appropriate scale for retaining strong scientific validity while contributing to a more pragmatic rule.

In the context of the proposed rule, the agencies should also note that Omernik (2004) and McMahon et al. (2001) articulate a strong rationale for using a "weight of the evidence" approach, which is qualitative in nature but founded on collective expertise, over a more rule based or quantitative approach to ecoregion definition. We suggest that the rationale they provide for the weight of the evidence approach is directly applicable to some of the overarching issues and challenges that the agencies face in formulating a final rule. The rule must be clearly based on the available science and consistent with case law while at the same time being pragmatic to apply and protective of the integrity of the Nation's water resources as mandated in the Act, while cognizant of the limits imposed by case law.

Therefore, we agree with and strongly support the use of Alternative 1 (FR 22215), "determine by rule that 'other waters' are similarly situated in certain areas of the country." For reasons articulated previously, the agencies should proceed with a priori, science-based significant nexus analyses of the selected, high-priority regions, and the waters in those ecoregions in which a significant nexus was found for wetlands in the aggregate should then be designated as jurisdictional by rule. (p. 30-32)

Agency Response: **See Agency Summary Response Essay 8. The agencies have determined that waters in the five subcategories of waters (including prairie**

potholes) identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. Waters not included in (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

4.522 After reviewing the list of ecoregions proposed as being potentially suitable for such analyses (FR 22215), we concur with the list of 25 regions as a good starting point. Clearly, priorities should be established so that those ecoregions containing well-known, important wetland systems would be examined first. The SAB September 30 letter to the EPA states that, "*there is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' 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, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States*." We agree with this statement, and the wetland systems listed therein include the following Level III ecoregions, which should therefore be priorities for significant nexus analysis in the aggregate:

- 6 – Central California Foothills and Coastal Mountains
- 7 – Central California Valley
- 9 – Eastern Cascades Slopes and Foothills
- 34 – Western Gulf Coastal Plain
- 42 – Northwestern Glaciated Plains
- 46 – Northern Glaciated Plains
- 47 – Western Corn Belt Plains
- 48 – Lake Agassiz Plain
- 63 – Middle Atlantic Coastal Plain
- 65 – Southeastern Plains

Of particular interest to Ducks Unlimited is the area traditionally known as the Prairie Pothole Region, which is contained within ecoregions 42, 46, 47, and 48. We will provide a detailed review of some of the science for this region, as well as a few others, later in our comments. One of those will be the Nebraska Sandhills (ecoregion 44), which contains the sandhills wetland system, an area for which we suggest the science also supports a finding of significant nexus. We therefore recommend that ecoregion 44 be added to the above list of the highest priority ecoregions. (p. 32)

Agency Response: **While the agencies considered an approach based on ecoregions, the agencies determined to use the single point of entry watershed to define the geographic scope of similarly situated waters "in the region" for purposes of a case-specific significant nexus analysis under (a)(7) or (a)(8). See Agency Summary Response Essay 7. At this time, the agencies are not able to determine that the available science supports identifying any classes of waters other than those identified at (a)(1) through (a)(6) as jurisdictional by rule or to identify categories of waters other than those identified in (a)(7) as similarly situated by rule. Nebraska Sandhills are jurisdictional where they fall within one of the (a)(1) through (a)(6) or**

(a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.

4.523 We further suggest that the agencies consider adding several ecoregions to the larger list of 25 on FR 22215:

- 25 – High Plains: This ecoregion contains the South Platte and portions of the Platte River system that we referenced earlier as containing wetlands and other waters that are known to have shallow, subsurface connectivity with the rivers, and that are being managed to augment maintenance of base flows in the rivers to benefit four federally listed threatened and endangered species as well as maintaining water supplies for irrigation and other interests.
- 53 – Southeastern Wisconsin Till Plains: This ecoregion, and the three that follow, adjoin the Great Lakes. In light of the high priority of these interstate/international waters, and the level of concern generated by an increasing number of high profile algal blooms and their relation to public health and welfare as well as economic impacts, we suggest that these Great Lakes ecoregions be added to the list.
- 56 – Southern Michigan / Northern Indiana Drift Plains
- 57 – Huron / Erie Lake Plains
- 61 – Erie Drift Plain
- 73 – Mississippi Alluvial Plain: This region was historically highly significant in terms of its wetlands and their importance to the Mississippi River and major tributaries. A significant amount of wetlands remain there, although most would likely be captured within the definition of riparian areas and adjacent waters. However, the remaining "other waters" in this ecoregion would most likely be considered similarly situated, and therefore suitable for a significant nexus evaluation in the aggregate.

All of the factors listed (FR 22216) as being used to develop the list are suitable science-based factors that appropriately relate to the primary question of significant nexus. However, we note that the list contains no reference to biological factors. This is of some concern because the EPA's original draft of the Connectivity Report, and this proposed rule, both seemed to minimize the biological component of the integrity of the Nation's waters. This was also pointed out by the SAB's special panel on connectivity. We will highlight a situation in our detailed treatment of the Texas Prairie Coastal Wetlands that is a biologically based example of connectivity that is fully consistent with the scientific and legal requirements for significant nexus. Thus, we recommend that a biological factor should be added to the list proposed by the agencies. (p. 32-33)

Agency Response: **See Agency Summary Response Essay 5. See Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard. The agencies have determined that waters in the five**

subcategories of waters (including prairie potholes) identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. Waters not analyzed under (a)(7) are jurisdictional where they meet fall in one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

4.524 We do not agree with the second portion of alternative 2 (FR 22216), which would result in the "other waters" in those ecoregions considered to not have a demonstrated significant nexus to be designated as non-jurisdictional. We support the comment in the SAB's draft report in which they state that "the Board notes, however, that the science does not support excluding groups of 'other waters' or subcategories thereof." For the final rule to fulfill its objectives, and those of the Act, it must be science-based. In the case of the second portion of alternative 2, it must be understood that not finding a significant nexus is not scientifically the same as determining that these waters "lack a significant nexus to an (a)(1) through (a)(3) water," as stated in the proposed rule. While there may be a few instances in which such a statement of certainty and finality is justified by the circumstances and the science, most cases will be situations in which not finding a significant nexus simply means that the science currently available is insufficient to make such a designation. So, as science continues to emerge, areas in which a significant nexus could not currently be determined might indeed be later found to have a significant nexus based on new science. For the final rule to be truly science-based, it must allow for this distinct and likely possibility. Clearly, for regulatory purposes, those waters for which a significant nexus cannot be demonstrated at this time would need to be treated as non-jurisdictional unless and until shown otherwise. (p. 33-34)

<u>Agency Response:</u> See Features and Waters Not Jurisdictional compendium. The final rule does not exclude categories of water based upon geography or ecoregion.

4.525 Ecoregion #44, the Nebraska Sand Hills, is the largest sand-dune area in the Western Hemisphere. This approximately 12 million-acre region of central and eastern Nebraska contains over 1,000,000 acres of sandhill wetlands (LaGrange 2005). The "other waters" in this region include approximately 177,000 acres of open water and marsh, i.e., permanently and semi-permanently inundated wetland, and 1.13 million acres of wet meadow, i.e., ephemeral and seasonal wetlands (Rundquist 1983). Sandhill wetlands range in size from less than an acre to 2,300 acres, but 80% are less than 10 acres (Wolfe 1984).

Ginsberg (1985) noted that although many of these wetlands and lakes appear to be geographically isolated wetlands, they are predominantly hydrologically connected to and represent an extension of the groundwater, particularly in the eastern and central sandhills and thereby supply base flows to the streams and other waters in the region. These sandhill wetlands developed as groundwater seepage areas in the valleys of wind-deposited sand dunes (Sidle and Faanes 1997). Rundquist et al. (1985) provided evidence of groundwater flow-through in a shallow lake, with the groundwater flowing toward Blue Creek, about 3 miles away. LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and groundwater as water in this interconnected system flowed toward lower elevations. Novacek (1989) stated

that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2003).

Winter (1986) demonstrated that recharge of the groundwater was focused on depressions in the landscape (e.g., wetlands). Thus, in this region, the return of polluted water can enter the aquifer or regional watershed through these geographically isolated wetlands and degrade downstream water quality (Winter 1998). Winter (1998) stated that, "groundwater and surface-water interactions have a major role in affecting chemical and biological processes in lakes, wetlands and streams, which in turn affect water quality throughout the hydrologic system." Katz et al. (1995) demonstrated the ease with which changes in the chemistry of these types of "other waters" are transported and reflected in the water quality of groundwater. The extent of connectivity between the wetlands, groundwater and downstream flowing waters was provided by Chen and Chen (2004) when they documented that a very high percentage of the flow of the Dismal and Middle Loup rivers was supplied by groundwater. Further evidence of the connectivity with the groundwater is the presence of fens in the region (Steinauer 1995).

Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Importantly, in terms of the issue of connectivity of the wetlands with downstream waters via groundwater, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers.

In summary, the scientific evidence is clear that the Sandhill wetlands are, in the aggregate and generally, connected via groundwater linkages to navigable waters and their tributaries in this region of the country. Thus, they should be strongly considered for designation as jurisdictional by rule. (p. 54-55)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding sandhill wetlands. At this time, the agencies are not able to determine that the available science supports that sandhill wetlands as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, individual sandhill wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.526 The science of playas (sometimes referred to as "playa lakes") and related waters provides another excellent example of the types of linkages that can be used to demonstrate a significant nexus between even physically remote wetlands and navigable waters, in this case via critical groundwater connections. Playas are relatively shallow,

ephemeral, closed-basin wetlands usually not located adjacent to navigable waters (Fig. 12). They occur in high densities in several areas within ecoregion 27, the Central Great Plains, including the Rainwater basin region of Nebraska (see below) where its wetlands are very similar in structure and function to the playas that occur farther south. These shallow, typically circular basins lie at the lowest points in relatively low-relief watersheds, and each collects runoff from the surrounding area. About 66,000 playas remain in the relatively flat topographic landscape of the Great Plains of Kansas, Colorado, Oklahoma, Texas, and New Mexico (Playa Lakes Joint Venture http://www.pljv.org; Smith et al. 2012; Fig. 13). In Kansas, a recent study using improved techniques documented about double the number that had previously been estimated (new estimates of about 22,000 playas), and noted that more than 80% were smaller than 5 acres in size (Bowen et al. 2010). Playas tend to occur in clusters of high density in several distinct areas across the ecoregion, and are dominant components of the landscape in these areas (Bowen et al. 2010). For example, the total playa area in west Texas was estimated (Fish et al. 2000) to be almost 400,000 acres. Thus, given their numbers, distribution, and structural and functional similarities, the value of playas is most reasonably assessed in the aggregate across the landscapes in which they occur (Johnson et al. 2012; Smith et al. 2012).

The Ogallala (or High Plains) aquifer underlies about 170,000 square miles and is shared by eight states, including most of the playa region, as well as the Rainwater Basin area of Nebraska. This aquifer is the primary source of water in the region with about 97% being used to support irrigated agriculture (Maupin and Barber 2005), and the water has an economic value of approximately $20 billion (Moody 1990). The aquifer also provides drinking water for about 82% of the region's residents (Maupin and Barber 2005).

Conceptual models have recognized for years that the playas are critical recharge zones for the Ogallala (e.g., Wood 2000). Gurdak and Roe (2009; 2010) recently provided a comprehensive synthesis of the related literature (approximately 175 studies) and concluded that playas are pathways of relatively rapid recharge and provide an important percentage of recharge to the Ogallala aquifer. Thus, playas are, in the aggregate, critical to supplying water to an important, interstate water body, and they therefore impact the water quantity of the underlying aquifer (Gurdak et al. 2009; 2010). Furthermore, Rainwater and Thompson (1994) stated that landscape changes increased water collection in playas and that infiltration had also increased. They further stated that these factors increased the contribution of playas to Ogallala aquifer recharge and that, in some areas, infiltration from playas that receive runoff are the principal source of aquifer recharge.

Understanding that the CWA has no jurisdiction over groundwater, the importance of the aquifer to human health, welfare and economic benefit is therefore not a direct, independent concern of the Act except as it is affected by the condition of surface water and wetlands and in turn as it impacts waters to which the aquifer discharges. For example, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers, as well as the Pecos and Canadian rivers (Kreitler and Dutton 1984). Further strengthening documentation of the linkage of wetlands, groundwater, and flowing navigable waters,

Slade et al. (2002) showed that channel gain or loss in Beals Creek (draining into the Colorado River basin of Texas) corresponded to discharges from or recharges to the Ogallala aquifer. Thus, the significant nexus between the playa wetlands and navigable waters is created by their direct linkage via the Ogallala aquifer.

In addition to the impact that playa wetlands have on the quantity of water moving from the wetlands, through the aquifer, and to navigable waters, they also have an impact on the quality of that water. Ramsey et al. (1994) showed that playa wetlands improve the water quality of storm runoff, demonstrating that water quality in the playa is better than that found in storm runoff before entering the wetland. They stated that this wetland function thereby contributes to improving/maintaining groundwater quality in the aquifer, as would be predicted in light of playas being the principal source of aquifer recharge in some areas (Rainwater and Thompson 1994). Thus, as a result of the relationships with navigable rivers in the region (Weeks and Gutentag 1994), playas must also improve water quality in those streams and rivers. Hence, impaired water quality functions of playas would have adverse impacts on the quality of water in the aquifer and linked navigable waters. Increased agricultural application of nitrate fertilizers makes the groundwater more vulnerable to nitrate contamination (Gurdak and Roe 2009) via playa recharge. Belden et al. (2012) found that the water in many playas sampled in Nebraska, Colorado, Texas and New Mexico contained elevated levels of pesticides, particularly herbicides. Given the linkage of playas to the Ogallala, the potential impacts of what might be deposited in the playas to the groundwater and then transferred to the receiving waters of the aquifer's discharge are clear. In addition, as a result of relatively slow recharge rates, the limited ability of the aquifer itself to attenuate contaminants such as nitrates, and the prolonged travel times of aquifer water, any potential contamination would have very long duration (Gurdak and Roe 2009) even if corrective action were taken. Thus, the natural denitrification function of intact playas takes on added significance in relation to the quality of water in the aquifer, and ultimately, to its interconnected flowing waters.(p. 55-57)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding playa lakes. Playa lakes have not been identified as jurisdictional by rule or in paragraph (a)(7) as one of the five subcategories of similarly situated waters by rule. Playa lakes are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

4.527 The Platte River and Rainwater Basin region of central Nebraska is an inland situation that should be examined in more detail. The Platte River and its major tributaries transect ecoregions 25 (High Plains) and 27 (Central Great Plains), and the Rainwater basin region is in ecoregion 27, along with most of the playas (see above). In addition to the previously discussed documentation and acceptance of the fact of the hydrologic connectivity between the Platte River, its tributaries, and "other waters" in the region, Chen (2007) noted that the river, alluvial aquifer, and the riparian zone all form a well

connected hydrologic system. He additionally indicated that water in streams there may come from shallow or deep aquifers depending on evapotranspiration rates, further indicating the connectivity of the components of the aquatic system there.

Millions of waterfowl migrate through the region every year and concentrate in the small percentage of the region's remaining wetlands (approximately 5%) that provide habitat, particularly in the spring. In addition, nearly the entire population of mid-continent sandhill cranes (Grus Canadensis; ~500,000 birds) stages there (Krapu et al. 1982; Vrtiska and Sullivan 2009), and it is an important concentration site for the federally endangered whooping crane (G. americana; Austin and Richert 2005). Although this region is a migration and staging area for the crane species, the situation requires further examination because huge numbers of the sandhill cranes, and non-negligible percentages of the whooping crane, roost at night by standing in the very shallow waters of the Platte River (along about 65 miles of its length in central Nebraska), but they leave the river to use other habitats for feeding and loafing during the day. While the sandhill cranes feed predominantly on waste grain in crop fields (Krapu et al. 1984; Davis 2003; Anteau et al. 2011), the whooping crane spends more time in palustrine wetland habitats (Austin and Richert 2005). Austin and Richert (2005) analyzed habitat use from 1977-99, but did not appear to directly review their data relative to the question of the degree of dependence of whooping cranes on both the riverine habitat and the freshwater wetlands in the sense required to firmly establish a significant nexus as currently proposed.

Folk and Tacha (1990) documented patterns of use of the North Platte River and the region's temporary and semipermanent palustrine wetlands by sandhill cranes. The North and Central Platte River valley provides the primary spring staging habitat for about 80% of the entire midcontinent population of the species (Pearse et al. 2010), and the cranes typically roost in the river channel or nearby wetlands for safety during the night. They found that the cranes were collectively interdependent upon the shallow navigable river and the region's wetlands, providing a biological nexus between the two types of waters. Taken together, these and other studies (Gersib et al. 1989; Tacha et al. 1994; Bishop et al. 2010; Pearse et al. 2011) indicate that the Platte River and the wetlands of the rainwater basin and surrounding landscape function as a complex of aquatic habitats for a diversity of species, and as the "other waters" of the region are negatively impacted, so too is the biological integrity of the navigable Platte River.

Thus, playa wetlands, as well as the Rainwater basin wetlands, provide strong evidence of the kinds of linkages (often via important groundwater bodies) and relationships between "other waters" and downstream or navigable waters that can inform significant nexus analyses of aggregated wetlands in these and other regions of the country. (p. 57-58)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding this region. Playa lakes and Rainwater basin wetlands have not been identified as jurisdictional by rule or in paragraph (a)(7) as a subcategory of similarly situated waters by rule. Playa lakes and Rainwater basin wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.

National Wildlife Federation (Doc. #15020)

4.528 We join Ducks Unlimited in recommending that during the finalization of the rule, the agencies evaluate categories of "other waters" likely to have a significant nexus on an ecoregional basis and, "based on the available science and judgments of wetland and hydrologic experts, determine for which regions of the country the wetlands that exist therein should be designated as jurisdictional by rule." Ducks Unlimited 2014 Rule Comments at 22. These a priori case-specific analyses should be conducted by the agencies for major subcategories of "other waters" in the course of finalizing the rule.

We agree with the Ducks Unlimited analysis that this approach has numerous advantages, including:

- Increased clarity and certainty for landowners and regulators with respect to "other waters" located within those regions found to be jurisdictional by rule.
- Significant reduction of future administrative burdens associated with resource intensive case-specific analyses for "other waters" located within those regions found to be jurisdictional by rule.
- Scientifically sound recognition that the current scientific literature clearly supports findings of significant nexus in some regions, but may not currently support such findings in other regions.
- Providing for the documentation and accumulation of science-based significant nexus determinations over time.

These *a priori* analyses, supported by the breadth and depth of the scientific literature and expertise currently available to the agencies, would allow identification, by rule, of those ecoregions for which a presumption of significant nexus between its wetlands, in the aggregate, and other jurisdictional waters would be reasonable, and thereby also provide a greater degree of clarity, certainty, and predictability regarding CWA jurisdiction within those landscapes. As the agencies recognize, "[t]here is substantial value to the regulated public and all other stakeholders involved in providing increased certainty regarding which "other waters" are jurisdictional and which are not."[529] Categorical significant nexus determinations fulfill the purpose of the proposed rule because it allows the agencies to "better address the clarity, certainty, and predictability goals of this rule."[530] Therefore, the agencies should make categorical significant nexus determinations where possible in order to ease the administrative burden of the proposed rule on all stakeholders involved.

The importance of providing for science-based, categorical – versus case-by-case – findings of connectivity for categories of non-floodplain, non-adjacent waters cannot be overstated. The scientific evidence for such categorical findings exists and should be

[529] 79 Fed. Reg. at 22216.
[530] Id.

accurately reflected in the final Connectivity Report and the final rule. Case-specific significant nexus analyses are extremely time and resource intensive and simply impractical in many cases. Realistically, if left to case-by-case analysis, many non-adjacent other waters – and their demonstrated ecological influence on downstream waters – will continue to be discounted, degraded, and destroyed. The integrity of downstream waters will suffer as a result.

We acknowledge that even with these eco-region-based significant nexus findings and inclusion of categories of "other waters" as jurisdictional by rule, the final rule cannot and will not assert jurisdiction as broadly as the current (a)(3) regulations do. (p. 63-64)

Agency Response: **See Agency Summary Response Essay 7and Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard. The agencies have determined that waters in the five subcategories of waters (including prairie potholes) identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water. Waters not analyzed under (a)(7) are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. By not determining that any of the "similarly situated" waters is jurisdictional by rule, the agencies will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

4.529 We support the agencies' list of science-based factors used to develop the list of 25 ecoregions where waters are similarly situated and aggregation can be used. 79 Fed. Reg. at 22216. We agree that these factors appropriately relate to the primary question of whether waters in these ecoregions are similarly situated and subject to aggregation in determining significant nexus. However, we note that the list of factors, the draft Connectivity Report, and this proposed rule, seem to minimize biological factors and the biological component of the integrity of the Nation's waters. The SAB Connectivity Peer Review Report at 6 shared this concern and recommends more of an emphasis on biological factors in the Final Connectivity Report. Factor "f" at 79 Fed. Reg. 22216 relates to habitat function, but seems limited and not fully reflective of the scientific evidence of biological connectivity. (p. 66-68)

Agency Response: **See Agency Summary Response Essay 7 and see response 4.272 (Doc. #14285) and Technical Support Document regarding the consideration of the effect similarly situated waters "in the region" for purposes of the significant nexus standard. See Agency Summary Response Essay 10 and see response 4.77 (Doc. #7499.1) for a discussion of how the significant nexus standard considers affect on the biological integrity of downstream traditional navigable waters, interstate waters and territorial seas.**

4.530 Sinkhole Wetlands in Karst Regions[531]

[531] This section is excerpted and summarized from Woolford et al (October 2014) at 25-30; See also Woolford and Carroll (July 2014) re southeastern coastal depressional wetlands

Sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses. Sinkhole wetlands in karst regions fit into several categories that have differing hydrologic connections to groundwater, various hydroperiods, and contrasting topography and geography. Compound sinks are typically connected to groundwater systems, while karstic pans are usually isolated. Sinkhole wetlands of each category generally have significant physical, chemical, and/or biological impacts on downstream waters:

- Karst wetlands can mediate flooding and stormwater run-off, and reduce peak flows by retaining water on the landscape before it reaches navigable waterways.
- Compound sinks can slow water infiltration aquifers in karstic landscapes and allow for sedimentation and pollutant removal, while karstic pans eliminate water quality deterioration by retaining water and restricting surface water-aquifer connectivity.
- Karstic wetlands transform nutrients and organic compounds, and cycle organic carbon that can be exported to navigable waters via ephemeral streams or aquifer connections to river networks.
- Karst wetlands in the Mammoth Caves region are home to a diversity of invertebrates, including cyclic colonizers that migrate between these wetlands and permanent waters, as well as passively dispersing invertebrates that move among lentic and lotic systems on the feet, fur, and feathers of other animals.
- Some sinkhole wetlands in Virginia are connected to navigable waters by the movement of C. serpentina [Eastern Snapping Turtle], which can be a frequent colonizer of newly inundated waters and is commonly present in permanent sinkhole wetlands (such as some compound sinks); this is likely the case in all karstic regions in the United States.

Nebraska Sand Hill Wetlands[532]

Ecoregion 44 is named the "Nebraska Sand Hills," and is the largest sand-dune area in the Western Hemisphere. This approximately 12 million-acre region of central and eastern Nebraska contains over 1,000,000 acres of sandhill wetlands (LaGrange 2005). The "other waters" in this region include approximately 177,000 acres of open water and marsh, i.e., permanently and semi-permanently inundated wetland, and 1.13 million acres of wet meadow, i.e., ephemeral and seasonal wetlands (Rundquist 1983). Sandhill wetlands range in size from less than an acre to 2,300 acres, but 80% are less than 10 acres (Wolfe 1984).

Ginsberg (1985) noted that although many of these wetlands and lakes appear to be geographically isolated wetlands, they are predominantly hydrologically connected to and represent an extension of the groundwater, particularly in the eastern and central sandhills and thereby supply base flows to the streams and other waters in the region. These sandhill wetlands developed as groundwater seepage areas in the valleys of wind-

[532] This subsection excerpted from Ducks Unlimited 2014 Rule Comments at Section III. See also Woolford et al (October 2014) at 35-39.

deposited sand dunes (Sidle and Faanes 1997). Rundquist et al. (1985) provided evidence of groundwater flow-through in a shallow lake, with the groundwater flowing toward Blue Creek, about 3 miles away. LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and groundwater as water in this interconnected system flowed toward lower elevations. Novacek (1986) stated that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2002).

Winter (1998) stated that, "groundwater and surface-water interactions have a major role in affecting chemical and biological processes in lakes, wetlands and streams, which in turn affect water quality throughout the hydrologic system." The extent of connectivity between the wetlands, groundwater and downstream flowing waters was provided by Chen and Chen (2004) when they documented that a very high percentage of the flows of the Dismal and Middle Loup rivers was supplied by groundwater. Further evidence of the connectivity with the groundwater is the presence of fens in the region (Steinauer 1995).

Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Importantly, in terms of the issue of connectivity of the wetlands with downstream waters via groundwater, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers.

In summary, the scientific evidence seems clear that the Sandhill wetlands are, in the aggregate and generally, connected via groundwater linkages to navigable waters and their tributaries in this region of the country. Thus, they should be strongly considered for designation as jurisdictional by rule. (p. 87-89)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding sinkhole wetlands in karst regions and Nebraska sandhill wetlands. These wetlands have not been identified as jurisdictional by rule or in paragraph (a)(7) as a subcategory of similarly situated waters by rule. Sinkhole wetlands in karst regions and Nebraska sandhill wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The information provided may be useful in analyzing water under (a)(8). The agencies will continue a transparent review of the science, and gain 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.**

4.531 Interdunal Wetlands[533]

Interdunal wetlands exist along the coastlines of America's oceans and Great Lakes among sand dunes formed by nearshore processes and historically higher water levels. These landscapes have several significant physical, chemical, and biological impacts on navigable waters, including streams, the Great Lakes, and the coastal oceans, including the following:

- Seasonal shifts in the groundwater hydrologic gradient cause exchange between interdunal wetlands and navigable waters, including streams, the Great Lakes, and coastal oceans.
- Fluctuating dunes commonly create temporary connections between interdunal wetlands and navigable waters, stimulating exchange of water, sediments, nutrients, and organic matter.
- Open water interdunal wetlands can sequester incoming suspended solids, as well as attached phosphorus and pollutants such as heavy metals and pesticides, and may prevent them from entering nearby navigable waters.
- Interdunal wetlands support some 1,400 species of living organisms and are extremely important staging and breeding areas for waterfowl, shorebirds, and wading birds that migrate along the Atlantic, Mississippi, and Pacific flyways.
- Many resident birds, mammals, reptiles, and (during times of temporary connection to navigable waters) fish in interdunal wetlands move between these habitat and navigable waters such as streams and rivers, Great Lakes, and coastal oceans, and represent transfers of energy, nutrients, genetic material, and organic matter, (p. 92)

Agency Response: **The agencies appreciate the contribution of these scientific studies to the body of knowledge regarding interdunal wetlands. These wetlands have not been identified as jurisdictional by rule or in paragraph (a)(7) as a subcategory of similarly situated waters by rule. Interdunal wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The information provided may be useful in analyzing water under (a)(8). The agencies will continue a transparent review of the science, and gain 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.**

4.532 The 2003 and 2008 Guidances leave millions of acres of lakes, potholes, and wetlands at risk of pollution and destruction.

The current 2003 and 2008 guidance documents, as well as the proposed rule's case-specific significant nexus test for "other waters," leave millions of wetland acres at risk nationwide. EPA acknowledged in its economic analysis of the 2011 draft guidance that

[533] This section is excerpted and summarized from Woolford et al (October 2014) at 49-50.

"[s]ince SWANCC, no isolated waters have been declared jurisdictional by a federal agency."[534] Our review of several districts shows no indication so-called isolated waters such prairie potholes and playa lakes are receiving protection.[535]

EPA Region 8 staff reported in 2009 that they are losing protections for prairie potholes, playa lakes, and vernal pools. They report that Army Corps Sacramento, Omaha, and Albuquerque Districts –covering Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming, and 27 Tribal Nations – failed to assert jurisdiction in nearly 72% of their jurisdictional calls between June 2007 and August 2008, and that SWANCC, not Rapanos, was cited as the basis for lack of federal jurisdiction on 88% of these non-jurisdictional determinations. In numerous instances, these findings of no jurisdiction ignored important shallow sub-surface connections.[536]

At risk waters in the West include those that connect to TNWs and IWs through a ground water rather than a surface water connection. The "Lost" river drainages in eastern Idaho include 73 streams within a 5500 square mile area.[537] The rivers empty into the Eastern Snake Plain Aquifer, an underground water body twice the size of Lake Erie.[538] Eventually, the Aquifer discharges to the Snake River, itself a TNW, but also a major tributary to the Columbia River. As far back as 1985, the Walla Walla Corps District documented fishing, hunting, recreation, and agriculture connections to interstate and foreign commerce that established Clean Water Act jurisdiction over the Lost River drainages.[539] Based on the 2003 SWANCC Guidance, the Corps ultimately designated some of the Lost Rivers, including the Big Lost, but not the Little Lost, to be jurisdictional as TNWs. Others, including the Little Lost, should qualify as a TNW because of kayaking and guided recreation. The ESA-listed bull trout inhabits a number of these drainages as well.[540]

In the wake of the 2003 SWANCC Guidance, the Albuquerque Corps District has disclaimed jurisdiction over entire "isolated" or "closed" basins in New Mexico, including the Sacramento, Yseltano Canyon (Tularosa Creek and tributaries), the Mimbres, the San Augustine Plains, Santa Clara Canyon, Estancia, Jornado del Muerto, and the Tularosa River Basins.[541] The New Mexico Department of Game and Fish noted the SWANCC-induced risk to these basins in a 2003 letter to EPA noting that about 20% of New Mexico's waters could be considered within closed basins, and "[m]ore than 84

[534] U.S. Environmental Protection Agency, Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of the Clean Water Act Jurisdiction, at 3 (April 27, 2011).
[535] See, e.g., Earthjustice, et al. Courting Disaster: How the Supreme Court Has Broken the Clean Water Act and Why Congress Must Fix It. (April 2009), at 6-7 ("isolated" but navigable-in-fact skiing lake); 8-9 (North Dakota prairie potholes).
[536] 2009 EPA Inspector General Report at 9-10.
[537] EarthJustice, NWF, NRDC and Sierra Club, "Reckless Abandon" 12 (2004).
[538] Id.; see also, Idaho National Laboratory Oversight Program, State of Idaho, The Eastern Snake Plain Aquifer 2-3 (May 2005) available at: https://www.deq.idaho.gov/media/552772-newsletter_0505.pdf
[539] Id. 13 citing Initial Report on Isolated Waters in the State of Idaho Subject to Clean Water Act Jurisdiction," Walla Walla District, April 26, 1985.
[540] Id.; See, e.g., USFS, Bull Trout Final Critical Habitat Justification, Chapter 28 (2010), available at http://www.fws.gov/pacific/bulltrout/pdf/Justification%20Docs/BTChapter28.pdf.
[541] Imperiled Treasures, supra, at 13-14.

miles of perennial and 3900 miles of intermittent waters exist within these close basins, representing over 14% of the perennial and intermittent waters in the state."[542]

In 2007, the Corps found an eight-acre playa in Colorado's Washington County non-jurisdictional because it was "isolated, … surrounded by uplands, … 4000-5800 feet from any potentially jurisdictional tributary, and [prior to SWANCC, likely] regulated solely based upon the presence of migratory birds."[543] The Corps made no effort, even though its determination was made in 2007, after Rapanos, to determine whether the playa, alone or aggregated with similarly situated wetlands, had a significant nexus to other waters of the United States.

Over 60% of Montana's mapped wetlands, accounting for almost 25% of the state's wetlands acreage, may be considered geographically "isolated" and at continued risk of losing Clean Water Act protections, even under this proposed rule.[544]

In finalizing this rule, we urge the agencies to consider all the scientific literature, as well as other documentation of physical, chemical, and biological connectivity, that is presented herein and in the administrative record. (p. 100-101)

Agency Response: In the final rule, the agencies have considered the scientific literature, including those referenced in the Science Report and provided by commenters, and the SAB's recommendations.

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

4.533 The conservation groups believe, however, that your proposed use of Level III Ecoregion listings, such as you have suggested, id., may be insufficient to adequately account for regionalscale ground water and, in particular, groundwater connectivity of "other waters" with traditionally jurisdictional waters. Accordingly, the conservation groups recommend, in addition to the Ecoregion approach, specific consideration of the hydrologic landscape, such as has been suggested by members of EPA's Science Advisory Board. See, e.g., discussion by Kolm at SAB Sept. 2, 63-70.

The conservation groups are greatly concerned that "closed basins" do not appear to be covered under the Proposed Rule. This includes 20% of the land area in New Mexico, and many rivers, streams and wetlands. These waters provide recreation, fishing and waters supply in a region with scarce water resources. Closed basins exist throughout the arid western interior and must not be eliminated from coverage. (p. 9)

Agency Response: See Agency Summary Response Essay 7 and the Technical Support Document for the rationale regarding why 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. Waters

[542] Id. at 14; Reckless Abandon, supra, at 7 citing Letter from Larry G. Bell, Commissioner, New Mexico Department of Fish and Game, to U.S. EPA, April 15, 2003.
[543] Buechler (2010), supra, at 15.
[544] See Vance, Linda K. 2009 Geographically Isolated Wetlands and Intermittent/Ephemeral Streams in Montana: Extent, Distribution, and Function. Report to the Montana Department for Environmental Quality and the U.S. Environmental Protection Agency. Montana Natural Heritage Program, Helena, Montana.

within closed basins have not been identified as jurisdictional by rule or in paragraph (a)(7) as one of the five subcategories of similarly situated waters by rule. Waters within closed basins are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories (such as an interstate water) and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.

Environmental Defense Fund (Doc. #15352)

4.534 Include in the final rule categorical protection for waters on an ecoregional or hydrologic-landscape basis, consistent with the legal, technical and scientific administrative record (p. 2)

Agency Response: "Similarly situated" waters will not be categorically determined to be jurisdictional by rule. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.

4.535 EDF strongly supports the agencies' recognition of the importance of protecting "other waters"[545] and their resulting request for comment and scientific, technical and scientific data to support categorical protection of similarly situated waters in an ecoregional or hydrologic landscape scale that have a significant nexus to downstream navigable waters. EDF urges the agencies to include protection in the final rule for as many types of waters, such as prairie potholes, at the ecoregional or other hydrologic landscape level as the administrative record supports for compliance with the significant nexus test on a categorical basis at the ecoregional or hydrologic landscape level.[546] This is critical to achieving the goals of the Clean Water Act as well as the agencies' goals to provide clarity, transparency, and predictability. We further suggest that, as new scientific information comes to light, the agencies periodically amend the rule to include additional categories of waters protected at the ecoregional or hydrologic landscape scale. (p. 5)

Agency Response: In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are

[545] "Other waters" are waters that do not fit into any of the proposed categories of waters of the U.S. in the proposed rule (79 Fed. Reg. 22189, 22211).

[546] As discussed above, see supra at footnote 3, Swampbuster applies to prairie potholes, and the Farm Bill conservation programs incentivize farmers to restore and protect these wetlands because of the important functions and values they provide. This reflects a connection to interstate commerce.

jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. Waters not analyzed under (a)*7) are jurisdictional when they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.

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

4.536 As these comments discuss in detail above, the available evidence readily supports a conclusion that certain kinds of "other waters" that are prevalent in particular parts of the country significantly impact downstream waters' physical, chemical, and biological integrity and therefore must be protected categorically as "waters of the United States."

Moreover, we support, in addition to – not in place of – finding the categories of water bodies listed above to be jurisdictional by rule, the agencies' proposal to assess the combined effect of "other waters" in several identified ecoregions, and to find such waters to be jurisdictional by rule.[547] (p. 63)

Agency Response: See response 4.534 or 4.535 (Doc. #15352)

Rock the Earth (Doc. #12261)

4.537 As stated in the rule "[e]coregions cover relatively large areas of land or water, and contain characteristic, geographically distinct assemblages of natural communities and species."[548] An ecosystem approach to jurisdictional evaluation of "other waters" permits an analysis based on the "similar *functions*" of the "other waters" analyzed.[549] The focus on function is critical to protecting our nation's waterways, recognizing that they are interconnected bodies rather than isolated features.

This approach is particularly important to other waters that are classified as nonadjacent wetlands. Wetlands are often considered ecotones, which are generally defined as zones "of transition between adjacent ecological systems, having a set of characteristics uniquely defined by space and time scales and by the strength of the interactions between adjacent ecological systems"[550] Wetlands exhibit traits of both aquatic and terrestrial ecosystems, yet they are characterized by a number of processes and functions that are

[547] Id.
[548] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22225 (proposed Apr. 21, 2014) (to be codified as 40 CFR Parts 110, 112, 116, et al.).
[549] Id. at 22215 (emphasis added).
[550] Risser, The Ecological Importance of Land-Water Ecotones *in* Naitnan, R.J. and H Decamps, eds. *The Ecology and Management of Aquatic-Terrestrial Ecotones*. Paris, France: United Nations Educational, Scientific, and Cultural Organization (P.G. 1990), at 7-21 ("Risser").

unique to them. Wetland/upland ecotones "have been recognized as sites that mediate fluxes of energy, nutrients, and materials and consequently link processes in the adjoining systems."[551] These features underscore the importance of a ***functional view*** and an approach that considers the regional significance of a water body.

Under the ecoregion approach, EPA "would consider the 'other waters' in a single point of entry watershed in these identified ecoregions as similarly situated for purposes of aggregation for a significant nexus analysis."[552] Considering function within an ecological system resonates with Justice Kennedy's analysis of a "significant nexus" and "similarly situated waters" in Rapanos, where he explained that wetlands possess the requisite nexus if "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."[553] The Supreme Court's earlier focus on "significant natural biological functions" in its Riverside Bayview opinion also supports an ecoregion approach that contemplates the biological impact and connection of a water body within a larger region.[554]

The evident spotlight on the function of a water body within its surrounding system provides a legal foundation for the proposed ecoregion approach. RtE supports this broader method that considers a water body's role within its surrounding aquatic and terrestrial environment. (p. 7-8)

Agency Response: See Agency Summary Response Essay 7and the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard. The final rule identifies nine functions that will be considered in connection with a case-specific significant nexus analysis. See Significant Nexus compendium.

Tulane Environmental Law Clinic; and Tennessee Clean Water Network; et al (Doc. #15123)

4.538 THE RULE SHOULD CATEGORICALLY PROTECT PRAIRIE POTHOLES, VERNAL POOLS AND KARST SINK HOLE WETLANDS AS WATERS OF THE UNITED STATES.

Karst Sinkhole Wetlands

Large portions of Missouri, Tennessee, Kentucky, Wisconsin, and Illinois are underlain with extremely karstic geology, which has produced an abundance of caves, sinkholes, losing streams, and other geologic features that have interaction with surface water.[555] These sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses.

[551] *See* Kirkman, L.K., M.B. Drew, and E.R. Blood, Ecotone Characterization Between Upland Longleaf Pine/Wiregrass Stands and Seasonally-Ponded Wetlands (1998), at *Wetlands* 18(3): 346-364 ("Kirkman").
[552] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22215.
[553] *Rapanos v. United States*, 547 U.S. 715, 759 (2006) (J. Kennedy, concurring).
[554] *United States v. Riverside Bayview Homes*, Inc., 474 U.S. 121, 133 (1985).
[555] Missouri Department of Natural Resources, Comments on "Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of 'Waters of the United States,''' Docket ID OW-2002-0050, at p-2 (Mar. 5, 2003).

While they can be classified into several different categories, sinkhole wetlands generally have significant impacts on downstream waters. They can mediate flooding and stormwater runoff and reduce peak flows by retaining water on the landscape before it reaches navigable waterways. Some types can slow water infiltration to aquifers and allow for sediment and pollutant removal. Studies have demonstrated that stream flows downstream of karstic sinkhole wetlands are characterized by peak discharges that are of a lesser volume and longer duration than those upstream.

Ducks Unlimited's review of the scientific research bears this out:

> "'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."[556] (p. 10-11)

Agency Response: **The agencies appreciate the contribution of this information to the body of knowledge regarding karst sinkhole wetlands. These wetlands have not been identified as jurisdictional by rule or in paragraph (a)(7) as one of the five subcategories of similarly situated watersby rule. Karst sinkhole wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule. The agencies will continue a transparent review of the science, and gain 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.**

Audubon Florida and Audubon of the Western Everglades (Doc. #15251)

4.539 EPA and the Corps have requested science, data and input on alternative ways to increase accuracy and predictability of jurisdictional determinations of "other waters" while lessening the reliance on case-specific "significant nexus to navigable waters, interstate waters, or the territorial seas" determinations. To this end in Florida, AF and AWE recommend considering the greater Everglades as an ecological region in which the full spectrum of wetland types are considered categorically jurisdictional based on the annual cycles of wet and dry season overland sheet flow to the coastal estuaries of the Gulf of Mexico, Florida Bay and the Atlantic Ocean. These annual landscape-level wet season inundations with flowing water connect wetlands of shorter hydroperiods with those of longer hydroperiods.

While there should be consensus that the deep River of Grass which includes Shark River and Taylor Sloughs are a south Florida version of jurisdictional navigable waters, there

[556] Ducks Unlimited, Comment Letter to EPA & Army Corps of Engineers, Docket ID No. EPA-HQ-OW-2011-0880 at 63 (Nov. 5, 2014).

may be confusion over the status of "other waters" like the shallow, seasonal wetland types that formerly were abundant around the periphery of these deeper flows. These were the wetlands that cyclically dried up more than half the year and consequently were largely converted to farming and urban land uses over generations. This is a trend that Audubon scientists have documented continuing today, along with insufficient mitigation. This is a significant factor in the functional loss of more than half the Everglades wetlands and in why more than 90% of its wood stork and wading bird populations have disappeared. The remaining shallow, seasonal wetland types are vulnerable to the reduced protection that has resulted from jurisdictional confusion. Shallow and seasonal wetlands are a similarly situated class of wetlands, ecologically a part of a still vast Everglades hydrological landscape, and they contribute a disproportionately high degree of biological integrity.

As one fundamental illustration of the importance of these short hydroperiod/shallow hydropattern wetlands in the Everglades, Audubon Florida scientists at Corkscrew Swamp Sanctuary, in the heart of the Western Everglades, have gathered and analyzed wetland permitting data, nesting data for the historically largest wood stork rookery in the nation at Corkscrew Swamp going back to 1958, and compared 2004 mapped land cover data on shallow, seasonal wetlands in the core foraging area (30km radius) of this Corkscrew wood stork rookery, to the reconstructed land cover data for colonial times. (See figures 1 and 2 below). As over 70% of the biologically critical shallow, seasonal wetlands were eliminated from the Corkscrew Rookery's core foraging area, nesting at this rookery declined by over 90%.

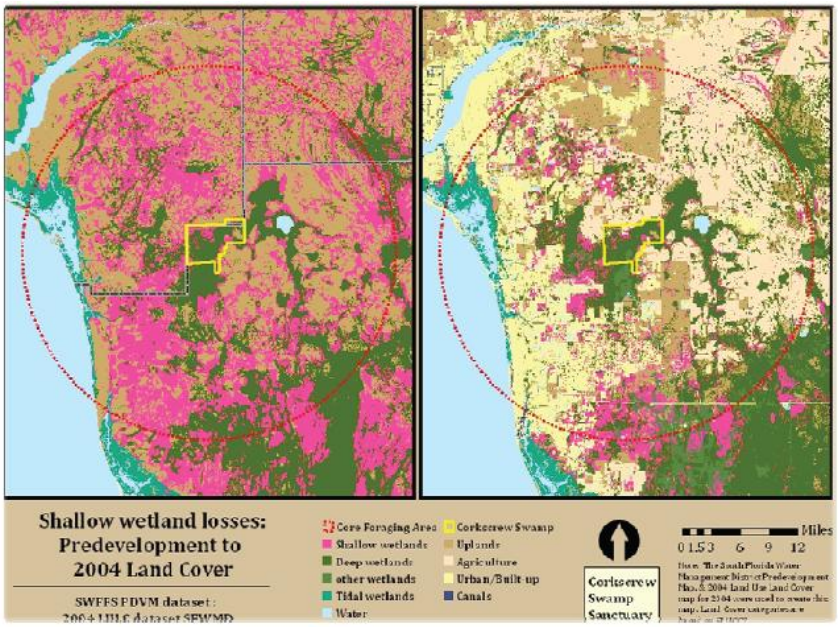

Fig. 1: Pink on maps are shallow, seasonal wetlands (critical for stork nesting success) – note huge decline from historic (left) to 2004. This has been calculated to be over 70% loss of the Corkscrew Swamp (yellow outline) wood stork rookery core foraging area's (red circle) shallow, seasonal wetlands. 82% of wet prairies have been destroyed, a wetland type shown to be most critical to stork nest initiation in the Corkscrew rookery.

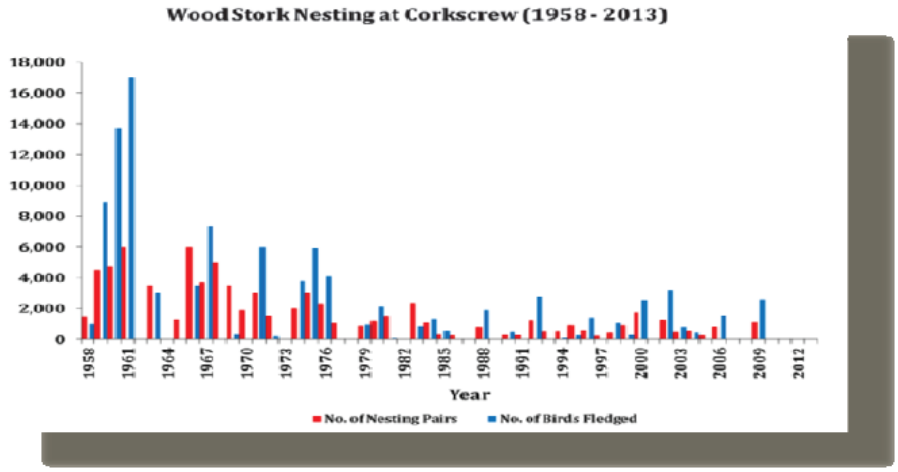

Fig. 2: The graph above shows the 90% decline in storks nesting at Corkscrew Swamp, which corresponds to the historic and continuing loss of the majority of the Corkscrew rookery's core foraging area shallow, seasonal wetlands. This is occurring across the Everglades for wading birds mostly due to large and continuing losses of short hydroperiod/hydropattern wetlands.

It is important to recognize the biological role these short hydroperiod/shallow hydropattern wetlands play in the greater Everglades. As the flooded and flowing greater Everglades enters the dry season in late fall, the water descends into pools, concentrating forage fish in November and December, which is the ecological signal to wood storks to begin nesting. The shallow wetlands pool the fish first, so if such wetlands and their concentrated fish are too scarce, storks do not nest or nest later which greatly lowers their nesting success. Corkscrew scientists have monitored this correlation between the wood stork rookery's nesting initiation and fledging success, which is displayed in the graph in Figure 3 below:

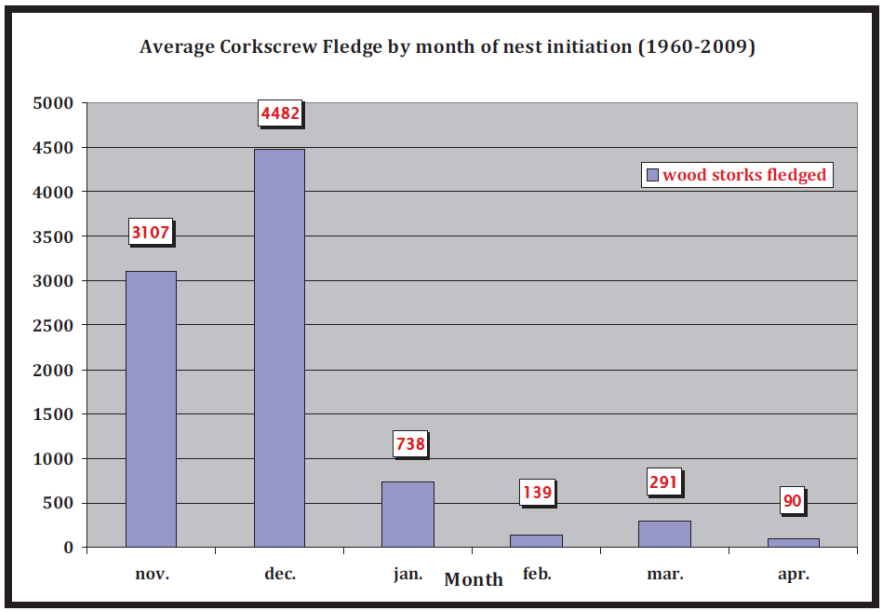

Fig. 3: Y-axis is 50 year average of successful stork fledges by month of nest initiation (x-axis). Note the precipitous decline in productivity when nesting doesn't start until after January. Only shallow, seasonal wetlands are available for foraging prior to January, if they haven't been destroyed.

Finally, Audubon staff reviewed hundreds of State of Florida issued Environmental Resource Program wetland permits issued between 2004 and 2010, many of which had corresponding federal CWA Section 404 permits. Seventeen permits were analyzed in detail which revealed a consistent practice of disproportionate impacts to these shallow, seasonal wetland types, including wet prairies, hydric pine flatwoods, hydric hammocks and others.[557] The permits also consistently undercompensated for these short hydroperiod wetland impacts. While this analysis does not demonstrate jurisdictional confusion as a cause, it does show that regulatory agencies have insufficient understanding and recognition of the functions of shallow, seasonal wetlands in the Western Everglades watershed. It also shows the long trend of disproportionate destruction of shallow, seasonal wetlands without adequate compensation in the greater Everglades is continuing. There are other regulatory improvements and restoration objectives AF and AWE are pursuing to help address this problem. However, it is also vital to categorically classify these types of Everglades wetlands as jurisdictional under the CWA and this proposed rule. Such an action will assure that there is no jurisdictional confusion over a unique ecological region's water resources. Based on these data and evidence, AF and AWE assert the shallow, seasonal wetlands have an ecological link to, and significant nexus with, undisputed jurisdictional Everglades water resources. That link and significant nexus contributes to jurisdictional Everglades wetland biological, chemical and physical integrity, and is clearly enough to warrant categorical inclusion of all greater Everglades ecological region wetlands as jurisdictional under the CWA and this proposed rule. (p. 2-6)

Agency Response: **At this time, the agencies are not able to determine that the available science supports that wetlands in the greater Everglades, as a class, have a significant nexus to (a)(1) through (a)(3) waters. However, individual wetlands are jurisdictional where they fall within one of the (a)(1) through (a)(6) or (a)(8) categories and are not excluded by rule.**

4.540 We believe the rule could be made even more efficient by categorically including as jurisdictional by rule the full spectrum of wetland types in the greater Everglades, especially similarly situated and very scarce shallow, seasonal wetlands. (p. 6)

Agency Response: **See above response.**

[557] Lauritsen, J.A. 2010. Functional Tracking of SFWMD's Implementation of UMAM: Gains and Losses by Hydrologic Categories. Unpublished staff report, 11 pp.

4.3.5.2 Opposing Approach

Sealaska Corporation (Doc. #15356)

4.541 The Agencies included a possible list of Level III EcoRegions where waters could be similarly situated. This proposal represents a significant shift in policy that would greatly expand the Agencies' jurisdiction. For example, the map of Level III EcoRegions provided by the Agencies appears similar to the map of the nation's migratory bird flyways. If the Level III EcoRegions map were used to determine whether waters are similarly situated, such an approach could easily result in a determination of jurisdiction over the isolated ponds determined to be non-jurisdictional in SWANCC.

Finally, as with the Agencies' watershed proposal, the Agencies' "ecoregion" proposal raises significant questions about notice, opportunities to comment, and appeal rights. As an initial matter, the Agencies have merely provided a "possible list" of EcoRegions that may be used for a by-rule jurisdictional determination. This approach by the Agencies is patently vague and does not afford the level of notice and comment required under the Administrative Procedure Act. Specifically, the Agencies have not provided any explanation or rationale as to their potential selection of Level III EcoRegions.

For the reasons stated above, the Agencies should not proceed with the "ecoregion" approach, but if they do, they should provide due process to affected parties by providing a more complete notice and an opportunity to comment. Of course, such a process would impose yet another burden on both the Agencies and the regulated community, which is among the many reasons why the Agencies should reject this overly-expansive approach. (p. 19)

Agency Response: See the response 4.316 (Doc. #13074) and the Technical Support Document for rationale regarding why 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.

State of Alaska (Doc. #19465)

4.542 The proposed rule introduces a new watershed/ecosystem concept into jurisdictional determinations that, as written, would allow EPA and the Corps to "aggregate" the contributions of all similar waters within an entire watershed to determine whether jurisdiction should be asserted. Implementation of this portion of the proposed rule would require additional guidance and does not meet the intended purpose of the proposed rule to reduce confusion and uncertainty. Based on the significant nexus analysis provided in the proposed rule, particularly for consideration of whether or not wetlands are jurisdictional, field staff would need to start from a "watershed" standpoint, looking at the whole watershed in which the activity will occur, in determining whether jurisdiction should be asserted.

As we understand it from discussions with representatives of both federal agencies, under the existing 2008 guidance, field staff looks to the "relevant reach" of the tributary (navigable or non-navigable) relative to the adjacent wetland which is to be disturbed, a more confined geographical assessment. Under the watershed approach in the proposed

rule, the relevant reach concept is no longer used, and field staff will aggregate and consider all similarly situated waters or wetlands (not just adjacent wetlands) in determining whether a significant nexus exists to a "downstream" navigable water. Thus, under the proposed rule, the analysis would start from a greater geographic area/landscape looking back at the activity and including assessment of "similarly situated waters." An entire group of waters could be determined jurisdictional without ever performing a significant nexus analysis of each of those waters. Attempts to establish classes of waters in this manner (based on assumptions instead of a case-by-case analysis) should only be done so with public involvement and comment. There is no formal written process by which these significant nexus studies would be conducted which is not consistent with the intended purpose of the proposed rule to reduce confusion and uncertainty.

Such a blanket jurisdictional approach would establish a nexus between remote intrastate waters and traditional navigable waters, even though it may not meet any common understanding of the term "significant." The proposed rule's sweeping ecosystem/watershed approach defies Supreme Court precedent, where Justice Kennedy stated that "absent more specific regulations," a pointed, "case-by-case," significant nexus analysis is required to determine whether jurisdiction over a wetland, based on adjacency to a navigable water, is appropriately exercised.[558]

Additionally, wet areas isolated from tributaries because they are hydrologically disconnected are likely to be held jurisdictional, requiring enormous effort to verify or rebut the presumption of jurisdiction. This will put project proponents at a significant disadvantage when a wrong, but non-appealable decision, is made by federal agency staff. It will lead to delays in projects, costs of inflation associated with delayed construction, and the cost of hiring experts and lawyers to debate jurisdiction. (p. 29)

Agency Response: **As set forth in the Technical Support Document, compared to the historic scope of the existing regulations, the final rule is narrower; compared to agency practice in light of guidance issued after *SWANCC* and *Rapanos*, the final rule is generally broader compared with that baseline, but still narrower than practice under the existing regulations prior to those decisions. Compared with current field practice based on the 2008 EPA and Corps jurisdiction guidance, the agencies anticipate the new rule will result in an increase in the number of positive jurisdictional determinations and an associated increase in both costs and benefits that derive from the implementation of CWA programs. That being said, the agencies also believe that the final rule provides the agencies, the regulated community and the public with far more consistency, clarity and predictability than exists under the current field practice. The agencies further believe that the final rule is fully supported by the best available science and the case law. See Technical Support Document. With respect to the "other waters" category, the agencies believe that category is not overbroad, and the agencies have retained only in two specified circumstances the current practice of case specific significant nexus determinations. See Agency Summary Response Essay 1.**

[558] 547 U.S. 782.

Clark County Regional Flood Control District (Doc. #11726)

4.543 We recommend that the Agencies recognize that ephemeral washes in the desert southwest are landforms over and through which infrequent flows have eroded the land surface, and which only rarely convey water to downstream jurisdictional "waters". The Agencies should by rule exclude ephemeral washes in certain Level III ecoregions, including ecoregions 13 Central Basin & Range and 14 Mojave Basin & Range and perhaps other ecoregions, from the definition of "waters of the United States". (p. 3)

Agency Response: See Agency Summary Response Essay 3.

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

4.544 The Commenters object to the other approaches to "other waters" that were floated by the agencies, particularly the "eco-region" approach. First, the request itself indicates that the agencies are ambiguous about whether the waters in certain eco-regions are similarly situated such that they provide the collective nexus. Second, by pre-determining the types of waters in certain regions, the proposed rule would remove any necessity that a specific water maintain at least a nexus or connection. Finally, dividing the country into different categories with different jurisdictional waters seems inherently confusing, both to the agency and the general public. (p. 17)

Agency Response: See Agency Summary Response Essay 7 and the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard. See Conclusion 5 of the Science Report. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Thus, based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water.

City of Glendale (Doc. #15054)

4.545 The City of Glendale is located within one of those ecoregions under consideration - #81 Sonoran Basin and Range. Based on knowledge of local conditions, it is not appropriate to consider all "other waters" in this ecoregion in aggregate. Therefore, *the proposed language in (a)(7) is adequate for case specific evaluations and should not be revised to reference ecoregions.* (p. 5)

Agency Response: The final rule did not determine the Sonoran Basin and Range to be one of the categories "similarly situated" by rule in a single point of entry watershed. However, the waters within that ecoregion may be still be evaluated

under a case-specific significant nexus analysis to determine if they are both similarly situated and have a significant effect on (a)(1)-(a)(3) waters, if they meet the other conditions stated in the rule. See the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard.

Lea Soil and Conservation District Board of Supervisors (Doc. #15144)

4.546 The Parties object to the other approaches to "other waters" that were floated by the agencies, particularly the "eco-region" approach. First, the requests itself indicates that the agencies are ambiguous about whether the waters in certain eco-regions are similarly situated such that they provide the collective nexus. Second, by pre-determining the types of waters in certain regions, the proposed rule would remove any necessity that a specific water maintain at least a nexus or connection. Finally, dividing the country into different categories with different jurisdictional waters seems inherently confusing, both to the agency and the general public. (p. 5-6)

Agency Response: **See response 4.545 (Doc. #15054)**

Colfax Soil & Water Conservation District, New Mexico (Doc. #16890)

4.547 The Parties object to the other approaches to other waters that were floated by the agencies, particularly the ecoregion approach. First, the requests itself indicates that the agencies are ambiguous about whether the waters in certain eco-regions are similarly situated such that they provide the collective nexus. Second, by predetermining the types of waters in certain regions, the proposed rule would remove any necessity that a specific water maintain at least a nexus or connection. Finally, dividing the country into different categories with different jurisdictional waters seems inherently confusing, both to the agency and the general public. (p. 1-2)

Agency Response: **See response 4.545 (Doc. #15054)**

Western Coalition of Arid States (Doc. #14407)

4.548 WESTCAS members operate irrigation systems, drainage systems, and public water treatment plants and/or conduct construction and development activities in several Ecoregions listed in the preamble to the proposed rule.[559] For example, Ecoregion No. 81, the Sonoran Basin and Range, was identified as an Ecoregion that meets the agencies other waters (a)(7) aggregation test.

While some natural undeveloped desert areas in the Sonoran Basin and Range Ecoregion meet the agencies broad characteristics, most do not. Almost every perennial surface water is dammed and diverted for agricultural, industrial, or municipal use. In agricultural areas, many ephemeral streams were converted to cropland, decades, if not more than 100 years ago. And where ephemeral streams are still present in urbanized areas, they largely are channelized, diverted or dammed to prevent flooding.

[559] Other Ecoregions listed include: No. 6, Central California foothills and Coastal Mountains; No. 7, Central California Valley; No. 8, Southern California Mountains; and No. 85, Southern California/Northern Baja Coast.

In addition, one distinct physical characteristic within the Sonoran Basin and Range Ecoregion is the widespread occurrence of land subsidence. After decades of intensive agricultural groundwater pumping, large tracks of land have experienced permanent subsidence rates varying from a few feet at the base of mountain ranges, to more than 40 feet in some alluvial basins. As a result, many natural ephemeral streams in some areas were permanently and negatively modified and no longer follow previous flow patterns.

We acknowledge and support the "agencies" efforts to streamline the process for jurisdictional determinations, but for the reasons stated above, we strongly oppose the proposal to categorically designate all other (a)(7) waters within the listed Ecoregions as jurisdictional waters. Such waters should continue to be evaluated by permitting agency staff and field personnel on a case-by-case basis. (p. 18-19)

Agency Response: The final rule did not determine the Sonoran Basin and Range to be one of the categories "similarly situated" by rule in a single point of entry watershed. However, the waters within that ecoregion may be still be evaluated under a case-specific significant nexus analysis to determine if they are both similarly situated and have a significant effect on (a)(1)-(a)(3) waters, if they meet the other conditions stated in the rule. See the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard.

Kent Connelly, Chairman, Coalition of Local Governments (Doc. #15516)

4.549 The Coalition also does not support the determination that "other waters" that are similarly situated within certain Level III ecoregions would be found by rule or on a case-by-case basis in the aggregate to have a significant nexus to "waters of the United States." 79 Fed. Reg. at 22215. The list of ecoregions where aggregation could be used contain large portions of land that stretch across a number of neighboring states. See Level III Ecoregions of The Continental United States Map (April 2013), available at http://www.epa.gov/wed/pages /ecoregions/level_iii_iv.htm (Ecoregions 27, 42, 44, 46, 47, 48, 51, and 50 from the list fall within the north-central states of Montana, North Dakota, South Dakota, Nebraska, Minnesota, Wisconsin, Michigan, and Iowa). (p. 13-14)

Agency Response: See Agency Summary Response Essay 7and the Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard.

North Houston Association et al. (Doc. #8537)

4.550 In summary, these three studies [Forbes et al. 2012; Wilcox et al. 2011; Enwright et al. (2011)] are being used to draw conclusions that cover a tremendously large and diverse area from the coast to hundreds of miles inland, elevations zero to hundreds of feet, with diverse geology, hydrology, soils, and biota. All of the study areas referenced in the three studies are located near the coast and many at very low elevations. Indeed the maximum elevation for any wetland studied is +35 feet MSL. Additionally, many of the wetlands in the studies are already subject to CWA jurisdiction. Overall, the limited and targeted nature of these studies do not provide sound data to conclude that the Western Gulf Coast Plain [i.e., III Ecoregion 34), or any sizable sub-delineation of that Ecoregion,

is clearly connected to traditional navigable waters in such a way as to have a significant nexus. (p. 9)

Agency Response: **See Technical Support Document, sections XI.**

North Houston Association, West Houston Association, Woodlands Development Company (Doc. #12259)

4.551 The new rule proposes to include isolated wetlands that are either singularly or in combination with similarly situated waters as having significant nexus to TNW and thus jurisdictional by rule. The basis of this focus and drive to include whole regions such as the WGCP appears to be a desire to bring land-use management and regulation by the Federal Government into the State and local setting. A single compendium study, in Draft Form, is the technical basis for the expansion of jurisdiction. Although the Rapanos Supreme Court ruling directed that significant nexus to traditional waters should not be speculative, the use of a Draft Report, that itself is a synthesis of published reports of a wide variety, does not address the specifics of the WGCP and the varying situations that this broad area presents. The use of the few, limited studies conducted in the WGCP as validation of jurisdictional inclusion of WGCP isolated wetlands are highly speculative and biased in our view. We object to the attempt to include the WGCP and any subgroup of that ecoregion, into the jurisdictional fold by rule, without rigorous, local, and regional based studies, with public participation of the significance of connectivity of the various watershed units in the ecoregion. (p. 5)

Agency Response: **See Technical Support Document, section XI.**

New Mexico Mining Association (Doc. #8644)

4.552 In response to the agencies' specific request for comment regarding whether playa lakes could have a significant nexus with a jurisdictional water, see 79 Fed. Reg. 22250, it is the opinion of this commenter that the final rule should categorically exclude playa lakes from the definition of Waters of the United States under subsection (b). By their very definition, playa lakes are ephemeral and found in closed basins. See http://water.epa.gov/type/wetlands/playa.cfm; 79 Fed. Reg. 22251. They do not contribute any flow to other bodies of water. 79 Fed. Reg. 2225 1; D.A. Haukos, and L.M. Smith, "Past and Future Impacts of Wetland regulations on Playas," Wetlands 23(3):577-589 (2003). Therefore, it is highly unlikely that a playa lake could have a substantial nexus with another Water of the United States. (p. 4)

Agency Response: **See response 4.422 (Doc. #11014), 4.423 (Doc. #15020) (discussion of playa lakes)**

Andrew C. Wilson, Simon, Peragine, Smith & Redfearn, LLP on behalf of Edward Wisner Donation (Doc. #15438)

4.553 Wisner is most concerned that if these agencies cast their jurisdictional "net" on a regional basis, Wisner's entire 38,000 acres may become subject to these agencies' expanding jurisdiction. This is far beyond the parameters of the existing guidance documents maintained by these agencies, as well as the aforementioned Supreme Court

precedents. Accordingly, this seeming "catch all" provision should be rewritten to reflect existing law. (p. 4)

Agency Response: See Agency Summary Response Essay 1 and Technical Support Document, section XI.

Michigan Farm Bureau, Lansing, Michigan (Doc. #10196)

4.554 The EPA and USACE go on to request suggestions for how they may assess these other waters categorically. We respectfully suggest that they cannot, as the agencies have more than amply demonstrated with the above lack of ability to even show these other waters are jurisdictional on an actual analysis, let alone by category. (p. 8)

Agency Response: The agencies note the comment and disagree.

Kennewick Irrigation District, Kennewick, WA (Doc. #13571)

4.555 Additionally, the rule proposes the use of Level III ecoregions as guidance for aggregating certain "other waters" in these regions for purposes of assuming that they are "similarly situated" and then evaluating them for a "significant nexus" to a traditional navigable water, interstate water, or the territorial seas. This proposal is puzzling, as Level III ecoregions are generally quite large and heterogeneous in the biodiversity of flora, fauna, and ecosystems that they represent. For example, the "Eastern Cascades Slopes and Foothills" Level III ecoregion covers a broad swath of land from northern California to central Washington State. The range of ecosystems covered in this one ecoregion is immense; vegetation varies from grand fir montane forests and oak and pine woodlands in the north to pumice-covered plains and juniper savannah in the south. Likewise, the waters in this ecoregion vary as well, due to climatic and geological influences, and in no way would it make any sense from a hydrological perspective to aggregate the waters across this ecoregion for the purposes of claiming that they are "similarly situated" and thus have a "significant nexus" to jurisdictional waters.

To illustrate this point further, the KID is situated in the "Columbia Plateau" Level III ecoregion, a large arid region mostly located in eastern Washington State but also extending to parts of northeastern Oregon and western Idaho. This ecoregion has been largely altered from its natural state by agricultural development, both irrigated and dry land. Before the onset of development, there were few natural streams in this ecoregion besides the large rivers (the Columbia, Snake, Yakima, Palouse, Walla Walla, and Umatilla, to name a few). Due to the aridity of the climate in the ecoregion, all of these natural streams are allogenic, with headwaters located in other ecoregions that have different climates and more precipitation. As clearly stated earlier, there are now numerous artificial streams in the ecoregion due to irrigation influence, yet there still remains many dry washes that do not convey any natural water or overland flow on a consistent basis. Thus, these waters and washes may be "similarly situated," but they are quite different in hydrological conditions, which would make aggregating and evaluating these waters for purposes of determining a "significant nexus" to traditional navigable waters an unreliable exercise at best. The agencies should drop the use of Level III ecoregions to determine "similarly situated" waters from the proposed rule. (p. 7-8)

Agency Response: See Agency Summary Response Essays 1, 7, 8.

Union County Cattlemen (Doc. #15261)

4.556 We disagree with the ecoregion approach. Ecoregion designations are too broad and they do not have homogeneous soils, vegetation and landforms. Valley soils are not the same as mountain soils and there are extremely different functions of streams with the proposed rule. EPA and the Corps are making an attempt to regulate all kinds of water that may or not be flowing and do not meet the traditional understanding of "navigable water" as described in the Supreme Court opinions. (p. 3)

Agency Response: The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See Agency Summary Response Essay 5 and the Technical Support Document for rationale regarding why 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.

Iowa Farm Bureau Federation (Doc. #15633.1)

4.557 The Agencies requested public comment on an alternative proposal to designate all waters in several ecoregions as "other waters"[560] One ecoregion, the Western Corn Belt Plains, encompasses most of the state of Iowa. Iowa's highly altered landscape does not lend itself well to aggregating waters to determine whether a significant nexus exists. The state is not homogenous. For example, comparing Map A in the record with the above hydric soils map shows that Map A ecoregion would include non-wetland waters in multiple counties. Using the ecoregion map as a surrogate to aggregate waters in a desktop analysis will not result in accurate wetland determinations. This interpretation stretches the concept of "similarly situated" beyond reason and would allow the agencies to find that essentially every feature within the ecoregion is "similarly situated" and therefore can be aggregated to assess jurisdiction. (p. 12-13)

Agency Response: The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See the Technical Support Document for rationale regarding why 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. The reference Map A is not being utilized as a surrogate. However, the agencies support the use of geographic information systems, remote sensing and other data as part of a case-specific significant nexus analysis. See Agency Summary Response Essay 14.

[560] 69 Fed. Reg. 22215.

County of San Diego (Doc. #15172)

4.558 The significant nexus determination should be retained for determining jurisdiction for "other waters." The new rule proposes to automatically consider "other waters" jurisdictional by definition based on the eeoregion or hydrologic landscape region. In the Federal Register posting, the agencies specifically request comment on alternate approaches to determining whether "other waters" are similarly situated and have a "significant nexus" to a traditionally navigable water, interstate water, or territorial seas. The discussion suggests alternative approaches such as evaluating significant nexus based on ecoregions or hydrologic landscape regions. However, considering "other waters" jurisdictional by definition, based on an ecoregion or hydrologic-landscape unit, could result in "other waters" without actual connectivity being considered jurisdictional and requiring costly mitigation and permits. The County recommends that all "other waters" continue to be evaluated as potentially jurisdictional based on the "significant nexus determination" made in the context of on-the ground conditions.

Example: In San Diego County, vernal pools are common. Some vernal pools have a clear hydrologic connection to a Waters of the U.S. based on the significant nexus determination and are therefore jurisdictional; other vernal pools do not show clear connection and therefore would not be jurisdictional under current regulations. By changing the definition to automatically consider "other waters" jurisdictional based on ecoregion or hydrologic landscape region, many additional vernal pools without clear connectivity could be grouped in with vernal pools that have connectivity based on their location within the same ecoregion. Note that the definition of an ecoregion is very broad: "an area defined by its environmental conditions, especially climate, landforms, and soil characteristics ". If additional isolated vernal pools are considered jurisdictional, this would trigger lengthy permitting and costly mitigation if impacted. (p. 8)

Agency Response: **In the final rule, the agencies have made scientifically and technically informed judgments about the nexus between the relevant waters and the significance of that nexus and conclude that tributaries and adjacent waters, each as defined by the rule, have a significant nexus such that it is reasonable to identify them as "water of the United States" by rule. The science available today does not establish that waters beyond those identified in (a)(1) - (a)(6) are jurisdictional by rule under the CWA, but the agencies' experience and expertise indicate that there are waters within the categories described in (a)(7) and (a)(8) where the science demonstrates that they often have a significant effect on downstream navigable waters, interstate waters, or territorial seas, either alone or in combination with similarly situated waters. The agencies have identified western vernal pools in California as one of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule in the single point of entry watershed because they perform similar functions and are located sufficiently close together in the watershed to function as a single system in affecting downstream waters. The agencies have not determined that vernal pools in California are jurisdictional by rule and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial.**

Southern Company (Doc. #14134)

4.559 The agencies' ecoregion map included in the docket (i.e., Map A: Level III Ecoregions for Consideration) depicts a large swath of coverage along the East and West Coasts, and throughout most of the Mississippi River basin, covering roughly one-third of the continental United States. Along the East Coast, in particular, this would include all the Southeastern U.S. and coastal plains, encompassing the vast majority of geographic areas in which Southern Company operates. Vast areas of the coastal plains consisting of forested wetlands, most of which are currently non-jurisdictional due to their remoteness to and geographic isolation from TNWs, conceivably would be deemed automatically jurisdictional under an eco-aggregation approach.

In addition to the expected added permitting burden associated with more jurisdictional features, we are concerned that the reliance upon ecoregions and broad categories of waters increases the likelihood of certain habitats being designated as "aquatic resources of national importance" (ARNIs), thereby resulting in more 404(q) elevations from EPA to the Corps for heightened review of projects impacts.[561] Although the ARNI process was initially established to improve and facilitate regulatory approvals for projects impacting certain aquatic resources, unfortunately, over the years, the ARNI process has been used to purposefully slowdown and impede the permitting and approval of local developments and capital projects. Although the agencies have never officially defined the term ARNI, the term has been applied to certain habitats in the Southeast such as forested wetlands (e.g., cypress and hydric pine habitats), vernal pools, pocosins, and Carolina Bays. Once a habitat has been characterized as an ARNI, the heightened environmental review and the requisite time needed to go through and complete the approval process can take many years. Because of our concern regarding the potential increased use of the ARNI process precipitated by the proposed ecoregion approach, we would ask the agencies to clarify their intention and the potential increase in the creation of ARNIs within each ecoregion. (p. 46-47)

Agency Response: **The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See Agency Summary Response Essay 7 and the Technical Support Document for rationale regarding why 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.**

Implementation of the permitting program, including implementation of the Section 404(q) Memorandum of Agreement between EPA and the Department of the Army, is outside the scope of this rule. The agencies disagree that the term aquatic resource of national importance has been misapplied.

[561] See 1992 Memorandum of Agreement Between the Environmental Protection Agency and the Department of Army, available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/1992_MOA_404q.pdf see also the following for subsequent 2002, 2006, and 2008 clarifications, available at http://water.epa.gov/lawsregs/guidance/cwa/dredgdis/404q.cfm.

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

4.560 Metropolitan does not support the use of ecoregions or hydrologic-landscape regions because Metropolitan believes that this approach would cover "other waters" too removed from the water quality outcomes of downstream navigable waters, especially in the arid west, to justify inclusion in the proposed rule at this time. Metropolitan is concerned that this methodology will increase the number of false positives, leading to an expansion of jurisdiction over current practice. (p. 14)

Agency Response: See Agency Summary Response Essay 1, 7, 8. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Alan Hofmann, General Manager- Secretary, Fresno Metropolitan Flood Control District (Doc. #15484)

4.561 If the Agencies adopt this ecoregion approach at the proposed Level III ecoregion baseline, then all "other waters" in the Central California Foothills and Coastal Mountains, Central California Valley, Southern California Mountains, Southern California/Northern Baja Coast, and Klamath Mountains/California High North Coast Range may be designated as "similarly situated" and come within CWA jurisdiction by rule. (See 79 Fed. Reg. 22188,22215 (April21, 2014).)

Under the expansive ecoregion approach, many "other waters" throughout California will be included under CWA jurisdiction, unless specifically excluded. Arguably, any surface water body not categorically exempted may be treated as a WOTUS if either Agency determines that the surface water body in question, or in combination with other similarly situated waters, affects the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or territorial sea. Hydrologic connection (surface or subsurface) would be unnecessary to create significant nexus. Under such an approach, stormwater agencies will face significant uncertainty with respect to CWA jurisdiction for MS4 conveyance facilities as well as other storm water related facilities. Further, the vagueness in the exclusions will only add to this uncertainty, which will not further the overall clarity goals of the Proposed Rule. (p. 8)

Agency Response: See Agency Summary Response Essay 1. The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis.

It was not the agencies' intent to change current practice to make stormwater control features constructed to convey, treat, or store stormwater, and cooling ponds that are created in dry land "waters of the United States. In the final rule,

the agencies added an exclusion to reflect current agencies' practice, and (b)(6) of the final rule excludes "[s]tormwater control features constructed to convey, treat, or store stormwater that are created in dry land."

Washington County Water Conservancy District (Doc. #15536)

4.562 The WWG objects to this proposal, which represents a significant shift in policy that would greatly expand the Agencies' jurisdiction. For example, the map of Level III EcoRegions provided by the Agencies appears similar to the map of the nation's migratory bird flyways. If the Level III EcoRegions map were used to determine whether waters are similarly situated, such an approach would inevitably result in a determination of jurisdiction over the same types of isolated ponds determined to be non-jurisdictional in SWANCC. The WWG opposes the Agencies' "ecoregion" proposal and their proposed use of the Level III EcoRegions map. Finally, as with the Agencies' watershed proposal, the Agencies' "ecoregion" proposal raises significant questions about notice, opportunities to comment, and appeal rights. The Agencies should not proceed with the "ecoregion" approach, but if they do, they should provide due process to affected parties by providing notice and an opportunity to comment. Of course, such a process would impose yet another burden on both the Agencies and the regulated community, which is among the many reasons why the Agencies should reject this overly expansive approach. (p. 22-23)

Agency Response: The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See the Technical Support Document for rationale regarding why 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.

Southern Environmental Law Center et al. (Doc. #13610)

4.563 We do not agree with the ecoregion approach. Although it would create some bright lines for regulators, many of these bright lines would be arbitrary and would lead to unnecessary litigation. (p. 39)

Agency Response: The agencies considered the use of ecoregions in case specific analyses. However, the agencies chose to use the "single point of entry watershed." We believe it is a reasonable, clear, and technically appropriate scale for identifying "in the region" for purposes of the significant nexus standard within a case specific analysis. See response 4.316 (Doc. #13074) and the Technical Support Document for rationale regarding why 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.

Protect Americans, Board of Directors (Doc. #12726)

4.564 Section (a)(7) should be removed in its entirety.

If, as the government declares, the primary objective is to conserve resources and promote clarity, then section (a)(7) is inherently inapposite. This section is a section of last resort, as the agencies' field officers will likely conduct all necessary analysis to determine if: (i) the water is jurisdictional by rule and/or (ii) if the water is exempted under subsection (b). If the answer is no to both counts, only then would the field officer make the investigation to determine if the water maintains the appropriate "nexus" with a water identified in (a)(1) through (a)(3). To do this analysis requires a "region" wide analysis of all other waters that *may* be "similarly situated" waters. (p. 16)

Agency Response: **See Agency Summary Response Essay 1.**

4.565 The Commenters object to the other approaches to "other waters" that were floated by the agencies, particularly the "eco-region" approach. First, the request itself indicates that the agencies are ambiguous about whether the waters in certain eco-regions are similarly situated such that they provide the collective nexus. Second, by pre-determining the types of waters in certain regions, the proposed rule would remove any necessity that a specific water maintain at least a nexus or connection. Finally, dividing the country into different categories with different jurisdictional waters seems inherently confusing, both to the agency and the general public. (p. 16)

Agency Response: **See Agency Summary Response Essay 7 and Technical Support Document regarding the identification of "in the region" for purposes of the significant nexus standard. See Conclusion 5 of the Science Report. Thus, based on the agencies' expertise and experience and available literature and data, the agencies have determined that waters in the five subcategories of waters identified in paragraph (a)(7) are similarly situated by rule in the single point of entry watershed and must be combined with other waters in the same subcategory located in the same watershed that drains to the nearest (a)(1) through (a)(3) water.**

4.4. SUGGESTIONS FOR ACCOMMODATING EVOLVING SCIENCE REGARDING PRESENCE OR ABSENCE OF SIGNIFICANT NEXUS

Agency Summary Response

The agencies recognize that in establishing the "bright line" threshold for significant nexus in the rule, the agencies are narrowly applying the available science. As is the case today, nothing in this rule restricts the ability of states to more broadly protect state waters. 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 or unless site-specific facts/information necessitate the reopening of an approved JD.

The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states.

Specific Comments

New Mexico Department of Agriculture (Doc. #13024)

4.566 The Federal Register notice of this proposed rule states, "If waters are categorized as non-jurisdictional because of lack of science available today, the Agencies request comment on how to best accommodate evolving science in the future that could indicate a significant nexus for these other waters. Specifically the agencies request comment as to whether this should be done through subsequent rulemaking, or through some other approach, such as through a process established in this rulemaking" (79 FR 222 17). NMDA has concern over this request for information because it asks the regulated community to provide insight on ways to increase or change the jurisdictional reach of Waters of the U.S. in the future.

Furthermore, the "best available science" is constantly evolving. In a second draft of this rulemaking, EPA should specify areas where changes may occur in order to assist the regulated community in identifying ways this proposed rule may change in the future. (p. 6-7)

Agency Response: The agencies will continue a transparent review of the science, and gain 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.

Department of Conservation and Recreation (Doc. #14762)

4.567 DCR supports the proposed rule for defining waters of the U.S. under the Clean Water Act "to enhance the predictability and accuracy of the U.S. Army Corps of Engineers jurisdictional determinations". Wetlands communities including floodplains and riparian areas categorized by the proposed rule as "adjacent" or " neighboring" waters are potential significant communities types as defined by DCR (http://www.dcr.virginia,gov/natural heritage/natural communities/ncpalustrine.shtml) and warrant regulatory consideration. Coastal Plain Depressional Wetlands are another significant wetland type our program tracks which currently are defined as isolated wetlands and not falling under the Clean Water Act nexus. However, with a surface or shallow subsurface connection and a "fill and spill" hydrological connection downstream these important wetland types could be subject to regulation under the new proposed rule.

In regards to using best available science to determine whether "other waters" are jurisdictional, DCR recently developed the Virginia Wetlands Catalog, formerly known as the Wetland Restoration Catalog. The first step in the development of the catalog was the creation of a wetlands basemap that includes all National Wetland Inventory wetlands, as well as other predicted wetlands based on analyses of soils data, floodplains, and agricultural wetlands data. All wetlands in this statewide basemap were then prioritized for their conservation and restoration values, using various datasets that identify each wetland's contributions to biodiversity conservation, wildlife habitat and/or water quality. This methodology was tested in a subwatershed pilot area of the Pamunkey River of Virginia.

With findings from the Pamunkey Pilot and with funding from the Natural Resources Conservation Service (NRCS), DCR-DNH, The Nature Conservancy (TNC), and the Virginia Department of Transportation (VDOT), DCR developed a statewide catalog for Virginia. In November 2014, this catalog will be provided to conservation partners as distinct and separate map-based summaries of wetland conservation and restoration opportunities ranked from l-Outstanding to 5-General value. Both conservation and restoration opportunities will be mapped by sub-watershed boundaries, wetland boundaries and tax parcel IDs in six separate map outputs. This statewide model may be a resource for determining if "other waters as defined by the proposed rule are "waters of the United States". Dependent on data availability and staff funding, this wetland assessment and prioritization methodology could possibly be applied to other states and/or a nationwide level.

Agency Response: **Comment noted**

New York City Law Department (Doc. #15065)

4.568 EPA and the Corps invited comments on emerging technologies or approaches that may improve efficiency for regulators in determining which waters are subject to Clean Water Act jurisdiction. The City's DEP recently acquired a local resolution National Hydrography Dataset ("NHD") developed from I meter resolution LiDAR data. These local resolution data enabled detection of an additional 581 stream miles, for a 17.8 percent increase in the Catskill and Delaware portions of the New York City Watershed, and an additional 74 miles for a 9.3 percent increase in the Croton System. These additional tributaries reveal more adjacent waters than are currently detectable using standard "high" resolution (1:24,000) NHD and other lower resolution datasets that are available for the majority of the United States. Acquisition of local resolution hydrography data would clearly increase efficiency in the agencies' identification of jurisdictional tributaries and adjacent waters. (p. 3)

Agency Response: **The agencies recognize the utility of remote sensing and other desktop tools, such as LiDAR and NHD. The agencies have been using such tool to identify waters and delineate streams for many years, and new and updated resources benefit the process. The agencies' use of remote sensing tools is described in the description of identifying tributaries within the Preamble and the Technical Support Document.**

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

4.569 One technology that can help save time and money and improve efficiency for regulators and the regulated community is LiDAR. BES is using LiDAR at 1-2' elevation contours, coupled with modeling to determine the approximate location of drainageways throughout the city. This approach is being beta tested now and is expected to be publically available in 2015, including technical memoranda supporting its use as a first pass at identifying areas where regulated waters potentially exist. (p. 3)

Agency Response: **See Agency Response 4.457 regarding the use of remote sensing tools.**

4.570 BES also recommends continued flexibility in the rule to allow for incorporation of evolving science with respect to the definition of "other waters." The geographic approach to "other waters" may prove to be more flexible and allow for limited rulemaking as local science develops. (p. 3)

Agency Response: See Agencies' Summary Response. The final rule requires a case specific analysis for categories of waters identified in (a)(7) and (a)(8). For these waters, the case specific analysis of a significant nexus will allow the incorporation of current science at the time the agencies determine the jurisdictional status of the waterbody.

Ducks Unlimited (Doc. #11014)

4.571 It is clear through an examination of the draft report of the EPA's Scientific Advisory Board entitled, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" (henceforth, the "Report" or "Connectivity Report"), that there is a large and diverse body of science regarding wetland and other aquatic components of the environment that relates to this rule. While there is much in the existing literature that informs a science-based evaluation of the fundamental question of "significant nexus" between various types of waters, the specific issue of connectivity between waters is experiencing a recent acceleration of research as a result of the Supreme Court decisions and the new importance of connectivity per se having become evident. Thus, this science is rapidly emerging and relevant new research appearing frequently in new issues of related journals and other publications.

An extremely important, overarching issue in the finalization of the rule is the extent to which the existing science can and will be appropriately generalized. It is clear that much of the past research was not conducted to answer questions related to the specific issue of connectivity in the current context of a "significant nexus" analysis. In addition, the distribution of past research, geographically and across wetland types, was influenced less by the need to fill gaps in the science that would ultimately be important in a regulatory context, than it was influenced by factors such as the coincidental proximity of universities and other adequately funded research entities to wetlands and wetland systems. Only very recently has research increasingly focused on key wetland landscapes for the explicit important purpose of seeking information related to specific questions of connectivity in recognition of the need for this kind of information to provide the foundation for assessment of significant nexus, jurisdiction, and conservation.

Nevertheless, the existing and growing body of science is demonstrating key generalities regarding the functions of wetlands and their connectivity with other waters, particularly downstream waters. These wetland functions and generalizations regarding connectivity are addressed in detail in the Report, the science appendix to the proposed rule, and emerging literature that currently appears in neither. While we recognize the tremendous variability in the level to which any particular wetland, or wetlands in the aggregate in some landscapes provide for the suite of functions that wetlands serve, essentially all wetlands provide functions which, if disrupted, have the potential to affect other waters as a result of their nexus with them. Of course, a key issue is the significance of that nexus. The level of significance is not only a science-based function of the size, density, and functional proximity and relationship of wetlands to downstream waters evaluated

within the context of the appropriate ecological scale, but also a reflection of society's willingness to accept the level of risk associated with the impacts (e.g., increased flooding, decreased water quality, increased toxic algal blooms, degradation or loss of fish and wildlife habitats, etc.) that are observed as a consequence of cumulative wetland loss at local, regional, and national scales.

Thus, in reviewing the proposed rule and related scientific literature, and in developing our comments, we have tried to apply an approach similar to the "weight of evidence" approach described by Omernik (2004) in the context of defining ecoregions. This approach is a more qualitative approach as opposed to being "rule-based." We believe that a basis for its reasonableness in approaching the science-based issues at the center of this proposed rule is fundamentally related to the similarity between the two situations (i.e., ecoregion definition and assessment of significant nexus for "other waters") – a need for consistent decision-making and application of a national rule in the face of incomplete and imperfect information across the U.S. Nevertheless, although information may be incomplete and imperfect relative to evaluation of a specific situation, using the "weight of the evidence" approach to draw and appropriately apply information from wetlands in the same general region, in the landscape setting, and/or for wetlands in general, allows a reasonable a priori assessment by the agencies of whether or not the wetlands in a particular landscape or ecoregion are likely to have a significant nexus with downstream waters. We will expand upon this in more detail in the section on ecoregional analyses.

Some of Justice Kennedy's language regarding categorical and/or regional protection of wetlands seems to explicitly invite this approach. Furthermore, in their 9-0 Riverside Bayview decision, the Court explicitly recognized that while "not every adjacent wetland is of great importance to the environment of adjoining bodies of water," "if it is reasonable for the Corps to conclude that in the majority of cases adjacent wetlands have significant effects on water quality and the ecosystem, its definition [of adjacency] can stand." We believe that this is a clear indication of the Court's willingness to accept the "weight of the evidence" approach and reasonable generalization of existing science.

As we have reviewed the proposed rule and the science related to the issue of whether the wetlands in particular landscapes, such as the Prairie Pothole Region, have a significant nexus to downstream waters, we have sought to apply the "weight of the evidence" approach to address the fundamental question of:

"If all the similar wetlands in a particular region, in the aggregate, were to be filled and/or drained, based on the weight of the existing evidence and science, is it more likely that (1) there would be a significant impact, or (2) there would not be a significant impact on downstream waters?"

We encourage the agencies to take this approach to assessing which categories and subcategories of "other waters," in particular, should be determined to be jurisdictional by rule based on the weight of all the related scientific evidence. (p. 5-7)

<u>Agency Response:</u> The agencies agree with the merits of a "weight of evidence" approach. In fact, pages 1-14 to 1-16 of the SAB report references a method similar to the "weight of evidence" approach to infer the influence of waters downstream. Similarly, for waters identified in (a)(7) and (a)(8), the final rule requires a case

specific significant nexus, including consideration of the effect of waters alone or in combination with other similarly situated waters in the region, which would accommodate cumulative information available, considering the "weight of evidence."

4.572 Furthermore, in the event that certain components of the final rule generally conform to the proposed rule, such a geographic database should also include and depict all "other waters" that also have been determined to be jurisdictional by rule. For example, as the proposed rule stands, we would anticipate such maps and databases would include all tributaries, adjacent wetlands, and wetlands in floodplains. We understand that the satellite imagery and other technologies that would provide the basis for such maps are imperfect and incomplete. However, those issues would be manageable in light of the tremendous benefits that such a geographic database would provide to regulators and the regulated community alike. Finally, as additional waters are found to be jurisdictional (e.g., via court cases regarding navigability-in-fact, findings of significant nexus in the case of individual or aggregated "other waters," etc.), those findings and decisions should be incorporated into the database. Although not an "emerging" technology, existing technology related to mapping and geographic databases could and should be used to develop this valuable tool. It could be among the most important and achievable tools for streamlining information dissemination and speeding administrative processes, thereby providing significant and tangible benefits to both regulators and the regulated community. (p. 12-13)

Agency Response: Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

4.573 Given the pivotal importance of the classes of waters that will ultimately be required to be used to evaluate significant nexus, this situation further underscores the importance and necessity of having a comprehensive, standardized, and publicly available database that allows the regulated community to determine the location of the nearest such water. The creation of such databases and/or maps would significantly increase the ability of the regulated community and regulators to first determine if a permit is necessary, and then to work through the permitting process in a timely fashion. These tools would significantly increase the efficiency of the entire process of administering and complying with the Act. (p. 23)

Agency Response: Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

4.574 Given the breadth and depth of the science and scientific expertise currently at the agencies' disposal with respect to this issue, and the significant degree to which it would benefit several key objectives of the agencies as well as desires and concerns of the public, we therefore strongly encourage the agencies to conduct significant nexus analyses across key landscapes for the purposes of identifying those landscapes whose "other waters" should be designated as "waters of the U.S." by rule based on the existing

science. We note and acknowledge, however, that such analyses cannot and will not assert jurisdiction as broadly as do the existing regulations. Nevertheless, this would represent a significant step in providing CWA protections to those waters that meet the scientific and legal thresholds required by recent judicial decisions.

In regard to all significant nexus analyses, conducted either a priori or after finalization of the rule, we strongly agree with the SAB's statement in their letter: "The Board notes, however, that the science does not support excluding groups of "other waters" or subcategories thereof." In other words, if the science currently available is not considered in certain cases to be sufficient to support a finding of a significant nexus at this time, it does not mean that such a nexus does not exist. Future science could emerge that could clearly demonstrate such a nexus. Thus, the lack of a significant nexus finding should not be the basis for placing such waters into the category of being permanently excluded from jurisdiction. However, for operational purposes, they would clearly remain non-jurisdictional unless a significant nexus finding was warranted by future analyses with additional scientific support. (p. 24-25)

Agency Response: **While not at the landscape scale, the final rule retains the concept that a water is within the scope of the CWA if "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.* 547 U.S. at 780. The agencies have retained in specified circumstances the current practice of case specific significant nexus determinations. The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" by rule in a single point of entry watershed for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule identifies waters meeting certain thresholds as waters that will be subject to a case-specific significant nexus determination. The final rule identifies as the "region" the single point of entry watershed. See Agency Summary Response Essay 7. For a discussion of similarly situated waters. See Agency Summary Response Essay 8. Developing science can be included in case-specific significant nexus determinations under (a)(7) and (a)(8).**

In response to comment that no "other waters" should be excluded from the rule based on a lack of current science, see Features and Waters Not Jurisdictional compendium. The agencies decided that it is important to promulgate a rule that not only protects the most vital of our Nation's waters, but one that is practical and provides sufficient limits so that the public reasonably understands where CWA jurisdiction ends.

4.575 Some of our concerns stem in part from two seemingly conflicting messages in the proposed rule regarding the agencies' intent with respect to these analyses and the use of related science. On the one hand, the explanatory language seems to offer what is scientifically sound, helpful guidance with respect to the analyses of "other waters" for

significant nexus. However, on the other hand, there are broad geographic swaths of subcategories of "other waters" that, at least in the current form of the proposed rule, would not be jurisdictional by rule. These would therefore be required to be subjected to case-specific significant nexus determinations in spite of the seemingly strong, broadly based scientific information that indicates that a significant nexus for these waters clearly exists, including subcategories of "other waters" which the EPA's SAB and special panel of experts on connectivity agree possess, in the aggregate, the required significant nexus. Thus, this situation offers additional rationale for proceeding with as many a priori significant nexus determinations of ecoregions, watersheds, or other suitable landscapes as is reasonable based on the available science, and designating jurisdictional by rule those waters that satisfy the agencies' significant nexus evaluation.

Regarding the question of whether or not a nexus is "significant," the agencies should consider the range of pollutants (or fill) that could be deposited in a non-jurisdictional wetland and their potential impacts on the integrity of downstream waters, as well as health and human welfare. For example, deposition of soil into a single isolated wetland, such as one that might be located miles away from the South Platte River as described earlier, might be deemed to have an "insubstantial" impact on the navigable waters. Infiltration would be impacted and a decrease in the base flow would result, for example. If there were no other wetlands suitable for contributing to an aggregate analysis, this could be a situation in which the nexus was considered insubstantial. However, if instead of soil a water soluble toxic chemical were to be deposited in that same wetland, in a few years the water carrying the compound would have moved through the groundwater and be discharged into the river, ultimately causing serious degradation of the chemical and biological integrity of a navigable "water of the U.S." This is but one illustration of the kinds of possibilities that will inevitably be encountered, and therefore should be considered when evaluating the "significance" of a nexus.

An actual example can be used to even better illustrate that point. The ongoing events involving the spill of an estimated 5,000-7,000 barrels of crude oil spill that occurred in the small town of Mayflower, Arkansas in March 2013 demonstrate this kind of scenario, and the associated potential legal ramifications of failing to identify the existence of a significant nexus and designating jurisdiction when such a nexus indeed exists. Some of the crude oil that spilled as a result of a ruptured Exxon pipeline flowed into wetlands and inlets adjoining Lake Conway, a popular fishing and recreational lake surrounded by homes and cottages. Some media reports (http://arkansasnews.com/news/arkansas/judge-won-t-toss-joint-state-federal-lawsuit-overmayflower-oil-spill) state that Exxon's defense includes the assertion that the State Attorney General failed to show that "rupture of the Pegasus pipeline polluted navigable waters." Thus, at least a portion of the company's defense regarding their legal responsibility for damages to the integrity of the associated water bodies apparently hinges on whether or not the waters were jurisdictional, in spite of the observed connections and impacts. This is just one example of the potential consequences stemming from the interpretation of "significant" and the results of future significant nexus analyses. (p. 26-27)

Agency Response: See Agency Summary Response Essay 1. See response 4.244 (Doc. #16630), 4.346, 4.347, or 4.348 (Doc. #13029)

4.576 We believe that the single point of entry watershed should be the minimum scale for evaluating similarly situated wetlands in the aggregate. We believe that there are many instances in which a watershed at this scale, upon review of its many characteristics related to topography, soils, land use, and the many other physical, chemical and biological characteristics reflected in the watershed's wetlands and other water bodies, will be very similar, and in some cases almost indistinguishable, from neighboring watersheds (see Lorenz et al. 2010). For example, there are a number of single point of entry watersheds that are lined up north to south along the Red River of the North between North Dakota and Minnesota and that exhibit strong similarities in almost every respect. When a need for case-specific analyses of "other waters" arises in circumstances such as this, it would seem to be consistent with the science and also administratively expeditious to first briefly review neighboring watersheds to determine if they are similar enough to the one in question to warrant an aggregation of more than one watershed into the analysis. There are numerous such examples of single point of entry watersheds that would be sufficiently similar, ecologically and hydrologically warrant being grouped together.

Therefore, combining adjoining watersheds to the extent scientifically appropriate and justifiable would lead to greater administrative efficiencies, and perhaps actually strengthen the results and validity of the scientific evaluation of significant nexus. Importantly, it would also more quickly provide a greater level of clarity and certainty to those affected by the rule across the broader geographic area of aggregated watersheds that simply expand upon an appropriate aggregation of waters. Of course, if neighboring watersheds were deemed, for science-based reasons, to be sufficiently different than the one in question, such aggregation of watersheds would not be appropriate. (p. 29)

Agency Response: **The final rule retained the single point of entry watershed provided in the preamble for case-specific significant nexus determinations for waters specified by (a)(7) and (a)(8). Regarding combining adjoining watersheds for a significant nexus analysis, the agencies determined that the single point of entry watersheds should not be combined, and one single point of entry watershed is a reasonable and technically appropriate scale when completing a significant nexus analysis. The basis for the single point of entry watershed is the Preamble Section 1. Scope of Significant Nexus Analysis, subsection b. in the region and in the Technical Support Document.**

4.577 The preamble requests comments "on how to best accommodate evolving science that could indicate a significant nexus for these 'other waters.'" This is a critically important consideration because, even as this rule is being reviewed and finalized, relevant new science continues to emerge, as it surely will long into the future. Science builds upon itself and is inherently cumulative. A science-based rule must recognize and incorporate that reality into the rule. We strongly recommend that the agencies incorporate into the final rule a process by which "other waters" within ecoregions, or single point of entry watersheds, can be subject to scientific assessment, and/or re-assessment as necessitated by emerging science, and the findings incorporated into the cumulative body of scientific "case law," so to speak. In that light, we again suggest that if the geographic database (with accompanying mapping features) discussed earlier were to be developed and maintained to facilitate the objectives of clarity, certainty, predictability, and

administrative efficiency for the benefit of all stakeholders and affected publics, it could include data layers related to the findings of significant nexus analyses of "other waters" that would clearly depict:

- ecoregions and/or watersheds for which significant nexus analyses were conducted, and those for which an analysis has not yet been conducted;
- areas within which "other waters" in the aggregate were found to have a significant nexus and would therefore be jurisdictional;
- areas whose "other waters" in the aggregate could not at this time be demonstrated to have a significant nexus, and would therefore be non-jurisdictional; these areas could be subject to re-assessment as new science emerges;
- if applicable, areas in which it was determined that the "other waters" do not and could not possibly be shown to ever have a significant nexus, and therefore would be non-jurisdictional, or perhaps even excluded if the determination could be made with sufficient scientific finality; and,
- other relevant information.

We maintain that such a nationally standardized and consistently applied database would be a tremendously useful tool in many broad and significant ways that would ultimately benefit all aspects of the Act and its administration. (p. 34)

Agency Response: See agencies' Summary Response. Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)

4.578 There is a wealth of scientific information indicating the extent to which connectivity exists between many wetlands across the U.S. and downstream waters. The final rule should not diverge from the science that broadly supports the existence and significance of these connections. In addition, we strongly recommend the use of a "weight of the evidence" approach to evaluating the massive amount of science available and applying it within the final rule. (p. 74)

Agency Response: The agencies concur with the commenter that the rule should not diverge from the science, and the final rule defines the scope of waters protected under the CWA, in light of statute, science, Supreme Court decisions, and the agencies' experience and technical expertise. In response above regarding the "weight of evidence" approach (Comment Response 4.459).

Southern Environmental Law Center et al. (Doc. #13610)

4.579 In light of the fact that it is likely that the final rule will be challenged soon after it is issued, we suggest that the agencies continue searching for additional scientific studies even after November 14, 2014. We also suggest that the scientific studies submitted as part of the comment process be included in the final Connectivity Report. In the span of two months a small team of Masters students at the University of Georgia was able to amass an impressive list of additional scientific studies that were not contained in the

original Connectivity Report. The reports that came out of this research are attached as Exhibits C and D. The science is out there to support the proposed rule, it is just a matter of continuing the search. (p. 17-18)

Agency Response: The agencies appreciate the contribution of this information to the body of knowledge. EPA does not intend to add additional literature to EPA's Office of Research and Development Connectivity Report, published in the Federal Registry on January 25, 2015. The agencies will continue a transparent review of the science, and gain 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.

The final rule does allow the agencies to consider new science when conducting a case specific analysis for those waters identified in (a)(7) and (a)(8).

4.580 It is imperative that the agencies establish in this rulemaking a mechanism whereby the agencies can establish new classes of "other waters" by rule. The agencies should explain in the preamble to the final rule how scientific studies that are performed in the future can be used to support the development of new categories of "other waters" by rule. While the connection of certain waters to jurisdictional waters may not be apparent now, further study may reveal such connections. The agencies should establish some mechanism for creating new categories of "other waters" and defining them as waters of the United States by rule. (p. 39)

Agency Response: The agencies will continue a transparent review of the science, and gain 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. The final rule does allow the agencies to consider new science when conducting a case specific analysis for those waters identified in (a)(7) and (a)(8).

Clean Water Action (Doc. #15015)

4.581 We urge the agencies to establish a process for "other waters" to be considered for future inclusion as a new class of jurisdictional waters, to accommodate evolving science in the future. Just because there is a lack of scientific evidence today to include every type of other water as categorically protected by rule, further scientific study and investigation could reveal the presence of a significant nexus between additional classes of "other waters" to navigable waters in the future. For this reason, it is imperative that the agencies establish a process by which the public can formally request (i.e., petition) for a certain "other water" to be categorically protected by rule. In the preamble of the final rule the agencies should describe what scientific and/or legal documentation would be required for a member of the public to submit a petition. Additionally, the agencies should establish a process by which they (EPA science staff) periodically review the latest scientific literature to determine whether or not there is evidence to include additional categories of "other waters" as jurisdictional by rule. (p. 9)

Agency Response: Although the final rule does not include a process for establishing new classes of categorically jurisdictional waters beyond those

described in the final rule, 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. The final rule does allow the agencies to consider new science when conducting a case specific analysis for those waters identified in (a)(7) and (a)(8).

National Wildlife Federation (Doc. #15020)

4.582 Where the science *currently available* is not considered in particular instances (based on case-specific review) to be sufficient to establish significant nexus, those waters would remain non-jurisdictional unless and until a significant nexus finding is warranted by a future analysis with additional scientific support. However, that lack of information currently should not be the basis for *permanently excluding* such waters from jurisdiction. (p. 63)

Agency Response: For case specific significant nexus analyses, final rule (a)(7) and (a)(8) waters, the jurisdictional determination based on currently available science would not be permanent. Under existing Corps' regulations and guidance, Corps' approved jurisdictional determinations generally are valid for five years. The agencies do not intend to reopen existing approved jurisdictional determinations unless requested to do so by the applicant.

4.583 Retaining the case-specific approach where the science is inconclusive is scientifically sound and helps to accommodate evolving science that could establish significant nexus in the future.

While the currently available science is sufficient to establish significant nexus and jurisdiction by rule for some subcategories of "other waters," we acknowledge that it is not yet sufficient to establish significant nexus and jurisdiction by rule for all such "other waters." The agencies seek comment on how this inconclusiveness of the science relates to the use of case-specific determinations. 79 Fed. Reg. at 22216-17. As noted previously, we agree with the SAB that the current science does not support findings that categories of "other waters" as a class lack a significant nexus and are excluded from jurisdiction by rule. We believe the science supports retaining the case-specific approach for those "other waters" that are not specifically found to be jurisdictional by rule. See Id. at 22217. As the agencies state, doing so "would retain the ability for a jurisdictional determination consistent with the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters." It would also help to accommodate the emerging science. As science continues to emerge, areas in which a significant nexus could not now be found might indeed be later found to have a significant nexus based on the new science. Once again, it would *not* be appropriate to categorize remaining "other waters" as not jurisdictional. (p. 69-70)

Agency Response: For case specific significant nexus analyses, final rule (a)(7) and (a)(8) waters, the jurisdictional determination based on currently available science would not be permanent. Under existing Corps' regulations and guidance, Corps' approved jurisdictional determinations generally are valid for five years.

The agencies do not intend to reopen existing approved jurisdictional determinations unless requested to do so by the applicant.

4.584 The final rule should establish a process by which emerging scientific evidence of connectivity can be incorporated into a cumulative body of scientific information and used to inform both case-specific and categorical significant nexus determinations over time.

The preamble also requests comments "on how to best accommodate evolving science in the future that could indicate a significant nexus for these 'other waters.'" 79 Fed. Reg. at 22217. To be science based and to achieve the goals of the CWA, the final rule must accommodate this evolving science. We strongly recommend that the agencies establish in the final rule or preamble a process by which emerging scientific evidence of connectivity can be incorporated into a cumulative body of scientific information and used to inform both case-specific and categorical significant nexus determinations over time.

This process and the scientific information gathered through it should be science-based, transparent, and accessible to the public. We do not believe a subsequent (and repeated) rulemaking process is appropriate for accommodating the evolving science. We join Ducks Unlimited in recommending a nationally standardized and consistently applied geographic database (with accompanying mapping features) developed and maintained to facilitate the objectives of clarity, certainty, predictability, and administrative efficiency that could include data layers related to the findings of significant nexus analyses of "other waters" that would clearly depict:

- ecoregions and/or watersheds for which significant nexus analyses were conducted, and those for which an analysis has not yet been conducted;
- areas within which "other waters" in the aggregate were found to have a significant nexus and would therefore be jurisdictional;
- areas whose "other waters" in the aggregate that could not at this time be demonstrated to have a significant nexus, and would therefore be non-jurisdictional; these areas could be subject to re-assessment as new science emerges;
- if applicable, areas in which it was determined that the "other waters" do not and could not possibly be shown to ever have a significant nexus, and therefore would be non-jurisdictional, or perhaps even excluded if the determination could be made with sufficient scientific finality; and, other relevant information. (p. 70)

Agency Response: **See responses above regarding a process to establish new categories of jurisdictional waters and establishing a jurisdictional database. Many commenters suggested the agencies produce database and map records of waters once a determination is made. This request is further addressed in the Implementation Compendium (response to Governor's Office—State of Utah Doc#16534, 12.1168)**

American Rivers (Doc. #15372)

4.585 American Rivers does not currently seek any category of natural waters to be determined nonjurisdictional (i.e., categorically excluded).[562] We believe that any waterbody not specifically included in the rule should be given a significant nexus test. However, we request that the Agencies allow for the inclusion of other jurisdictional categories in the future if scientific evidence becomes available that would support a categorical jurisdictional determination. The Agencies should define a process that allows for the list of categorically protected waters to grow as appropriate in response to the continually updated body of scientific evidence. It is especially critical that the process is responsive to the rapidly expanding catalog of peer-reviewed science and our improved understanding of physical, biological, and chemical connectivity. For example, the Agencies could establish a process by which categorical protection can be formally requested (i.e., petitioned) and subjected to scientific evaluation, or they could plan to revisit the peer reviewed literature and other applicable scientific evidence after a reasonable period of time (e.g., five years) to reassess the possibility of conferring jurisdictional status to the remaining sub-categories of "other waters". The former might be preferred by the Agencies as it would eliminate the need to engage in rulemaking processes for consideration of every class of "other waters," and would instead initiate review only for those subcategories of "other waters" where sufficient evidence has amassed in support of jurisdictional determination following the publication of the final rule. Carolina and Delmarva Bays are an example of an "other water" where rapidly emerging science is likely to support categorical inclusion in the future. The Agencies should have a way for Carolina and Delmarva Bays to be covered by the CWA when science has documented that it is appropriate to do so. (p. 25)

Agency Response: See response above regarding a process to establish new jurisdictional categories.

Environment Council of Rhode Island (Doc. #3532.2)

4.586 Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate. (p. 3)

Agency Response: For the basis for waters excluded pursuant to section (b), see Features and Waters Not Jurisdictional compendium. See responses above regarding a process to establish new jurisdictional categories and case specific significant nexus determinations.

Wisconsin Wetlands Association (Doc. #15629)

4.587 Advances in aerial image interpretation and remote sensing technologies such as LiDAR have improved our ability to accurately map the presence of wetlands and their

[562] See, SAB review of the proposed rule, supra note 89, at 3.

connections to other waters. New landscape-level approaches for assessing wetland function such as the NWI+ approach developed by the US Fish and Wildlife Service are also steadily improving experts' abilities to predict and measure the isolated and aggregate influence of wetlands on downstream waters.

In addition to improving our understanding of the physical and functional connections of wetlands to other waters, these technologies and assessment approaches also provide a relatively efficient and cost effective means to generate landscape-scale data.

The rule should acknowledge that the use of these tools and methods generates reliable information to support jurisdictional determinations including, but not limited to: identification of tributaries, identification of adjacent waters, flood plains, and riparian areas, determinations that waters are "similarly situated," and assessments to determine whether/when similarly situated waters have a "more than speculative or insubstantial" connection to waters in (s)(1) through (5). (p. 5-6)

Agency Response: **The agencies recognize the utility of remote sensing and other desktop tools, such as LiDAR and NHD. The agencies have been using such tool to identify waters and delineate streams for many years, and new and updated resources benefit the process. The agencies' use of remote sensing tools is described in the description of identifying tributaries within the Preamble and the Technical Support Document.**

4.588 As mentioned in our comments on the definition for significant nexus, the rule lacks a clear framework for how to adequately apply currently available and new science. The term "significant" implies that there is a threshold which must be met for the law to apply. Clarification is needed on what types of information are appropriate to consider, and what degree of evidence must be brought to bear to support a determination that other waters, alone or in combination with others, have a significant nexus to downstream waters.

This clarification is also needed that regulatory staff, regulated interests, and the public understand the approach(s) used to identify other waters of the U.S.

While we are not in a position to improve upon the extensive review of connectivity literature synthesized by the SAB, we encourage you to address the following in the final rule:

1. The rule should clearly acknowledge the SAB finding that the cumulative effect of many small, seemingly isolated wetlands can significantly influence downstream waters. This is particularly true with respect to streamflow maintenance and sediment retention functions. A fundamental question to ask is "what would be the aggregated effect of removing these geographically isolated wetlands from the landscape?"
2. Significant nexus determinations for similarly situated wetlands must consider the full range of functions and services these waters provide including but not limited to surface water detention, stream flow maintenance, sediments retention, nutrient transformation, and fish and wildlife habitat.
3. An abundance of other waters similarly situated in a region can often be a good indicator of a significant cumulative effect of these waters; however, many other

factors should also be weighed. These include but are not limited to: landscape position, local/regional topography, precipitation patterns, condition of the watershed, soil characteristics, subsurface flow, groundwater interactions, and more.

4. Current and historic landscape and watershed condition, including percent wetland loss, are relevant to nexus determinations. (p. 6)

Agency Response: **The agencies recognize that the Science Report and the SAB review confirmed that the critical contribution of upstream waters to the chemical, physical, and biological integrity of downstream waters results from the accumulative contribution of similar waters in the same watershed and in the context of their functions considered over time. These functions relevant to a significant nexus evaluation are detailed in the final rule as sediment trapping, nutrient recycling, pollutant trapping, transformation, filtering, and transport, retention and attenuation of flood waters, 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 water identified in paragraphs (a)(1) through (3). The other factors referenced in the comment may affect one or more of the listed functions.**

Regulatory Environmental Group for Missouri (Doc. #16337.1)

4.589 The EPA Should Consider the Stream Classification Method Recently Adopted in the State of Missouri. The Missouri Department of Natural Resources recently adopted rule on stream classification which expands the list of classified streams (and hence, waters of the United States) to include all streams represented in the 1:100,000 scale USGS National Hydrology Dataset. The new rule is a practicable and workable alternative to the federal rule and embraces the cooperative federalism envisioned by the Clean Water Act. It is the States and not the federal government that have a lead role in advancing water quality under the CWA through state, local and private partnerships. Missouri stakeholders agreed to expand the miles of classified streams from 25,025 to 109,870 miles with defined exceptions and a streamlined process to remove waters from the dataset. EPA's Proposed Rule by contrast as noted in this comment letter is overly inclusive and does so without any regard for state resources or impact to Missouri stakeholders. (p. 5)

Agency Response: **This final rule reflects the over 1 million public comments on the proposal, the substantial majority of which supported the proposed rule, as well as input provided through the agencies' extensive public outreach effort, which included over 400 meetings nationwide with states, small businesses, farmers, academics, miners, energy companies, counties, municipalities, environmental organizations, other federal agencies, and many others. The agencies sought comment on a number of approaches to specific jurisdictional questions, and many of these commenters and stakeholders urged EPA to improve upon the April 2014 proposal, by providing more bright lines and simplifying definitions that identify waters that are protected under the CWA, all for the purpose of minimizing delays**

and costs, making protection of clean water more effective, and improving predictability and consistency for landowners and regulated entities.

The agencies appreciate the information regarding the Missouri Stream Classification Method, but point out that "waters of the United States" covers more than streams.

4.5. OTHER WATERS – ADDITIONAL COMMENTS

T. Blake (Doc. #0848)

4.590 For the reasons outlined, including confusion after Rapanos, the resulting lack of protection for important waters, and therefore important eco-system services all over the United States, I support the new proposed CWA rules. Allowing aggregation of "all similarly situated waters located within the same watershed when determining the presence of a significant nexus," is logical, more scientifically grounded (and advances are taking place to connect the previously unconnected waterways), legally defensible (even under Rapanos) and absolutely necessary in the face of climate change. (p. 3)

Agency Response: Comment noted.

Anonymous (Doc. #1759)

4.591 I support this ruling because I agree that a clear definition of waters that are and are not protected under the CWA should be used. By categorically defining tributaries and adjacent waters as under the jurisdiction of the CWA because their nexus is always significant, the EPA has demonstrated that their policy is based on scientific data when it comes to regulating these types of waters. However, there is also science available to determine by rule that certain additional subcategories of "other waters" are similarly situated and have a significant nexus and are jurisdictional by rule (rather than addressed with a case-specific significant nexus analysis).

Finding that "other waters" are non-jurisdictional would be inconsistent with the science, the CWA, and the caselaw. Scientific data show that there are chemical, physical, and biological connections between waters of the US and "other waters" as defined in this ruling. Although generalizations are difficult to make, I think that your proposal to evaluate isolated wetlands on a case-by-case basis is not sufficient to properly regulate these waters, and that they should be categorically defined as under the jurisdiction of the CWA. Although the first proposed alternative of determining that all "other waters" within certain ecoregions are "similarly situated" has some appeal, it is limited in scope because connectivity can also exist among ecoregions. I also see value in evaluating all "other waters" in a single point of entry watershed as a single landscape unit with regard to their effect on the waters of the US, although this would be logistically challenging.

I prefer the second proposed alternative that waters such as prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, and western vernal pools should be jurisdictional by rule because of their significant nexus when considered in aggregate. I think that this definition better reflects an ecological understanding of the truly significant nexus between "other waters" and the waters of the US, regardless of their

geographic location. For example, Carolina bays should be jurisdictional by rule because of their chemical, physical, and biological importance to and connections with the waters of the US via groundwater, intermittent surface-water connections, and species with large home ranges that use or require both types of waters. Several studies have demonstrated the existence and importance of these connections (e.g., Lide et al. 1995. Hydrology of a Carolina bay located on the upper coastal plain of western South Carolina. Wetlands 15:47-57; Pyzoha et al. 2008. A conceptual hydrologic model for a forested Carolina bay depressional wetland on the Coastal Plain of South Carolina, USA. Hydrological Processes 22:2689-2698; Wilcox et al. 2011. Evidence of surface connectivity for Texas Gulf Coast depressional wetlands. Wetlands 31:451-458), and I have observed these connections first-hand during the time I have spent in and around Carolina Bays. Because I enjoy recreating in these ecosystems and make my living conducting research in and around them, my freedom to do so and my ability to contribute to the economy will be negatively impacted if they are deemed non-jurisdictional.

The factors used in assessing whether similarly-situated "other waters" should be considered in aggregate should also include the presence of and potential for mobile biomass (animals) to connect these "other waters" with both terrestrial habitats and the waters of the US. For example, many amphibian and reptile species attain high densities in isolated wetlands and transport significant nutrients to and from these systems, connecting them with each other and with the waters of the US (e.g., Gibbons 2003. Terrestrial habitat: a vital component for herpetofauna of isolated wetlands.

Wetlands 23:630-635; Gibbons et al. 2006. Remarkable amphibian biomass and abundance in an isolated wetland: implications for wetland conservation. Conservation Biology 20:1457-1465). This is also true of birds (Amezaga et al. 2002. Biotic wetland connectivity—supporting a new approach for wetland policy. Acta Oecologica 23:213-222). As a result of their ultimate biotic and geologic connectivity to all surrounding terrestrial and aquatic ecosystems, isolated wetlands are critical for maintaining the chemical, physical, and biological integrity of the nation's waters (i.e., the purpose of the CWA).

Whichever approach is used, I do not think that it would be appropriate to categorize remaining "other waters" as not jurisdictional. These "other waters" should be considered protected until proven otherwise. The precautionary principle suggests that we should not assume that remaining "other waters" have no connectivity, and I think that the burden of proof should be on the side of demonstrating that a particular "other water" body is not jurisdictional, not the other way around. The short list of 'Waters That Are Not "Waters of the United States"' is sufficient to exclude the few cases where the CWA clearly does not apply. The best available scientific data, as summarized in your report (e.g., Forbes et al. 2009. Hydrology of coastal prairie freshwater wetlands. The Society of Wetland Scientists Bulletin 26:12-17; Wilcox et al. 2011. Evidence of surface connectivity for Texas Gulf Coast depressional wetlands. Wetlands 31:451-458) suggest that, unless demonstrated otherwise, isolated unidirectional wetlands should be considered as hydrologically connected to navigable waters of the U.S. In fact, their isolation may be critical for certain functions (e.g., sediment and pollutant removal, water storage) that would be reduced if they were more closely or frequently connected. In this way, some of

the least connected waters are actually the most chemically, physically, and biologically significant because of the infrequent mingling of their waters with the waters of the US.

Finally, an ecological perspective suggests that any degree of connectivity between "other waters" and the waters of the US is potentially significant, no matter how distant or infrequent. Given that the vast majority of "other waters" in the US have already been degraded or developed, it would be prudent for this ruling to grant the few remaining such waters protection. (p. 1 – 2)

Agency Response: **The final rule defines "waters of the United States" to include eight categories of jurisdictional waters. Six categories ((a)(1) – (a)(6)) are found to have significant nexus to traditional navigable waters, interstate waters, or the territorial seas and are covered per se. These per se jurisdictional waters include tributaries to traditional navigable waters or interstate waters ((a)(5)) and wetlands adjacent to jurisdictional tributaries ((a)(6)). In the final rule, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination. The rule excludes certain waters and features over which the agencies have generally not asserted CWA jurisdiction, as well as groundwater, which the agencies have never interpreted to be a "water of the United States" under the CWA.**

Office of the Administrator, Science Advisory Board, U.S. Environmental Protection Agency (Doc. #7531)

4.592 Other Waters

The scientific literature has established that "other waters" can influence downstream waters, particularly when considered in aggregate. Thus, it is appropriate to define "other waters" as waters of the United States on a case-by-case basis, either alone or in combination with similarly situated waters in the same region. As mentioned previously for adjacent waters, distance should not be the sole indicator used to evaluate the connection of "other waters" to jurisdictional waters.

There is also adequate scientific evidence to support a determination that certain subcategories and types of "other waters" 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." The Board notes, however, that the existing science does not support excluding groups of "other waters" or subcategories thereof. (p. 3)

Agency Response: The agencies believe the final rule reflects these comments.

Rex McKim Peterson (Doc. #10552)

4.593 Particularly troublesome is the notion that additional waters be included on a "case by case" basis if they have "significant nexus". This is the announcement of a brawl for attorneys in court, not a regulation. In Nebraska, the term "significant nexus" has been used to define which wells will affect stream flow and the term has spent at least a decade being defined in court. The term "significant nexus" will have a completely different application for the EPA and will probably require several decades of court cases to define. (p. 2)

Agency Response: This rule only affects the definition of "waters of the United States." The Technical Support Document outlines the agencies legal and scientific rationale supporting the use of "significant nexus." In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. 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.

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

Anonymous (Doc. #11350)

4.594 The proposed rule addresses methods of determining jurisdiction using similarly situated waters within hydrologic landscapes and ecoregions versus case-by-case determinations. Jurisdictional determinations should be based on case-by-case determinations. Due to changes in vegetation cover, erosion patters, land use, and climate over time, the jurisdictional status of a waterbody can also change, especially in smaller, first or second order streams, their riparian areas or adjacent wetlands. The concept of basing a jurisdictional status or significant nexus of waterbody A on a neighboring or similar waterbody B in a watershed without adequate evidence of waterbody As nexus or true jurisdictional status is an assumption. (p. 1)

Agency Response: The final rule provides a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. When a significant nexus exists between a water(s) and (a)(1) through (a)(3) water, that nexus exists even in absence of a positive jurisdictional determination on the site. When a site specific jurisdictional determination has been done it serves to identify the boundaries of the "waters of the United States." 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 nexus 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 the 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, as noted above, 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.

Anonymous (Doc. #11304)

4.595 Thirdly, the inclusion of "other waters" as under jurisdiction of the EPA is immensely confusing. "Other waters" need at least some framework in order to be taken seriously, and not seen as dominion over all bodies of water within the U.S. I realize that not including "other waters" as under jurisdiction could lead to adjacent waters being polluted and the EPA not being able to be there at the point source as easily, but perhaps this should be left up to state by state interpretation of how to handle these case-by-case situations. This section does indicate the complexity of attempting to regulate waters without the legislative framework, as frequently referred to from the previous Supreme Court cases, but the language is far too vague to be included as is. Perhaps the solution is also in substantial (limit) rules for the use of pollutants in general than in procedural rules over where one would has pay in order to dispose of them. (p. 1)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at

paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination.

The agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations.

T. Walsh (Doc. #11437)

4.596 3. I agree that the science demonstrates that "other wetlands" (i.e., those not adjacent to traditional navigable waters and tributaries) often have a significant cumulative effect on the health of downstream waters, and should be considered in aggregate.

4. I disagree that there is insufficient science to determine when or how "other wetlands" should be categorically protected under the Clean Water Act. The rule should prescribe a process to apply generally accepted principles of wetland and watershed science to determine when the connectivity and cumulative effects of "other wetlands" meet the threshold for CWA protection.

5. The rule must also provide a mechanism to apply new connectivity literature and regional peer-reviewed science as it becomes available to determine when "similarly situated other wetlands" are eligible for Clean Water Act protections without a case-specific analysis. (p. 1)

Agency Response: 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination.

The agencies do not anticipate changes to this rule. However, 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 formal rule-making, including public comment

Anonymous (Doc. #11481)

4.597 The new rule indicates that: For other waters, connectivity varies within a watershed and over time, making it difficult to generalize about their connections to, or isolation from, traditional navigable waters, interstate waters, and the territorial seas. These other waters would be evaluated on a case-specific basis under the proposed rule.

Given the limit on regulating staff working currently within the federal government, this point seems to put unnecessary and unrealistic workloads on the staff that is already

stretched with work and are required to take mandatory furloughs. The new rule should eliminate this type of ambiguity and allow common practitioners of the CWA to determine this in the field, with agency representatives simply needed to review and documentation for permitting processes. This is in direct contradiction with Item No. 1 listed above. (p. 2)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination.

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

4.598 Similarly Situated -The new rule indicates that similarly situated wetlands may have significant effects on the quality of water many miles away, particularly in circumstances where numerous similarly situated waters are located in the region and are performing like functions that combine to influence downstream waters. It appears that the scope of the CWA would be expand to areas that would no longer technically meet the current definition of wetland as it exists and is delineated according to the 1987 Wetland Delineation Manual. If all three technical criteria used to determine the jurisdictional boundaries of wetlands are not identified, then how can areas determined as similarly situated, specifically floodplains, be included under the regulation of the CWA? (p. 2)

Agency Response: The agencies continue to use the 1987 Corps Wetland Delineation Manual, and Regional Supplements, for identifying wetlands and their boundaries for purposes of the CWA section 404 regulatory program. However, the term "waters of the United States" includes more categories of aquatic resources

than wetlands, such as tributaries, ponds, lakes, and oxbows. The preamble and rule contain information on the criteria and exclusions relating to these features.

Anonymous (Doc. #11761)

4.599 Because isolated wetlands in the Great Plains region are uniquely important biological refugia, and because they are at high risk, particularly from climate change, their conservation and protection under the Clean Water Act are critical. Climate warming projections suggest that all wetland types (temporary, seasonal, and semipermanent) can experience significant loss in water volume, hydroperiod, and annual frequency of flooding in the Great Plains (Johnson et al. 2010) and are crucial for the migratory bird Central Flyway, that includes many species that are protected under the Migratory Bird Act. Furthermore, many of these bird species are protected under the Federal Threatened and Endangered Species Act, and the Bald and Golden Eagle Protection Act, respectively. (p. 1)

Agency Response: The agencies believe there is adequate scientific evidence to support a determination that Prairie Potholes 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. The final rule identifies prairie potholes as one of 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.

Pershing County Water Conservation District (Doc. #12980)

4.600 The "Other Water[563]" definition to be included as "Waters of the United States" and thus subject to federal jurisdiction, includes most irrigation systems across the country, and certainly those of the District. Most surface irrigation water is obtained from what the EPA considers "navigable water ways" and so as not to waste water (something that is actually illegal under western water law), irrigators have established ways to use water in the most efficient way. This usually includes returning the non-consumptive water back to the water ways so that downstream appropriators can take advantage of its use. (p. 2)

Agency Response: The agencies recognize the importance of agriculture and this rule does not affect the long standing exemptions provided in the Clean Water Act for normal farming and those for agricultural stormwater and irrigation return flow. The agencies believe this rule will make identifying jurisdictional and non-jurisdictional waters simpler and more efficient, which will be of benefit to the public and agencies alike. (See also the Ditches Compendium). Also, as stated in the rule, artificially irrigated areas that would revert to dry land should application of irrigation water to that area cease are not "Waters of the United States."

[563] Id. at 22189

Interstate Mining Compact Commission (Doc. #14114)

4.601 The preamble to the proposed rule states that 'The purposes of the proposed rule are to ensure protection of our nation's aquatic resources and *make the process of identifying 'waters of the United States' less complicated and more efficient.*" 79 FR 22190 (emphasis added). It also states, "The agencies did not adopt the all in or the all-out approach to 'other waters.' Based on the information currently available in the scientific literature, applicable case law, and the agencies' policy judgment about *how best to provide clarity and certainty to the public regarding the jurisdictional status of 'other waters' the agencies today propose the case-specific significant nexus analysis* presented in this rule and explained in the preamble." 79 FR 22198 (emphasis added). The proposal put forth by EPA and the Corps appears to replace the current "other waters" case-by-case analysis for determining jurisdiction with a new "significant nexus" analysis which is also to be carried out on a case-by-case basis in order to determine jurisdiction. As a result, agencies may be doing little more than exchanging one collection of uncertainties for another. As a result, rather than streamlining and clarifying jurisdictional decision making, the proposed rule will create more confusion and leave affected parties with just as much uncertainty as before. The rule fails to set forth sufficient criteria for determining whether a wetland or water body will be deemed jurisdictional. (p. 2)

Agency Response: **In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas. 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination**

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

Salt River Project Agricultural and Power District and the Salt River Valley Water Users Association (Doc. #14928)

4.602 SRP strongly opposes the agencies' proposal to categorically designate all other §328.3 (a)(7) waters within Ecoregion No. 81 as jurisdictional waters. Such waters should

continue to be evaluated by permitting agency and field personnel on a case-by-case basis. (p. 18)

Agency Response: **The final rule did not determine Ecoregion No. 81, the Sonoran Basin and Range, to be one of the categories "similarly situated" by rule. However, the waters within that ecoregion may be still be evaluated under a case-specific significant nexus analysis to determine if they are both similarly situated and have a significant effect on (a)(1)-(a)(3) waters, if they meet the other conditions stated in the rule**

Clean Water Action (Doc. #15015)

4.603 Other Waters

Comment request: The agencies solicit comments on identifying subcategories of "other waters" that have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas and could be jurisdictional by rule, and subcategories of "other waters" where a significant nexus or its absence could not be determined as a class and could be subject to a case-specific analysis under the rule. The Report indicates that there is evidence of very strong connections in some subcategories that are not included as jurisdictional by rule. The agencies solicit comment on making such subcategories of waters with very strong connections jurisdictional by rule as well on making subcategories of waters that do not have such connections subject to a case-specific analysis or categorically non-jurisdictional under the rule. Such comment should explain with supporting documentation why a particular subcategory of "other waters" might or might not have a significant nexus to traditional navigable waters interstate waters, or the territorial seas[564].

Agency Response: **We urge the agencies to categorically protect certain "other waters" that have a clear significant nexus to navigable waters, rather than requiring case-by-case determinations for these "other waters." Relying on case-by-case analyses to determine jurisdiction provides less regulatory certainty to polluters and developers and we recommend the agencies categorically include certain classes of "other waters" where the science is clear, as categorically jurisdictional by rule. As the rule is currently proposed , the agencies will need to continue the current tedious case-by-case "significant nexus" analysis for all "other waters, including wetlands" that do not fit the definition of the six other categories of protected waters (paragraphs (a)(1) through (a)(6) in the proposed definition). We believe that many of these "other waters" clearly have an impact on navigable waters. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. In its final review of EPA's draft Connectivity report, the SAB panel disagreed with EPA's conclusion that there is not enough scientific evidence to**

[564] 79 Fed. Reg. at 22198 (April 21, 2014)

generalize about the connectivity of wetlands and waters outside of floodplains, stating this "conclusion largely overlooks the effects of deep aquifer connections and non-hydrologic biological connections on downstream waters."[565] In fact, the conclusion reached by EPA is inconsistent with earlier sections in its Report, "which describes numerous scientifically established functions of non-floodplain wetlands that can benefit the physical, chemical, and biological integrity of downstream waters."[566]

4.604 The available science described in the draft Connectivity report clearly supports "a determination that certain subcategories and types of "other waters" 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."[567] Two independently commissioned academic reports from the River Basin Center at the University of Georgia, which synthesized additional scientific literature not reviewed in the Connectivity report, also found significant evidence to support protecting certain subcategories of "other waters." Both of these reports have been submitted into the docket for the proposed rule. Together with the Connectivity report, these reports provide ample evidence for the agencies to build a solid scientific case for categorically including certain "other waters" as jurisdictional by rule. In addition to the "other waters" listed above by the SAB panel, the two UGA reports highlight scientific evidence to support categorically protecting "other waters" including northeastern vernal pools, sinkhole wetlands in karst regions, rainwater basin wetlands, sand hills wetlands, playa lakes and interdunal wetlands. We urge the agencies to categorically protect these "other waters" as jurisdictional by rule under the Clean Water Act. (p. 7 – 8)

Agency Response: **In the final rule, the agencies have identified by rule, five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered 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, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands. By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support. The agencies**

[565] U.S. EPA 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, at 58 (Oct 17, 2014) (hereinafter "SAB Connectivity Review"). Available at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf.

[566] *Id.* at 58.

[567] SAB Review Letter at 3.

may amend the rule as part of the rule-making process if evolving science and the agencies' experience lead to a need for action to alter the jurisdictional categories.

4.605 "Other waters" not categorically included as jurisdictional in the final rule should continue to be subject to case-specific analyses in order to determine if they have a significant nexus to navigable waters. The scientific literature summarized in both the draft Connectivity report and UGA reports clearly supports protecting "other waters" on a case-by-case basis. Waters and wetlands outside floodplains can have a significant influence on the physical, chemical and biological integrity of downstream waters, particularly when they are considered in aggregate (i.e. in combination with similarly situated waters). The SAB review of the draft proposed rule reached this same conclusion about the need to continue to review "other waters" on a case-by-case basis.[568] The primary goal of the agencies should be to move as many "other waters" into categories that can be defined by rule to be "waters of the United States," as the science evolves to reveal the significant connections between these "other waters" and jurisdictional waters. Doing this will add clarity and consistency for both agency staff and the regulated community. (p. 9)

Agency Response: **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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination. The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.**

4.606 Comment request: If waters are categorized as non-jurisdictional because of a lack of science available today, the agency's request comment on how to best accommodate evolving science in the future that could indicate a significant nexus for these "other waters." Specifically, the agency's request comment as to whether this should be done through subsequent rulemaking, or through some other approach, such as through a process established in this rulemaking.[569]

We urge the agencies to establish a process for "other waters" to be considered for future inclusion as a new class of jurisdictional waters, to accommodate evolving science in the future. Just because there is a lack of scientific evidence today to include every type of

[568] SAB Review Letter at 3.
[569] 79 Fed. Reg. at 22217 (April 21, 2014).

other water as categorically protected by rule, further scientific study and investigation could reveal the presence of a significant nexus between additional classes of "other waters" to navigable waters in the future. For this reason, it is imperative that the agencies establish a process by which the public can formally request (i.e., petition) for a certain "other water" to be categorically protected by rule. In the preamble of the final rule the agencies should describe what scientific and/or legal documentation would be required for a member of the public to submit a petition. Additionally, the agencies should establish a process by which they (EPA science staff) periodically review the latest scientific literature to determine whether or not there is evidence to include additional categories of "other waters" as jurisdictional by rule. (p. 9)

Agency Response: **The agencies do not anticipate changes to this rule. However, 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 formal rule-making, including public comment.**

4.607 Comment request: The agencies also seek comment on how the science supports retaining the case-specific determination for the remaining "other waters" that are neither specifically included nor excluded from jurisdiction. Retaining the case-specific analysis for these other waters would not enhance clarity of jurisdiction for these other waters, but it would retain the ability for a jurisdictional determination consistent with the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters. In the alternative, the agencies seek comment on whether it would be appropriate to categorize remaining "other waters" as not jurisdictional. The agencies specifically seek comment on how these "other waters" should be considered.[570]

We are strongly opposed to the agencies categorically excluding any "other waters" from CWA jurisdiction, at any time. The agencies should not declare any "other waters" non-jurisdictional at any time, even if a particular "other water" should fail a significant nexus test. Watersheds are dynamic ecosystems that change over time, both from natural events and human activities. As the climate changes, scientists anticipate more frequent flooding in certain regions and more intense drought in others, so just because a particular water does not meet a significant test once, does not mean it won't meet such a test in the future. Especially with the anticipated impacts of climate change, we can expect more dramatic changes to our watershed ecosystems in the future. This, coupled with increasing demand for clean water in the future, underscore the need for the agencies to continue to do everything within their legal authority to protect our nation's precious water resources as the science evolves and resource needs shift.

Categorically excluding any water would set a dangerous precedent, especially in light of the fact that the proposed rule contains no recapture provision. Given uncertainty about the availability and quality of water resources in the future, it would be shortsighted of the agencies to categorical exclude any waters from protection. Moreover, members of the SAB panel reviewing the proposed rule commented that "the science does not support

[570] *Id.*

a determination to exclude any groups of "other waters" (or subcategories thereof, e.g. Great Plains playa lakes) from jurisdictional status."[571] (p. 10)

Agency Response: The agencies agree that science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. However, the agencies have clarified the features not considered jurisdictional. These exclusions reflect current agencies' practice, and their inclusion in the rule furthers the agencies' goal of providing greater clarity over what waters are and are not protected under the CWA.

Atlantic Legal Foundation (Doc. #15253)

4.608 The Supreme Court has twice rejected attempts by regulators to assert authority over "isolated waters" ruling that waters must have a "a continuous surface connection" or "significant nexus" to navigable waters. (p. 2)

Agency Response: See the Technical Support Document, section I.C. for a discussion of the Supreme Court decisions relating to the definition of "waters of the United States".

Weyerhaeuser Company (Doc. #15392)

4.609 There are numerous problems with the Agencies' approach to "other waters" in the proposed rule. First, the assertion of jurisdiction over "other waters" is premised on the application of a "significant nexus" test that is deeply flawed. Second, the "other waters" category does not actually require a case-by-case analysis as the proposed rule suggests. Rather, the Agencies allow for the evaluation of similarly situated waters within a watershed "as a group," and they will only undertake an analysis of a specific water body in isolation if they are unable to find "similarly situated" waters in the watershed.[572] Remarkably, the Agencies proclaim that evidence that an "other water" meets the "significant nexus" test does not have to "be specific to the water whose jurisdictional status is being evaluated," and can actually come from "regional and national studies of the same type of water" or a "'desktop' analysis."—it seems Agencies have a generous view of what it means to conduct a case-by-case analysis. Third, the "significant nexus" test in the proposed rule incorporates vague concepts such as "single landscape unit" and "similarly situated," with very little guidance as to how they are to be applied.

Finally, the preamble to the proposed rule sets forth many physical, biological, and chemical connections that regulators can look to in determining whether there is a significant nexus.[573] It is unclear how many of these factors need to be present or how to determine whether the presence of one or more factors rises to the level of establishing a significant nexus. Of particular concern are the biological factors mentioned in the preamble: "resident aquatic or semi-aquatic species present in the 'other 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

[571] SAB Review Memo at 5.
[572] See 79 Fed. Reg. at 22,211.
[573] See 79 Fed. Reg. at 22,213-14.

(foraging, feeding, nesting, breeding, spawning, use as a nursery area, etc.); and whether there is a reason to expect presence or dispersal around the 'other water,' and if so whether such dispersal extends to the tributary system or beyond or from the tributary system to the 'other water."[574] (p. 11)

Agency Response: **The agencies disagree that the significant nexus evaluation rule is not specific to the water being evaluated. The final rule states that a significant nexus 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. The agencies have been using remote sensing and desktop tools to delineate tributaries and conduct desktop analysis of sites for many years where data from the field are unavailable or a field visit is not possible, but prefer to gather site-specific data from field visits whenever possible.**

The final rule also provides a more detailed definition of significant nexus which includes a list of nine specific functions that can be analyzed. 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. Justice Kennedy also noted that lack of a hydrologic connection sometimes can be the basis of a significant nexus. The appellate courts have held that the significant nexus analysis is a flexible ecological inquiry.

4.610 "Other waters" by their nature tend to be isolated, intrastate, nonnavigable waters. The proposed rule's approach to "other waters" sets the bar too low for the exercise of jurisdiction over these waters. This raises the same constitutional and federalism concerns expressed in SWANCC. Accordingly, we request that the Agencies eliminate the "other waters" category from the proposed rule. Waters that do not fall within one of the other categories of jurisdictional waters should not be subject to CWA regulation, as they are precisely the sort of isolated, nonnavigable waters with "little or no connection" to navigable waters that the Supreme Court has instructed should not be jurisdictional. (p. 12)

Agency Response: **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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination.**

The agencies further disagree that the approach to other waters will have the effect of extending coverage to isolated waters. The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or biological integrity of a traditional navigable

[574] Id. at 22,214.

water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8

West Virginia Department of Environmental Protection (Doc. #15415)

4.611 The federal government should leave "other waters" regulation to the states, as contemplated by the CWA. There is too much difference from state to state for a national regulation to succeed. In the absence of federal CWA jurisdiction, the WVDEP already asserts authority on a case-by-case basis to evaluate and decide whether to authorize filling isolated wetlands and waters based on the proposed activity's potential to violate West Virginia's water quality standards. The individual states can use strategies that suit their needs and the needs of their citizens without an ill-fitting definition dictated from Washington. The federal approach to "other waters" will only increase inconsistencies, cause more Rapanos- and SWANCC-like cases to reach and be rejected by the U.S. Supreme Court, and create unnecessary uncertainty. (p. 12)

Agency Response: The agencies disagree that the analysis of "significant nexus" to classify waters will lead to greater inconsistencies in regulation. In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. 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." The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states. As is the case today, nothing in this rule restricts the ability of states to more broadly protect state waters.

A. Kvien (Doc. #15441)

4.612 III. FINDING CATEGORICAL JURISDICTION FOR "OTHER WATERS" THAT ARE SIMILARLY SITUATED

In the Solid Waste of Northern Cook County (SWANCC) decision,[575] the Migratory Bird Rule was struck down. The implication of this decision was that CWA jurisdiction can no longer be asserted over "isolated" wetlands that serve as habitat for migratory waterfowl. Prairie potholes are one type of wetland that was affected by this decision since they serve as important habitat for migratory waterfowl, were often covered under this rule, and most are not near navigable waters. According to a Ducks Unlimited study in North and South Dakota, "most prairie potholes are not adjacent to (>95%) or even within one

[575] Solid Waste Agency of Northern Cook County v. United States Army Corps of Eng'rs, 531 U.S. 159 (2001).

kilometer (ca. 50%) of navigable waters."[576] Despite the lack of proximity between most prairie potholes and waters of the United States, there is still a significant nexus between these water features. Scientific evidence shows when prairie potholes are drained it can materially and substantially affect the waters of the United States since prairie potholes perform important ecological functions.[577] Such evidence demonstrates that a significant nexus can exist absent proximity or a direct hydrological connection.

EPA is currently considering whether to determine by rule that "prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools, and perhaps other categories of waters, either alone or in combination with 'other waters' of the same type in a single point of entry watershed have a significant nexus and are jurisdictional."[578] This approach would not require a case-specific significant nexus analysis to determine jurisdiction.[579] I support such an approach, and it is consistent with Justice Kennedy's significant nexus test. Jurisdiction over prairie potholes should be determined as a group in order to avoid burdens to EPA and the Corps and litigation over proving the existence of a significant nexus between numerous prairie potholes serving the same or similar functions in the same region and "waters of the United States" in that region.

Prairie potholes in particular regions often serve the same or substantially similar ecological roles and functions as to deserve being treated as a unit.[580] Prairie potholes are usually connected by groundwater flows and sometimes surface flows[581] and when they are drained it can substantially affect the waters of the United States, despite whether or not they are directly hydrologically connected to those waters.[582] I support the regions that EPA proposed in the rule in order to carry out these regional categorical determinations for jurisdiction.[583] It is important to make an affirmative categorical jurisdictional determination in the case of prairie potholes and other types of wetlands that EPA is considering doing this for because they all serve incredibly important ecological roles,[584] are vital to migratory waterfowl, and need consistent treatment under the CWA.[585] (p. 4 – 5)

Agency Response: **See the Technical Support Document, section I.C. for a discussion of the Supreme Court decisions relating to the definition of "waters of the United States". The final rule establishes two exclusive circumstances under which**

[576] Arnold G. van der Valk & Roger L. Pederson, The SWANCC Decision and its Implications for Prairie Potholes, 23 WETLANDS 590, 590 (2003).
[577] *E.g.,* Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22,250.
[578] *Id*.
[579] *Id*. at 22,216.
[580] *See* W. Carter Johnson et al., Prairie Wetland Complexes as Landscape Functional Units in a Changing Climate, 60 BIOSCIENCE 128, 128–29 (2010).
[581] van der Valk, supra note 7 at 591.
[582] *Id.* ("From an ecological perspective, prairie potholes are not isolated habitat for most wetland species.").
[583] A list of these regions is available at Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. at 22,215.
[584] van der Valk, supra note 7, at 590–91.
[585] *Id*.

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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination. The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations

CLUB 20 (Doc. #15519)

4.613 There are many ambiguities in the proposed rule that are likely to create confusion and potentially leave our farmers, ranchers, homeowners and local governments exposed to litigation due to multiple uncertainties.

Our members are concerned that low spots on private property and intermittently wet areas, i.e. streams that have water only during spring runoff, may be categorized in a fashion that would subject them to regulation under the rules. (p. 2)

Agency Response: The agencies do not agree that the final rule leaves a landowner with no way to assess the status of a local water. The final rule provides narrow definitions of waters that are covered *per se.* With respect to the "other waters" category, the agencies have retained only in specified circumstances the current practice of case specific significant nexus determinations. 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. Science shows that tributaries regardless of flow permanence are very effective at transporting pollutants downstream, such as excess nutrients and sediment, which impact the integrity and character of traditional navigable waters, interstate waters, and the territorial seas.

The final rule establishes two exclusive and readily identifiable 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination. Additionally, the final rule does limit which waters can be determined similarly situated and prohibits waters that fall under separate paragraphs to be considered similarly situated with waters covered by another paragraph in the case specific

analysis. These limitations in the final rule clarify that the agencies intend to regulate just those waters which have a significant nexus to (a)(1) through (a)(3) waters.

The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

Rachel Sclafani (Doc. #15762)

4.614 Therefore it can be seen that the current status of WOTUS is very unclear. Sadly, the proposed Rule does not do enough to set up clear standards for all bodies of water. It has clear definitions for the more easily definable bodies of water waters used in interstate or foreign commerce, interstate waters, territorial seas, and all impoundments, tributaries, and adjacent waters to the aforementioned bodies. However the rest of the bodies of water are thrown into the significant nexus clause, to be determined on a case-by-case basis. This language is very vague, and the definition of significant nexus is equally vague. The proposed rule states that for an effect to be significant, it must be more than speculative or insubstantial. However, it is unclear as to what speculative or insubstantial means, so this leaves a lot of grey area in terms of what gets protected. (p. 2)

Agency Response: 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, the rule identifies at paragraph (a)(7) five subcategories of waters (prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands) that the agencies have determined are "similarly situated" for purposes of a significant nexus determination. Second, at paragraph (a)(8), the Rule provides that identifies waters within a 4000 foot distance limitation which will be subject to a case-specific significant nexus determination.

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in inconsistences or delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

4.615 This language leaves important bodies of water unprotected. Prairie potholes, Carolina bays, vernal ponds, and playa lakes do not fall into any of the clearly defined categories laid out by the proposed rule. They do impact the health of downstream waters, but their connection is not directly obvious. They filter our pollutants, store flood waters in times of heavy rains, and provide critical habitat for fish and wildlife (National Wildlife Federation). The EPA and the Corps should take more time to study these underlying connections in order to give them protection and remove them from the vague significant nexus category. (p. 2)

Agency Response: **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 the specified subcategories – prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis.**

Although some commenters suggested additional subcategories of waters for consideration, such as playa lakes and kettle lakes, the agencies at this time are not able to determine that the available science supports that the suggested additional subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, to be clear, under the rule, individual waters of the suggested additional subcategories are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8) (e.g., a playa lake that is an interstate water, a kettle lake that is an adjacent water, or a woodland vernal pool that is 2,000 feet from a jurisdictional tributary and is determined on a case-specific basis to have a significant nexus to a traditional navigable water, interstate water, or the territorial seas).

B. Price (Doc. #16381)

4.616 C) WETLANDS: While some Wetlands certainly provide important environmental benefits, the Literature presented by EPA and other environmental agencies:

a) quantify Wetlands lost to development, sylvan-culture, and agriculture, but DO NOT add back Wetlands created from Lake and Pond building , Aqua and Wet Agriculture, Hunting Preserves, or Wet Ditches associate with road-building, consequently the literature presents a greatly distorted view of Losses of Wetlands.

b) assert incorrect benefits such as, Wetlands act to charge aquifers. Although such statements sound good, if land is wet, it is because the subsurface does not percolate water. Sandy soils percolate and filter waters to aquifers, not clay or organic sediment layers.) (p. 1)

Agency Response: **The agencies recognize the important wetland acreage that has been created through agricultural conservation programs, compensatory mitigation programs, and voluntary habitat enhancement activities. However, this rule focuses on the functions provided by waters and their potential significant nexus with traditional navigable waters, interstate waters, and territorial seas. In most cases, these functions are evaluated without regard to whether the waters are natural, altered, or created, unless otherwise excluded. Therefore, the agencies disagree the rule represents a distorted view.**

While recognizing the permeability of soils and geologic formations both can influence the range of hydrologic connectivity between non-floodplain wetlands and

river networks, the Connectivity Report and a review of the available science is also clear that both wetlands and streams can have a groundwater connection, and may provide groundwater recharge, depending on the type. For example, the Connectivity Report notes that evidence is strong that transmission losses in ephemeral tributary streams recharge alluvial and regional aquifers, and that ground-water exchange can occur in vernal pool systems that do not have perching layers.

Tri-State Generation and Transmission Association, Inc. (Doc. #16392)

4.617 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.[586] 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.[587] 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.[588] 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'.[589] 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.[590]

[586] Id at page 2
[587] 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
[588] Id at page 22.
[589] Id at page 44.
[590] 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.

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[591] 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 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.[592]

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: **Regarding tributaries, the SAB found, "[t]here is strong scientific evidence to support the EPA's proposal to include all tributaries within the jurisdiction of the Clean Water Act. Tributaries, as a group, exert strong influence on the physical, chemical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of physical, chemical, and biological process."**

The definition of "tributary" in the final rule includes only those waters the agencies have concluded are the type of waters that the CWA was intended to protect and which either individually or in combination with other covered tributaries in the watershed have a significant nexus to a traditional navigable water, interstate water, or 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. Thus, the agencies are not defining "waters of the United States" to include all streams that might be considered "tributaries" in the general scientific literature.

[591] 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
[592] Id at page 90.

Michigan United Conservation Clubs (Doc. #16395)

4.618 More than 930,000 acres of Michigan wetlands and >26,000 lakes and ponds could be considered so-called "isolated" waters no longer extended Clean Water Act protection in the wake of the SWANCC Supreme Court decision and subsequent agency guidance. 50% of Michigan's threatened or endangered species need healthy, fully functional wetlands to complete their life cycle. But these areas are also critical habitat for waterfowl and other game species in Michigan. According to the U.S. Fish and Wildlife Service, in 2011 hunters spent $33.7 billion nationwide, while anglers spent $41.8 billion. Ranking 4th nationwide, Michigan's 1,938,000 hunters and fishermen spend $4.8 billion annually and support 72,462 jobs.

Duck hunting in Michigan could be harmed by uncertainty within Clean Water Act protections. The Prairie Pothole Region (also known as "the Duck Factory"), an enormous geographic area west of Michigan, supports a globally significant population of breeding waterfowl, and it is at risk—these ducks born in the Prairie Potholes end up in Michigan. Unless these protections for wetlands duck habitat are restored, the duck population—and duck hunting—in Michigan will suffer. Michigan's hunters and anglers contribute much and care very much about conservation of the fish and wildlife they pursue. (p. 4-5)

Agency Response: The agencies believe there is adequate scientific evidence to support a determination that Prairie Potholes 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. The final rule identifies prairie potholes as one of 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.

Mobile Baykeeper (Doc. #16472)

4.619 Finally, the new rule should provide categorical protection for isolated bodies of water and wetland areas such as prairie potholes, vernal pools, delmarva, and carolina bays, pocosins, and playas. Substantial scientific evidence demonstrates that these waters should be categorically protected, including the Connectivity Report and comments of individual SAB members. (p. 2)

Agency Response: 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 the specified subcategories – prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add

consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis.

Although some commenters suggested additional subcategories of waters for consideration, such as playa lakes and kettle lakes, the agencies at this time are not able to determine that the available science supports that the suggested additional subcategories of waters as a class have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. However, to be clear, under the rule, individual waters of the suggested additional subcategories are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8) (e.g., a playa lake that is an interstate water, a kettle lake that is an adjacent water, or a woodland vernal pool that is 2,000 feet from a jurisdictional tributary and is determined on a case-specific basis to have a significant nexus to a traditional navigable water, interstate water, or the territorial seas).

Michael Teague, Secretary of Energy & Environment, State of Oklahoma et al. (Doc. #16560)

4.620 In sharp contrast to other efforts within the rule to define significant water features and those that might be exempt, the proposed "other waters" category essentially opens the door for any collection of water to be considered WOTUS. Inclusion of this category, at least as proposed, breeds significant regulatory uncertainty and undoubtedly will slow down projects due to the need for increased case-by-case determinations. When coupled with decreasing agency resources and increasing demands for other services, the prospect of getting timely jurisdictional determinations is dubious at best. A wholesale revision to this category that builds upon State knowledge and data on similar classes of waterbodies could help immensely. Furthermore, the burden that this current proposal places on landowners and potential developers must be shifted to the Agencies in order to make timely jurisdictional determinations (e.g., in 180-days or less). (p. 4)

Agency Response: **The agencies disagree that the analysis of "significant nexus" to classify waters will lead to greater inconsistencies in regulation or delays in the processing of jurisdictional determinations. In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. 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."**

The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states. As is the case today, nothing in this rule restricts the ability of states to more broadly protect state waters. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm.

Judy Petersen (Doc. #16580)

4.621 In Kentucky karst development is very prevalent, so much so that the Kentucky Division of Water has long recognized and offered CWA protections to underground streams, springs and their watersheds. In a large Conservation Reserve Enhancement Program (CREP) in Kentucky's upper Green River watershed, protection of karst sinkholes with buffers was an approved practice – acknowledging the water quality connection between sinkholes and the Green River and its tributaries. Therefore, the rule should categorically protect karst sinkhole wetlands as waters of the US. (p. 1)

Agency Response: At this time, the agencies are not able to determine that the available science supports that karstic sinkhole wetlands as a class have a significant nexus to (a)(1) through (a)(3) waters. However, individual karstic sinkhole wetlands are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8). Additionally, the agencies may amend the rule as part of the rule-making process if evolving science and the agencies' experience lead to a need for action to alter the jurisdictional categories.

California Stormwater Quality Association (Doc. #16606)

4.622 Under the expansive ecoregion approach, many "other waters" throughout California will be included under CWA jurisdiction, unless specifically excluded. Arguably, any surface water body not categorically exempted may be treated as a WOTUS if either Agency determines that the surface water body in question, or in combination with other similarly situated waters, affects the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or territorial sea. Hydrologic connection (surface or subsurface) would be unnecessary to create significant nexus. Under such an approach, stormwater agencies will face significant uncertainty with respect to CWA jurisdiction for MS4 conveyance facilities as well as other stormwater related facilities. Further, the vagueness in the exclusions will only add to this uncertainty, which will not further the overall clarity goals of the Proposed Rule. (p. 6)

Agency Response: The agencies disagree that the analysis of "significant nexus" to classify waters is imprudent expansion. The Technical Support Document outlines the agencies legal and scientific rationale supporting the use of "significant nexus." In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. 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."

It was not the agencies' intent to change current practice to make stormwater control features constructed to convey, treat, or store stormwater, and cooling ponds that are created in dry land "waters of the United States. In the final rule, the agencies added an exclusion to reflect current agencies' practice, and (b)(6) of the final rule excludes "[s]tormwater control features constructed to convey, treat, or store stormwater that are created in dry land."

W. Stevens (Doc. #17663)

4.623 Prairie potholes, playa lakes and dry arroyos should not be considered as Waters of the U S. Generally, they are great distances from traditional Waters of the U S and contain water only after specific and intermittent rain events. As stated below, state regulations administered through the Railroad Commission of Texas or the Texas Commission on Environmental Quality more than adequately provide protection for such features.

The new rule in its treatment of 'other waters' would bring into question the need for a SPCC plan, secondary containment, and the possibility of reporting spills to EPA in addition to the state regulatory authority.

The treatment of isolated 'other waters' would only become jurisdictional on a case specific basis upon the determination of a 'significant nexus'. This would necessarily create ambiguity, promote the possibility of arbitrary decisions and most certainly lead to time delays in its determination. It would be far better to exclude all of such areas from the proposal and delegate such responsibility to the existing state regulatory agency. (p. 2)

Agency Response: **In the final rule, the agencies have identified by rule that prairie potholes and western vernal pools are two of five specific types of waters in specific regions that science demonstrates should be subject to a significant nexus analysis and are considered similarly situated by rule. While playa lakes and non-western vernal pools have not currently been identified, these subcategories of waters are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8). By not determining that any one of these waters is jurisdictional by rule, the agencies are recognizing that a gradient of connectivity exists and will assert jurisdiction only when that connection and the downstream effects are significant and more than speculative and insubstantial. This approach strikes a balance between requests for bright lines and limited case-specific reviews with scientific support.**

The agencies disagree that the analysis of "significant nexus" to classify waters will lead to greater inconsistencies in regulation or delays in the processing of jurisdictional determinations. In order to provide clarity, the agencies provided a definition of "significant nexus" in the final rule which the agencies feel provides necessary detail for consistent implementation. The agencies will work with states to more closely evaluate state-specific circumstances that may be present across the country and, as appropriate, encourage states to develop rules that reflect their circumstances and emerging science to ensure consistent and effective protection for waters in the states. As is the case today, nothing in this rule restricts the ability of states to more broadly protect state waters. The agencies believe the clarity provided in the rule along with the agencies existing resources allow landowners to identify potentially covered waters on their property. As in current practice individual requests for assistance can be directed to the local Regulatory Corps Offices http://w3.saj.usace.army.mil/permits/HQAvatar/index.htm

The rule does not affect the reporting requirement for spills and the procedures for reporting are outside the scope of this rule. If a spill has occurred into any water, the National Response Center (NRC) should be notified, regardless of the

jurisdictional status of the water. The NRC is the federal government's national communications center, which is staffed 24 hours a day by U.S. Coast Guard officers and marine science technicians. The NRC is the sole federal point of contact for reporting all hazardous substances releases and oil spills. The NRC receives all reports of releases involving hazardous substances and oil that trigger federal notification requirements under several laws. The number is 1-800-424-8802.

S. Newell (Doc. #18547)

4.624 Prairie Potholes are simply upside/headwaters storage for flowing bodies of water as such should get the same protection as do permanent flowing streams and rivers. (p. 1)

Agency Response: 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 the specified subcategories – prairie potholes, Delmarva and Carolina bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands – are similarly situated because they perform similar functions and they are located sufficiently close to each other to be reasonably evaluated in combination with regard to their effects on the integrity of traditional navigable waters, interstate waters, or the territorial seas. While not determining these categories of waters to be jurisdictional by rule, this change will add consistency, predictability, and clarity, as the rule explicitly states that such waters are similarly situated for purposes of the significant nexus analysis.

Donald Shawcroft (Doc. #18569)

4.625 Given the breadth of the definitions in the proposed rule, the vast majority of ephemeral drainage features and ditches on farmlands and pastures described above would be categorically regulated as jurisdictional tributaries under the proposed rule. And the vast majority of small wetlands, ponds and pools (including, potentially, ephemeral ponds, which some might call "puddles") would be either categorically regulated as "adjacent" waters or could still be regulated as "other waters." Consequently, regulating drains, ditches, stock ponds, and other low spots within farm fields and pastures as "navigable waters" would mean that any discharge of a pollutant (e.g., soil, dust, pesticides, fertilizers and "biological material") into those ditches, drains, ponds, etc. will be unlawful without a CWA permit. (p. 2)

Agency Response: It is important to note that many ephemeral waters are jurisdictional under current regulations. The agencies intend to continue to regulate ephemeral tributaries where they meet the definition of tributary and are not otherwise excluded. The agencies have historically taken regulatory action in connection with ephemeral waters under CWA section 303(c), several Corps' Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies' definition of "waters of the United States" prior to this rule included all tributaries without reference to flow regime

The final rule recognizes that not all waters have a significant nexus to a traditional navigable waters, an interstate water, or a territorial sea. In the final rule, the agencies provided clear and explicit exclusions for a variety of non-jurisdictional

features, including erosional features, puddles, certain types of ditches and water-filled depressions. Further, this rule does not affect the exemptions provided in the Clean Water Act in Section 404(f)(1) (33 U.S.C. § 1344(f)(1)) exempts many normal farming activities from the Section 404 permitting requirement.

J. Dillard (Doc. #18907)

4.626 You state:

> Under the proposed rule, these "other waters" (those which do not fit within the proposed categories of waters jurisdictional by rule) would only be jurisdictional upon a case-specific determination that they have a significant nexus as defined by the proposed rule. Waters in a watershed in which there is no connection to a traditional navigable water, interstate water or the territorial seas would not be "waters of the United States."
>
> Comments:
>
> Significant nexus needs to include land uses and geology and soils as well as ecosystems and hydrology. This is significant in areas of oil, whether liquid or in rock. (p. 3)

Agency Response: As stated in the preamble, "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)."

Kevin and Nicole Keegan (Doc. #19128)

4.627 From the two-page paper titled "proposed Definition of Waters of the United States under the Clean Water Act" the following definitions would affect us and we oppose:

> (…) "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 water identified in paragraphs (s)(1) through (3) of this section"
>
> Again, this definition appears to refer to water that is anywhere near a wetland. I am originally from Wisconsin. Using the cities of Marshfield and Horicon as examples, this definition would appear to define all water use in and around these cities due to their proximity to the marsh. (p. 2)

Agency Response: The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas address concerns in the approach to "other waters."

The fundamental premise of the final rule is that for a water to be a "water of the United States" it must have a significant effect on the chemical, physical or

biological integrity of a traditional navigable water, an interstate water, or a territorial sea, which are (a)(1) through (a)(3) water respectively. All other categories of the rule are based upon a significant nexus with these three types of waters, whether determined to be jurisdictional per se in all cases meeting the defined criteria (such as sections (a)(4) through (a)(6), or subject to a case-specific analysis (such as sections a(a)(7) and (a)(8).

Jon Klingel (Doc. #19166)

4.628 Arroyo Riparian Habitat:

Arroyo Riparian Habitat is the vegetation corridor along ephemeral streams. The habitat type was established by the GAP Analysis program at NM State University where they classified the vegetation types in NM using satellite imagery. Arroyo Riparian habitat is valuable for wildlife because of the generally greater density and diversity of plants which provide more cover and food than surrounding areas. Because of this, arroyos are preferred travel corridors, as well as nesting, denning, feeding and resting habitat for wildlife and exhibit high wildlife abundance and species diversity when compared to surrounding uplands.

New Mexico has 678 extant vertebrate species of wildlife, excluding fish. Nearly half of these species (42%, 288 species) utilize "Arroyo Riparian" habitat.

These 288 vertebrates include:

16 taxa classified as State and/or federal threatened or endangered

31 taxa classified as State and/or federal sensitive or species of concern

38 taxa classified as State "Species of Greatest Conservation Need"

27 game species

5 taxa endemic to NM (i.e., occur nowhere else in the world)

29 species listed as of cultural importance to Pueblo Tribes (p. 2 – 3)

Agency Response: Under the final rule, waters located in arroyo riparian areas may be jurisdictional, provided they meet the criteria defined under (a)(6) or (a)(8) in the rule. In response to comments, the agencies have deleted the definitions of floodplain and riparian area and have provided a definition of neighboring which is clear that only waters in specified circumstances may be "waters of the United States."

4.629 "Playa Lakes Region"

Playas are the low, essentially flat part of a basin or other undrained area in arid and semi-arid regions. Usually they contain ephemeral waters with one or more drying cycles. The "Playa Lakes Region" of eastern New Mexico and west Texas contains the largest concentration of playas in the world. While most of these playa lakes are ephemeral waters, a few are perennial and the literature of species using the Region does not distinguish between ephemeral and perennial lakes. A USFWS publication states more than 115 bird species and 10 mammal species have been documented using the playa lakes of this Region. It is highly probable that these species use both ephemeral and

perennial waters. The Playa Lakes Region is extremely important to waterfowl and shorebirds. The Region produces up to a quarter of a million ducklings in wetter years. During spring and fall, several million shorebirds and waterfowl migrate through the area. Nearly a half million sandhill cranes migrate through and winter in the Region. In winter, from one to three million birds are in the Region including a half million Canada geese and 100,000 snow geese. These playas are also the primary recharge for the Ogallala aquifer of the southern high plains.

Many ephemeral playa lakes (Playa Lakes Region and elsewhere in NM) develop dense populations of crustaceans, food for waterfowl and shorebirds. Tadpole shrimp, (a NM Species of Greatest Conservation Need) for example can go through their entire active life cycle in as few as 15 days. Invertebrates in ephemeral playa lakes include large Brachiopods (i.e., clam shrimp, fairy shrimp, and tadpole shrimp). These brachiopods must have a dry cycle (i.e., ephemeral water) and are important food for waterfowl and shorebirds. Other crustaceans include cladocerans, copepods, and ostracods, all important wildlife food. Also represented are beetles, dragonflies, damselflies, true bugs, hemiptera, ephemerotera, tricoptera, diptera, mites and leaches which are also valuable wildlife food. Invertebrates are always in the diet of ducks in the playas. (p. 4)

Agency Response: **While playa lakes have not been identified in paragraph (a)(7) as one of the five subcategories of similarly situated waters, as the SAB noted, science does not support excluding groups of "other waters" or subcategories thereof from jurisdiction. Playa lakes are jurisdictional where they meet the requirements of (a)(1) through (a)(6) or (a)(8). Additionally, the agencies may amend the rule as part of the rule-making process if evolving science and the agencies' experience lead to a need for action to alter the jurisdictional categories.**

J. R. Dorney (Doc. #19235)

4.630 Finally, I am unsure what process is intended to be followed for the "other waters" category. I support the addition of this category in the rules as long as a clear, public process is followed to develop and implement this category. I suggest that the Corps develop a draft, written analysis for public comment on a Corps District basis with EPA assistance and state review/input. Further, I suggest using Level III ecoregions as geographic templates for these analyses. Adoption of this process will allow the agencies to develop this category of waters in an orderly manner with public input. In a related concern, the Corps and EPA will need to develop a process to handle permitting of projects which would normally have been able to avail themselves of a Nationwide Permit but with this change in jurisdiction would require an Individual Permit. I suggest a new, time-limited Nationwide Permit or other similar process to bridge this transition time. (p. 3)

Agency Response: **The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide 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 water, interstate waters, and the territorial seas. The agencies believe the final rule is not overly broad and it is not the case that any water would be considered a "waters of the United States."

The agencies believe that the rule will result in a reduction of case-specific determinations which was achieved by making tributaries and adjacent waters jurisdictional by rule coupled with limits on the two types of categories of waters that require a case-specific analysis. Therefore, the Agencies do not foresee an increase in delays due to workload on jurisdictional determinations. The Agencies believe the final rule will simplify the process of making jurisdictional determinations.

This rule does not change the agencies' longstanding practices or regulations governing the implementation of this rule and are outside the scope of this rule, nor implementation of the Nationwide Permits. The agencies will continue to develop general permits and simplified procedures, particularly as they affect crossings of ephemeral and intermittent tributaries to ensure that projects that offer significant social benefits, such as renewable energy development, can proceed with the necessary environmental safeguards while minimizing permitting delays.

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:

Analysis of Federal Jurisdictional Status of a Portion of the Virginia Tech Corporate Campus (2010) (Doc. #4958.2, p. 21)

Arnold G. van der Valk & Roger L. Pederson, The SWANCC Decision and its Implications for Prairie Potholes, 23 WETLANDS 590, 590 (2003) (Doc. #15441, p. 4)

D.A. Steen et al. 2012. Terrestrial habitat requirements of nesting freshwater turtles. Biological Conservation 150 (2012) 121-128. (Doc. #7499.4)

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Excerpt from 2008 study completed for regulatory enforcement action in Arizona (Doc. #4958.2, p. 14)

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Streams and Waterbodies in North Dakota (Doc. 19312, p. 3)

Technical Principles Related to Establishing the Limits of Jurisdiction for Section 404 of the Clean Water Act (Doc. #4958.2, p. 63)

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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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