

DISCUSSION PAPER
Association of State Wetland Managers, Inc.
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“SIGNIFICANT NEXUS” AND CLEAN WATER ACT JURISDICTION

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PREFACE

This paper is being circulated to both make recommendations as well as stimulate discussion concerning criteria and procedures for the determination of Clean Water Act jurisdiction based upon a finding of “significant nexus” of wetlands and other waters to “navigable in fact” waters. The ideas expressed in this paper do not represent the views of any state or federal agency. Our goal is to generate ideas and stimulate discussion. Comments, criticisms and suggestions would be greatly appreciated. Thanks much.

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FORWARD

Options for Addressing Clean Water Act Uncertainties

Today there are uncertainties with respect to the extent of the areas subject to Federal regulation pursuant to the Clean Water Act. Uncertainties are due, in part, to lack of clarity in Congressional intent with regard to regulated wetlands and waters. Uncertainties are due to conflicting Supreme Court and lower court decisions interpreting the Act and to confusing and fractured decisions. They are due, in part, to conflicts between scientific evidence suggesting that all waters need to be regulated to achieve Clean Water Act goals (i.e., restore and maintain...waters of the U.S.) and Supreme Court interpretation of Congressional intent as imposing geographical limits on regulation.

There are a number of possibilities for clarifying jurisdiction other than simply waiting for the courts to clarify jurisdiction on a case by case basis over time.

I) The issuance by the Corps and EPA of supplementary guidance concerning Clean Water Act jurisdiction. The Corps and EPA are now drafting guidance. How far this guidance will go in clarifying ambiguities and fully satisfying the Supreme Court remains to be seen. It is likely that whatever guidance is provided will be useful, given the high degree of present uncertainty.

II) Promulgation by the Corps and EPA of more detailed, formal regulations with specific criteria and procedures for identifying waters of the U.S. is a third option. The broad public review process associated with formal rule making would be difficult and time-consuming but could also permit a broad airing of issues and the building consensus.

III) Ideally, Congress would adopt remedial legislation specifying that, in order to protect the quality of our water and to prevent harm caused by flooding, the Clean Water Act applies to all waters bodies in the U.S. without reference to the ambiguous term “navigable” waters. This would be the cleanest and most comprehensive fix. But the political acceptability of this route is uncertain.

All three options must carefully consider and give due regard to the multiple opinions of the Supreme Court members in *Rapanos v. U.S.* as well as earlier Supreme Court decisions such as *SWANCC* and *Riverside Bayview*. The plurality and concurrent decisions in *Rapanos* set forth alternative ways of establishing Clean Water Act jurisdiction. Justice Kennedy’s concurring opinion in *Rapanos* set forth a “significant nexus” test for determining whether waters/ wetlands are subject to Clean Water Act jurisdiction. The following paper focuses upon this test which will often be the controlling test for isolated wetlands, small tributary streams, ephemeral streams, wetlands adjacent to small tributary and ephemeral streams and other wetlands and waters other than traditionally navigable waters and wetlands adjacent to such waters.

Evolving Tests for Clean Water Act Jurisdiction

The scope of Clean Water Act geographical jurisdiction was not always so unclear. In the 1972 to 2001 period, federal district and appellate courts and the U.S. Supreme Court broadly upheld Corps of Engineers and EPA Clean Water Act regulations and jurisdictional determinations for wetlands and other waters. This included the U.S. Supreme Court in the 1985 case, *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (S.Ct. 1985). The courts held that jurisdiction extended to not only navigable coastal waters, lakes and streams and adjacent wetlands but many nonnavigable rivers, streams, ditches, wetlands adjacent to such waters, and almost all geographically isolated wetlands and other waters subject to use by migratory birds or based on other factors affecting interstate commerce. Courts considered broad jurisdiction necessary to achieve the goals of the Clean Water Act to “restore and maintain the physical, chemical and biological integrity” of the Nation’s waters.

In 2001, however, a narrowly divided Supreme Court (5-4) in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (S.Ct. 2001) held that the intent of Congress, in defining “navigable waters” to include “waters of the U.S.”, was not to regulate all waters and that the Migratory Bird rule applied by the Corps which extended Federal jurisdiction to waters based upon use by migratory birds alone went beyond the intent of Congress. The Court in SWANCC observed that it had upheld Federal jurisdiction for wetlands adjacent to navigable waters in an earlier Supreme Court case, *Riverside Bayview*, because such wetlands had a “significant nexus” to navigable waters. The SWANCC decision, however, left many unanswered questions concerning the scope of Clean Water Act jurisdiction.

From 2001 to 2006, federal district courts and appellate courts issued thirty-seven decisions dealing with the scope of Clean Water Act jurisdiction. With the exception of two decisions from the Fifth Circuit, federal district and appellate courts narrowly interpreted SWANCC. Courts repeatedly held that particular waters and wetlands were subject to Clean Water Act jurisdiction because they were adjacent to navigable waters, tributaries, or had a “significant nexus” to navigable waters based primarily upon surface hydrologic connection. See Appendix B.

In 2006 the Supreme Court issued a consolidated decision, *Rapanos v. U.S.*, 126 S.Ct. 2208 (S.Ct. 2006) in which the Court vacated two lower appellate court decisions upholding Clean Water Act jurisdiction for wetlands which were separated by a berm from ditches or drains leading into navigable waters by a berm (Carabell) and for wetlands linked to navigable waters through a system of small natural drainageways and ditches and drains (Rapanos). In Rapanos the Supreme Court was more even sharply divided (4-1-4) than in SWANCC with five separate opinions as part of this larger decision. Justice Scalia and three other members of the court narrowly interpreted Clean Water Act jurisdiction in a “plurality” opinion which overturned the two lower court cases. Justice Kennedy wrote a separate opinion joining the plurality in overturning the lower court decisions but not agreeing with the plurality’s reasoning. His opinion set forth the “significant nexus” test which will be discussed below. Justice Stevens wrote a dissent with the support of three other members of the court supporting the Federal

jurisdictional determinations of the Corps and a broad interpretation of Clean Water Act jurisdiction.

Writing for four Justices, Justice Stevens, who was joined by Justices Breyer, Ginsburg, and Souter, concluded that the Corps had jurisdiction of the wetlands in question and that the decisions of the Corps and lower court should be sustained. Also writing for four Justices, Justice Scalia, who was joined by Chief Justice Roberts and Justices Thomas and Alito, said that the decisions of the lower courts should be vacated and remanded. Justice Scalia thought that the Corps' assertion of federal jurisdiction was far too broad. Specifically he indicated that the phrase "the waters of the United States" includes only those relatively permanent, standing or continuously flowing bodies of water "forming geographic features" that are described in ordinary parlance as "streams," "oceans, rivers, [and] lakes." He also noted that "waters of the United States" do "not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall." However, in footnote 5, Justice Scalia stated that "(b)y describing "waters" as relatively permanent," we do not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought. We also do not necessarily exclude *seasonal* rivers, which contain continuous flow during some months of the year but no flow during dry months....Common sense and common usage distinguish between a wash and a seasonal river."

Agreeing with Justice Scalia, Justice Kennedy concluded that the matter should be returned to the lower courts for re-processing in accordance with revised instructions. Unlike Scalia, however, Kennedy indicated that the lower courts may well find that the Corps appropriately had jurisdiction over the wetlands at issue in *Rapanos*.

Under the rules of the Supreme Court, when there is no majority opinion, the opinion offering the narrowest ground which would be supported by a majority of justices controls. See generally *Marks v. United States*, 430 U.S. 188 (S. Ct. 1977). Kennedy's opinion with its focus upon "significant nexus" (arguably) provides the "narrowest ground to which a majority of the Justices would have assented if forced to choose." See *United States v. Gerke Excavating, Inc.*, 2006 WL 2707971 (7th Cir. Sept. 22, 2006) paraphrasing *Marks v. U.S.* See also *U.S. v. Johnson, No. 05-1444 (D. N.H. October 31, 2006)*.

The Significant Nexus Test

There are many questions concerning the application of a significant nexus test. "Significance" is subject to a variety of interpretations although Justice Kennedy suggested in his concurring opinion a variety of factors relevant to determination of "significant nexus". The Corps of Engineers and EPA lack the staff and budget to undertake detailed data gathering and fact finding pertaining to significant nexus for thousands of wetlands and waters jurisdictional determinations each year. A significant nexus test will mean increased permitting times and costs for not only regulatory agencies but permit applicants. In addition, conditions change over time and a "significant" nexus under one set of conditions may become insignificant over time and vice versa.

Despite impediments to its application, the test has strengths. It is, at least superficially, quite simple. It is factually based. The information agencies gather to determine whether wetlands and waters have a “nexus” to navigable in fact waters and whether this impact is “significant” will also help agencies evaluate the functions and values of wetlands and other waters in watershed contexts, determine whether issuance of permit applications will be in the “public interest”, determine whether an Environmental Impact Statement is needed, and the determine the adequacy of proposed mitigation measures (restoration, creation, enhancement).

This significant nexus test for determining the extent of federal jurisdiction for wetlands and other waters has been used or endorsed with varying degrees of understanding and clarity by the lower courts since *Rapanos*. Some courts have had little difficulty in using the test or remanding decisions to lower courts for application of the test alone or in combination with the plurality opinion (Scalia) test. See *U.S. v. Johnson*, 05-1444 (1st Circuit. 10-31-2006); *No. Cal. River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006); *United States v. Gerke Excavating, Inc.*, 2006 WL 2707971 (7th Cir. Sept. 22, 2006); *United States v. Evans*, 2006 WL 2221629 (M.D. Fla. Aug. 2, 2006); *U.S. v. Kincaid Trust*, (E.D.Mich. 11-3-2006, Case Number 02k-10149); *Environmental Protection Inf. Ctr. V. Pacific Lumber*, (N.D. Cal. 1-9-2007). However at least one court was plainly confused as to how to apply the test. See, *United States v. Chevron Pipe Line Co.*, 437 F.Supp.2d 605 (N.D. Tex. 2006). Absent legislation by Congress or new cases from the Supreme Court, the Corps, EPA, and lower courts need to find practical and scientifically sound ways to apply the test.

SUMMARY AND RECOMMENDATIONS

The Supreme Court's fractured decision in *Rapanos* has introduced additional confusion and uncertainty into the already complicated and contentious issue of determining the geographic scope of federal jurisdiction under the Clean Water Act. In the absence of a majority opinion, a variety of competing interpretations are being advanced by parties in litigation across the country, as well as by advocates and commentators with various points of view. EPA and the Corps of Engineers are trying to develop guidance and implementation procedures for their field offices. The states are trying to figure out what the decision means for programs they administer under the CWA. The regulated community is trying to determine what jurisdictional test to use to determine regulatory requirements. The conservation community is concerned that important wetlands and other waters are at risk of losing federal protection. The lower courts are feeling their way through the maze case by case.

The premise of this paper is that no one's interest, least of all the public interest in a strong and effective CWA, is served by the current state of uncertainty surrounding this fundamental question of the Act's coverage. Accordingly, we propose the following approach and series of specific recommendations for EPA and the Corps to consider in charting a course for the future of the Act and in adopting guidance and/or regulations complying with the *Rapanos* decision. These recommendations are discussed in greater detail in the sections that follow.

In developing these recommendations we are guided by the words of Justice Kennedy in *Rapanos*:

"[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 waters more readily understood as 'navigable.'"

Recommendation No. 1: Adopt the approach suggested by Justice Stevens in *Rapanos* and taken by the First Circuit in *U.S. v. Johnson*, 05-1444 (1st Cir. 10-31-2006). This is the approach the Army Corps of Engineers and EPA have already taken in briefs filed by the U.S. in more than twenty pending cases. Under this approach, wetlands are jurisdictional if they meet either Justice Kennedy's "significant nexus" test or the plurality's categorical rule that wetlands are jurisdictional if there is a surface hydrological connection to either a navigable water or a seasonal tributary (paraphrase of the plurality opinion in *Rapanos*). This approach to interpreting *Rapanos* is grounded on a line of cases holding that legal standards derived from fragmented decisions must have the support of a majority of the justices. No standard can be based solely on Justice Scalia's plurality opinion since a majority of the Court rejected the rationale on which it is based. However, whenever either Justice Kennedy's or Justice Scalia's view favors jurisdiction there is a majority with the four members who joined Justice Stevens' dissent. This approach would maintain as much of the historic reach of the CWA as possible, while minimizing the threat to the majority of the Nation's waters that would be caused by a marked reduction in federal jurisdiction. It also acknowledges the reality that some wetlands may fail both Kennedy's test and the plurality test.

Recommendation No. 2: Build upon existing regulations and guidance rather than engage in a substantial rewrite. *Rapanos* did not invalidate any regulations, though several of the Justices, including Kennedy, strongly suggested that new rulemaking would be in order. Whether EPA and the Corps decide to engage in rulemaking or simply issue more detailed guidance the focus should be on defining key terms such as significant nexus and setting forth criteria to determine jurisdiction. Procedures and criteria for determining “ecological significance” need to be added to the use of hydrologic connections to assess jurisdiction. Justice Kennedy made it clear that wetlands and tributaries having a significant effect on the chemical, physical and biological integrity of navigable waters are jurisdictional. For example, the agencies may continue to use the “ordinary high water mark” as a jurisdictional criterion for a specific tributary, but must include other factors, such as the significance of the tributary and associated wetlands for maintaining downstream water quality, flood control, aquatic habitat or other ecological services. Needless to say, procedures and criteria should be kept as simple and efficient as practicable. Guidance should reflect not only statements of the Supreme Court in *Riverside Bayview*, *SWANNC*, and *Rapanos* but lower court decisions addressing significant nexus. See Appendix B.

Recommendation No. 3: Sound science and careful documentation should be required for both jurisdictional determinations and nonjurisdictional determinations. Decisions should be based on objective, transparent evaluation of the hydrological and ecological connections between wetlands, tributaries, and navigable waters, as well as whether existing and reasonably anticipated activities pose a threat to the chemical, physical and biological integrity of such waters, or increase flooding heights or velocities on “waters of the United States.”

Recommendation No. 4: Guidance should make it clear that wetlands “adjacent to” navigable in fact waters are jurisdictional per se. This is true regardless of whether there is a “continuous surface hydrological connection” between the wetlands and the navigable waters. Justice Kennedy acknowledged that such wetlands presumptively satisfy the significant nexus test. Likewise, Justice Stevens’ opinion would uphold the Corps’ existing regulations without a further showing of significant nexus or continuous surface connection.

Recommendation No. 5: Designate classes of major tributaries and wetlands that, in combination with other wetlands/waters within the watershed, are presumed to have a significant nexus with downstream navigable waters. Guidance should acknowledge that as circumstances change the nexus may become more significant as for example when urbanization increases stormwater flows. Conversely, the guidance should specify that jurisdiction cannot be defeated through water withdrawals or the creation of artificial barriers such as berms.

Recommendation No. 6: Shift at least a portion of the information gathering burden with regard to determination of significant nexus to permit applicants, but require independent review and verification by field offices.

Recommendation No 7: Keep the “significant nexus” test separate from the determination of what is a “wetland”. This is consistent with the Corps or Engineer’s and EPA’s current efforts which separate determination of whether an area is a wetland and whether it is subject to the Clean Water Act.

Recommendation No. 8: Apply a “notice” procedure for activities in headwater areas not included in any overall class of wetlands and waters determined to have a significant nexus to navigable waters. Such a procedure would allow the Corps an opportunity to check whether there may be a significant nexus.

Recommendation No 9: Define and provide guidance with regard to the determination of “nexus” and “significance”. “Nexus” should be defined to include hydrological **or** ecological connections. “Significant” should be defined to include the **cumulative** effect of wetlands and streams on the chemical, physical and biological integrity of navigable waters.

Recommendation No 10: In determining “nexus” the agencies should:

Recognize that a broad range of types of connections may form an adequate “nexus.” Through guidance and field implementation, the Corps and EPA should endorse a variety of types of physical, chemical, and biological connections as potentially creating an adequate nexus between individual wetlands/waters or classes of wetlands/waters and navigable waters related to the achievement of CWA goals. Guidance should recognize a variety of hydrologic connections including bank-defined surface water flow, diffused surface water flow, flood flows, and subsurface flows as related to CWA goals. Recognition of a broad range of valid types of connections to goals including ecological connections opens the door for regulatory agencies to introduce data pertaining to connections from a variety of federal, state, and local sources. For example, agencies may use FEMA flood data and local stormwater information to establish the relationships between complexes of wetlands and downstream flooding.

- **Encourage use of both quantitative data and qualitative judgment.** The Corps and EPA should encourage the use of quantitative data where such data is reasonably available. But, the agencies also need to allow the use of field observations and professional judgment to document “nexus” and “significance”.
- **Recognize watershed and landscape context.** As Justice Kennedy said, the Corps and EPA should consider the relationship of a water/wetland to navigable waters “either alone or in combination with similarly situated lands in the region”. The watershed and landscape context should be considered in establishing both “nexus” and “significance.” Kennedy endorses a broad hydrologic and ecological context and assessment of the cumulative importance of waters such as storage of flood waters by headwater streams and wetlands.

- Recognize both **hydrological and ecological connections**. Through guidance and implementation the Corps and EPA should make it clear that both hydrological and ecological connections must be addressed in jurisdictional determinations. Justice Kennedy repeatedly stressed the importance of considering jurisdiction in the broader context of the CWA’s goal of protecting aquatic ecosystems.
- Create a presumption that **nonnavigable tributaries** with watershed area or flow greater than a specified amount and wetlands adjacent to such **nonnavigable tributaries** are jurisdictional per se. Justice Kennedy noted that the Corps may choose, by rule or adjudication, “to identify categories of tributaries that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations are significant enough that wetlands adjacent to them are likely in the majority of cases to perform important functions for an aquatic system incorporating navigable waters.” The reference to “other relevant considerations” is particularly noteworthy. This indicates Justice Kennedy’s acknowledgement that there is more to CWA than mere flow calculations. Other relevant considerations may include such things as climate, geology, water quality, and biological diversity. Based on these considerations the Corps and EPA could justifiably designate entire tributary systems and associated wetlands as performing significant functions for the broader navigable water aquatic system.
- **Recognize that** subsurface flows **may** create the **required nexus** in some instances. Though the CWA does not regulate groundwater per se, a number of courts have recognized that discharges to wetlands and other waters are subject to regulation where there is a close connection between wetlands and navigable waters via tributary underground flows. See Appendix B.
- **Recognize that wetlands lacking a hydrologic connection may in some instances be jurisdictional.** Justice Kennedy correctly noted that one of the principal values of wetlands is the fact that they keep pollutants like sediment and nutrients out of navigable waters. Thus, guidance and implementation should reflect these functions as part of a significant nexus determination.

Recommendation No 11: In determining “significance” the agencies should:

- **Consider any real “threat” to navigable waters to be “significant”.** The Corps and EPA should provide that any chemical, physical, or biological connection between a wetland and a navigable body of water that **threatens individually or cumulatively** the body of water chemically, physically, or biologically should be considered a “significant” nexus for Clean Water Act jurisdiction. More specific factors relevant to determination of “significant” may include (note, these are simply examples): impact on a rare or endangered species of plants or animals in navigable waters, violation of federal, state, or local pollution standards, violation of flooding or erosion hazards standards, or impact on water levels in waters used for navigation.

- **Consider the future, cumulative potential for pollution, flooding or other threats to navigable waters and not simply existing threats.** The Corps and EPA should recognize in its guidance and field implementation procedures that the decision whether a “significant” nexus exists is to be determined based upon not simply whether there are existing pollution or other threats to waters but potential future threats including reasonably assumed future development. It is the potential for pollution, flooding or other impacts that should count in deciding whether specific waters are subject to Clean Water Act jurisdiction. See Appendix A. Floodplain managers have, in many communities, projected future watershed development in calculating flood flows and have not allowed increases in the storm water or flood hydrograph for the one percent annual flood and storm. These and similar studies could help evaluate the “significance” of individual wetlands and other waters.
- **Consider geographical context.** The Corps and EPA need to provide guidance concerning the evaluation of geographical context in determining “significance”. Regulatory staff must not only determine the importance of individual waters but their importance as part of larger hydrologic and ecosystems. This is consistent with Kennedy’s statement that: “[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 waters more readily understood as ‘navigable.’

ISSUES ADDRESSED BY THIS PAPER

In Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers (SWANCC), 531 U.S. 159 (2002) the U.S. Supreme Court stated that that it was the “significant nexus” between wetlands and navigable waters in *Riverside Bayview Homes*, an earlier Supreme Court case, that informed the Court’s reading of the Clean Water Act as including wetlands.

From this modest beginning, the concept of “significant nexus” has emerged in the federal district and appellate cases since *SWANCC* and now in *Rapanos* as a primary test for determining whether tributary streams and wetlands are subject to federal Clean Water Act jurisdiction.

This paper will address the following issues: What was the holding of the court in the *Rapanos* decision? What, further has the Supreme Court, and, more specifically, Justice Kennedy had to say concerning the meaning of “significant nexus”? How have lower courts applied the significant nexus test since it was first used in *SWANCC*? What are major issues in developing guidance or regulations for determining whether a significant nexus exists in a particular circumstance or for a class of wetlands/waters? Conclusions and recommendations are set forth above at the beginning of the paper. The paper concludes with two appendix notes, the first dealing with cumulative impacts and the second with the treatment of “significant nexus” in federal district and appellate court cases since the *SWANCC* decision.

THE RAPANOS DECISION

On June 19 2006 the U.S. Supreme Court in *Rapanos v. United States*, vacated judgments against Keith Carabell and John Rapanos who wanted to fill or had already filled (Rapanos) wetlands they owned in Michigan. The Court remanded the case to the lower court for further review with regard to Clean Water Act jurisdiction. The judgments will presumably be reinstated if Clean Water Act jurisdiction is found after review.

The Court issued five separate opinions in *Rapanos*, none of which commanded a majority of Court members. The only conclusion a majority of the Court could agree on was that the lower, Sixth Circuit court decisions were not rigorous enough in deciding whether specific wetlands were subject to Clean Water Act jurisdiction. Justice Scalia wrote a “plurality” opinion in which Chief Justice Roberts and Justices Thomas and Alito joined. However, an equal number of justices (Justices Stevens, Souter, Ginsburg, Breyer) dissented and decisively rejected the rationale of the plurality opinion. Justice Kennedy broke the tie by voting with Scalia et al to vacate the judgments of the lower courts. Although he supported the judgment per se, he strongly disagreed with Scalia et. al and wrote his own opinion which is discussed below.

In the “plurality” (but not majority) opinion, Justice Scalia concluded that “the waters of the United States” includes only relatively permanent, standing or continuously flowing bodies of water “forming geographic features” that are described in ordinary parlance as

“streams, ...oceans, rivers, (and) lakes.” See Webster’s Second 2882. The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall”. Justice Scalia went further to limit the scope of the Clean Water Act by stating that “establishing wetlands such as those at the Rapanos and Carabell sites are covered by Act requires two findings: First, that the adjacent channel contains a “water of the United States,” (i.e., a relatively permanent body of water connected to traditional interstate navigable waters); and second, that the wetland has a continuous surface connection with that water, making it difficult to determine where the “water” ends and the “wetland” begins.”

Justice Kennedy joined Scalia and the rest of the “plurality” in overturning the “judgments” of Rapanos and Carabell but he broadly disagreed with the plurality in his separate opinion. Justice Kennedy broadly concluded that the plurality opinion is “inconsistent with the Act’s text, structure and purpose.” As will be discussed below, he disagreed with the plurality on the test for inclusion of wetlands and other waters as “waters of the U.S.” and endorsed a “significant nexus test”. On the other hand, Justice Kennedy also declined to join the dissenting opinion written by Justice Stevens because he felt it went too far in the other direction and did not give enough importance to the word “navigable” in the statutory term “navigable waters.”

Justice Stevens in his dissent would have deferred to the Army Corps of Engineers in both Carabell and Rapanos and sustained the lower court decisions.

Based on how the Court has viewed prior fragmented decisions, Justice Kennedy’s concurring opinion will likely be viewed as stating at least one test for Clean Water Act jurisdiction. As the Court said in an earlier case, *Marks v United States*, 430 U.S. 188, 193 (1977), “When a fragmented Court decides a case and no single rationale explaining the result enjoys the assent of five Justices, ‘the holding of the Court may be viewed as that position taken by those Members who concurred in the judgments on the narrowest grounds... (citations omitted).” In *Rapanos*, Justice Kennedy’s concurrence, described below, apparently states the narrowest ground for the judgment to vacate the lower court judgments (inadequate showing of “significant nexus”) and should be considered at least a portion of the holding of the case. It is also worth pointing out Justice Stevens’ observation in his dissenting opinion:

I assume that Justice Kennedy's approach will be controlling in most cases because it treats more of the Nation's waters as within the Corps' jurisdiction, but in the unlikely event that the plurality's test is met but Justice Kennedy's is not, courts should also uphold the Corps' jurisdiction. In sum, in these and future cases the United States may elect to prove jurisdiction under either test.

To what extent lower courts will follow Justice Stevens’ advice remains to be seen. Several have already done so. See discussion below. The U.S. has also taken this position in at least 22 briefs. Chances for favorable rulings would be increased if EPA and the Corps would issue guidance adopting the view that tributaries and adjacent wetlands

should be considered jurisdictional if they meet either Justice Kennedy's or the plurality's test.

It is too early to definitively tell what will and will not be regulated because much will depend upon how the Corps and EPA interpret the decision, field implementation procedures, and further court interpretations of the decision. Nevertheless, some preliminary conclusions and recommendations are possible. A brief summary of what waters would be included and excluded by the various opinions in *Rapanos* includes the following:

Plurality opinion. The "plurality" opinion of Scalia et al would drastically limit the scope of Section 404 of the Clean Water Act, principally to navigable waters and wetlands continuously linked to navigable waters and some tributaries. Ephemeral streams would be nonjurisdictional although EPA could, presumably, continue to regulate point sources of pollution on such streams under Section 402 of the Clean Water Act and Scalia, in a footnote in the pluralist opinion, suggests that at least some "seasonal" streams may be jurisdictional. How "seasonal" streams differ from ephemeral streams is unclear. The pluralist opinion is not, however, the majority opinion of the Court. Kennedy strongly disagreed with the analysis and test of "waters of the U.S." contained in the plurality opinion and the plurality opinion has only 4 votes on the Court while the Stevens dissent with Kennedy's opinion marshals 5 votes.

Kennedy opinion. Kennedy would regulate almost all of the same waters and wetlands regulated by the Corps and EPA prior to *Rapanos*. Kennedy strongly disagreed with the plurality opinion concerning the test for determining whether specific waters are waters of the U.S. and set forth a "significant nexus" test. Using this test, almost all wetlands and waters regulated by the Corps would continue to be regulated. But, there would need to be a more specific determination of significant nexus either on a case-by-case basis or for classes of waters. This test should allow the Corps and EPA to regulate some hydrologically "isolated" waters if there were a showing of significant ecological nexus to navigable waters. On the other hand, some tributaries and ditches which are now regulated may not continue to be regulated without a more rigorous showing of significant nexus. As suggested above, the scope of CWA jurisdiction would be instructed by new guidance (and potential regulations) for determining significant nexus issued by the Corps and EPA.

Stevens dissent. The Stevens dissent would preserve the status quo and broadly defer to the Corps of Engineers in its interpretation of existing regulations in determining CWA jurisdiction. However, Stevens stated that where either the plurality or Kennedy would find CWA jurisdiction, so would the dissent.

PRIOR SUPREME COURT WETLAND DECISIONS

Rapanos was not the first U.S. Supreme Court decision dealing with wetlands and the Section 404 program. Prior to the *Rapanos* decision, the U.S. Supreme Court had issued two important decisions concerning the scope of the Clean Water Act as applied wetlands or related waters. In the first of these decisions, *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (S.Ct. 1985) the Court unanimously upheld the Corp's jurisdiction over wetlands adjacent to navigable-in-fact waterways. The Court deferred to the Corps construction of the Clean Water Act to include wetlands adjacent to navigable waters. The Court, however, reserved the question of the Corps' authority to regulate wetlands other than those adjacent to navigable waters.

In the 1985 to 2001 period, the *Riverside Bayview* decision was widely cited by federal district courts and courts of appeal in upholding broad Clean Water Act jurisdiction for virtually all waters including the use of waters by migratory waterfowl.

In the second wetland-related Supreme Court decision prior to *Rapanos*, a 5-4 divided Court in *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers* (SWANCC), 531 U.S. 159 (S. Ct. 2002) held that a series of ponds in northern Illinois were not subject to Clean Water Act jurisdiction solely based upon their use by migratory birds. The Court distinguished but did not overrule *Riverside Bayview*. As also noted above, the Court observed in this case that it was the "significant nexus" between wetlands and navigable waters in *Riverside Bayview Homes* that informed the Court's reading of the Clean Water Act as including wetlands. The Court held that such a nexus was lacking for the ponds addressed by *SWANCC*.

Rapanos was the third wetland-related Section 404 regulatory decision of the Supreme Court. In *Rapanos* the Court did not overrule either the *Riverside Bayview* or *SWANCC* decisions. The challenge for agencies and lower district courts is, therefore, to reconcile *Riverside Bayview*, *SWANCC* and *Rapanos*.

THE KENNEDY OPINION WHAT IS A "SIGNIFICANT NEXUS"?

Since Justice Kennedy's opinion states at least one of the applicable tests for Clean Water Act jurisdiction, his discussion of "significant nexus" is of considerable importance in determining whether specific wetlands or other waters are subject to Clean Water Act jurisdiction, particularly hydrologically isolated wetlands, small tributaries, ephemeral streams, and wetlands adjacent to small tributaries and ephemeral streams. What are the salient points of Justice Kennedy's significant nexus test? He states that the *Rapanos* and *Carabell* cases should be "remanded to the Court of Appeals for proper consideration of the nexus requirement." Beyond this, his views with regard to "significant nexus" include the following:

In attempting to harmonize the Court's earlier decisions in *Riverside Bayview* and *SWANCC* (a daunting task), Justice Kennedy relates significant nexus to broad Clean

Water Act goals and purposes including the restoration and maintenance of the “chemical, physical, and biological integrity of the Nation’s waters”. He did not limit nexus considerations to water pollution (see also discussion below). He writes:

T]he Corps’ jurisdiction over wetlands “depends on the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense. 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”....

Kennedy suggests that individual wetlands should be related to other wetlands and waters in applying the nexus test (i.e., “wetlands alone or in combination with similarly situated lands in the region”). However he would also require that the wetlands “significantly affect” other waters “more readily understood as navigable”. He also warns that connections must not be “speculative or insubstantial”. He writes:

[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 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.’

Kennedy applies the significant nexus test to tributaries, including impermanent streams, in addition to wetlands. He observes that “the Corps can reasonably interpret the Act to cover the paths of such impermanent streams.”

Kennedy endorses both categorical approaches to inclusion of waters based upon significant nexus and case-by-case determinations. He states that, “through regulations or adjudication, the Corps may choose to identify categories of tributaries that due to their volume (either annually or on average), their proximity to navigable waters or other relevant considerations are significant enough that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters.” Justice Kennedy also says that, “absent more specific regulations, 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...” However he goes on to note 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.” This suggests that the Corps has the authority to designate categories of wetlands and other waters, perhaps on a watershed basis, meeting the significant nexus test.

Kennedy specifically disagrees with the plurality’s exclusion of wetlands from Clean Water Act jurisdiction lacking a continuous surface connection to other jurisdictional waters. Kennedy concludes also that “As applied to wetlands adjacent to navigable-in-

fact waters, the Corps' conclusive standard for jurisdiction rests upon a reasonable inference of ecologic interconnection, and the assertion of jurisdiction for those wetlands is sustainable under the Act by showing adjacency alone."

Kennedy also concludes, in disagreement with the plurality, and that "the difficulty of defining the water's edge cannot be taken to establish that when a clear boundary is evident, wetlands beyond the boundary fall outside the Corps jurisdiction."

Kennedy concludes that *Riverside Bayview*, an earlier decision of the Court discussed above, did not "suggest that a flood-based origin (for moisture in a wetland) would not support jurisdiction; indeed, it presumed the opposite." He further observed that "Needless to say, a continuous connection is not necessary for moisture in wetlands to result from flooding-the connection might well exist only during floods."

Kennedy recognized that lack of a hydrologic connection might, in some instances, nevertheless subject wetlands and waters to Clean Water Act jurisdiction because such wetlands could then store floodwaters or pollutants:

In many cases, moreover, filling in wetlands separated from another water body by a berm can mean that flood water, impurities, or runoff that would have been stored or contained in wetlands will instead flow out to major waterways. With these concerns in mind, the Corps's definition of adjacency is a reasonable one, for 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.

Kennedy downplayed Constitutional problems with waters encompassed by this broad test, stating "in most cases regulation of wetlands that are adjacent to tributaries and possess a significant nexus with navigable waters will raise no serious constitutional or federalism difficulty."

On the other hand, Kennedy also suggested qualifications in applying a significant nexus test.

First, he warned that "the 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."

Second, he observed (as already noted above) that effects of waters subject to Clean Water Act jurisdiction upon navigable waters must not be speculative or insubstantial:

When... wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters.'

Third, he called for case by case determinations of significance nexus absent "adjacency" to navigable waters for wetlands:

“When the Corps seeks to regulate wetlands adjacent to navigable-in-fact waters, it may rely on adjacency to establish its jurisdiction. Absent more specific regulations, however, 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. Given the potential overbreadth of the Corps’ regulations, this showing is necessary to avoid unreasonable applications of the statute.”

Fourth, he suggested that adequate nexus might exist in the two cases reviewed by the Court but that neither the agency (Corps) or reviewing courts had adequately treated the issue:

“In both the consolidated cases before the Court the record contains evidence suggesting the possible existence of a significant nexus according to the principles outlined above. Thus the end result in these cases and many others to be considered by the Corps may be the same as that suggested by the dissent, namely, the Corps’ assertion of jurisdiction is valid. Given, however, that neither the agency nor the reviewing courts properly considered the issue, a remand is appropriate, in my view, for application of the controlling legal standard.”

Fifth, he rejected the “presence of a hydrologic connection” alone as being sufficient to establish significant nexus in all cases. He observed that “Absent some measure of the significance of the connection for downstream water quality, this standard is too uncertain.” With reference to the Rapanos cases, he called for “further evidence about the significance of tributaries to which the wetlands are connected.” He further observed:

“...(M)ere 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.”

Similarly, in referring to the Carabell case, Kennedy observed that the “record gives little indication of the quantity and regularity of flow in the adjacent tributaries—a consideration that may be important in assessing the nexus....”

Kennedy’s opinion leaves open a number of questions and requires, at least for now, a burdensome case-by-case determination of jurisdiction for wetlands and other waters except where adjacency to navigable waters is involved. But his opinion at least provided a rough blueprint for how the agencies, if properly motivated, could craft a rule that would designate large categories of wetlands and other waters as meeting the nexus requirement.

LOWER COURT DECISIONS PRIOR TO AND SINCE RAPANOS

Federal district courts and courts of appeals issued thirty-seven decisions concerning Clean Water Act jurisdiction in the 2001 to 2006 period following the issuance of the SWANCC decision and prior to *Rapanos*. With the exception of two Fifth Circuit decisions, the courts narrowly interpreted SWANCC and upheld Clean Water Act

jurisdiction. As will be discussed in Appendix B of this paper, the courts applied a “significance nexus” test in many of these decisions.

Since the *Rapanos* decision in June 2006, lower federal courts have issued five additional decisions dealing with CWA jurisdiction. One District court case from the Fifth Circuit did not apply the significant nexus test and did not find Clean Water Act jurisdiction. Two cases applied or said that Kennedy’s “significant nexus” test applied. And, two courts have held that federal Clean Water Act jurisdiction may be based upon either the plurality’s test or Kennedy’s significant nexus test. These five decisions are:

In United States v. Chevron Pipe Line Co., 437 F.Supp.2d 605 (N.D. Tex. 2006), the District Court for the Northern District of Texas held that there was no CWA jurisdiction for a dry bed stream subject to a 3,000 barrels of crude oil spill. The court indicated that the Kennedy test was so vague and subjective that it was forced to find guidance in precedents from other cases in the 5th Circuit. The court held that as a matter of law dry channels and creek beds are not subject to Clean Water Act jurisdiction.

In United States v. Gerke Excavating, Inc., the 7th Circuit Court of Appeals (7th, 2006) considered the application of the various tests for CWA jurisdiction set forth in *Rapanos* and concluded that

When a majority of the Supreme Court agrees only on the outcome of a case and not on the ground for that outcome, lower-court judges are to follow the narrowest ground to which a majority of the Justices would have assented if forced to choose. *Marks v. United States*, 430 U.S. 188, 193. In *Rapanos*, that is Justice Kennedy’s ground.

The court remanded the case to the district court observing that “Justice Kennedy’s proposed standard, which we conclude must govern the further stages of this litigation, requires fact-finding not yet undertaken by the district court.”

In No. Cal. River Watch v. City of Healdsburg, 457 F.3d 1023 (9th Cir. 2006) the 9th Circuit Court of Appeals applied the significant nexus test and found CWA jurisdiction based in part on both surface and ground water flow of pollutants from a constructed pond/wetland to a navigable river.

In U.S. v. Evans (M.D. Fla., 2006) 2006 WL 2221629 a district court in Florida held that CWA jurisdiction could be established under either Scalia’s or Kennedy’s test and held that the waters in question were subject to Clean Water Act jurisdiction.

In U.S. v. Johnson, 05-1444 (1st Cir. 10-31-2006) the 1st Circuit Court of Appeals remanded to the district court for more fact-finding in light of *Rapanos* a decision of the Circuit Court holding that cranberry farming was subject to Clean Water Act jurisdiction. The court considered at some length the case law pertaining to plurality decisions like *Rapanos* and concluded that the District court should examine the views of dissenting judges to determine “which propositions have the support of a majority.” The court

concluded that the federal government could establish Clean Water Act jurisdiction over a target site “if it can meet either the plurality’s or Justice Kennedy’s standard laid out in *Rapanos*.”

In *U.S. v. Kincaid Trust*, (E.D.Mich. 11-3-2006, Case Number 02k-10149) the District Court in Michigan concluded that the Corps of characterization of a beach area as a wetland was “substantially justified” for the purpose of determining attorney’s fees. The court applied a combination of Scalia’s and Kennedy’s tests for Clean Water Act jurisdiction.

In *Environmental Protection Inf. Ctr. V. Pacific Lumber*, (N.D. Cal. 1-9-2007) a District Court in California concluded in a Clean Water Act Section 402 case that Justice Kennedy’s concurrence was “controlling” in determining Clean Water Act jurisdiction. The Court held that plaintiffs had established a hydrologic connection based upon a map showing various categories of streams but that “(a) hydrologic connection without more will not comport with the *Rapanos* standard in this case.” The Court held that the plaintiffs would also need to show that streams shown on the map were “significant to the water quality of Bear Creek”.

GUIDANCE BY THE CORPS AND EPA

It is likely that the Army Corps of Engineers and EPA will in the near future provide field staff with a more detailed explanation of *Rapanos*, including an explanation of how the case is to be interpreted, and hopefully some preliminary guidance concerning a methodology for determining “significant nexus”.

Both concurring opinions and the dissent called for issuance of regulations. Chief Justice Roberts wrote in a concurring opinion to the plurality opinion: “Rather than refining its view of its authority in light of our decision in *SWANCC*, and providing guidance meriting deference under our generous standards, the Corps chose to adhere to its essentially boundless view of the scope of its power.” Justice Breyer, concurring with the dissent wrote: “I believe that today’s opinions, taken together, call for the Army Corps of Engineers to write new regulations, and speedily so.”

Absent Congressional action addressing the scope of Clean Water Act jurisdiction, the Army Corps of Engineers and EPA will be under considerable pressure to issue formal rules for determining whether a “significance nexus” exists in specific circumstances.

RELEVANT PRINCIPLES

What principles should the Corps and EPA consider in developing guidance or more formal rules? We suggest some important ones:

Virtually all waters may have a significant nexus to navigable waters under certain circumstances. The Corps and EPA need to recognize in their rules or regulations that virtually all wetlands/waters may, under certain circumstances (e.g., times of flooding)

have a significant hydrologic or ecologic connection to navigable waters. More specifically, virtually all waters may, under certain circumstances, carry toxics to navigable waters. Improper development can cause increased flooding of navigable waters. The “navigability” or “nonnavigability” of water makes no difference in terms of pollution nor does the seasonal versus permanent flow of water. Point and nonpoint pollutants do, in most instances, flow from headwaters to small rivers, streams, and lakes and then to navigable waters and streams (e.g., nutrient pollution in Chesapeake Bay, hypoxia in the Gulf of Mexico). Scientifically, it makes little difference whether this flow is underground (pipe, culvert, stormwater system), through sheet flow, through defined natural or artificial channels, or through ground water although flow through ground water may remove pollutants or flow may be so slow that pollutants never reach navigable waters.

In light of this, the Corps and EPA should not attempt to define a bright-line cutoff between regulated and unregulated waters. With any bright-line cutoff, polluters will move upstream of this cutoff. The reasoning of the 6th Circuit court in *United States v. Ashland Oil & Transp. Co.*, 504 F.2d 1317 (6th Cir. 1974) continues to make sense. The court in this case held that a non-navigable creek which discharged into a non-navigable river that discharged into a navigable river was within the jurisdiction of the CWA. The court stated, in part (Id at 1326):

It would...make a mockery of...(Congressional) powers if its authority to control pollution was limited to the bed of the navigable stream itself. The tributaries which join to form the river could then be used as open sewers as far as federal regulation was concerned. The navigable part of the river could become a mere conduit for upstream waste.

Such a situation would have vast impacts on interstate commerce. States and cities and industries situated upstream on the nonnavigable tributaries of our great rivers could freely use them for dumping raw sewage and noxious industrial waters upon their downstream neighboring states. There would be great pressure on the upstream states to allow such usage. Reduced industrial costs and lower taxes thus resulting would tend to place industries, cities and states located on navigable rivers at a considerable competitive disadvantage in interstate commerce. In such a situation industrial frontage on a creek which flowed ultimately into a navigable stream would become valuable as an access point to an effectively unrestricted sewer.

To avoid such a result, the Corps and EPA need to continue to exercise a measure of oversight for virtually all wetlands and waters. However the permitting procedures, data gathering requirements, assessment and analysis and other perhaps other requirements utilized for such oversight could be varied. See discussion below. This would, hopefully, satisfy the Supreme Court’s requirement that distinctions be made between wetlands/waters more directly and less directly related to navigable waters.

The Corps and EPA could do this by

- Presuming that virtually all navigable and nonnavigable waters may have a significant nexus under certain circumstances.
- Designating classes of wetlands and waters which, as classes, have a significant nexus such as wetlands adjacent to navigable waters and wetlands adjacent to nonnavigable waters with a significant nexus.
- Requiring “notices” for activities in areas not included in any overall class of wetlands and waters determined to have a significant nexus to navigable waters. The Corps now requires “notification” by landowners of certain “general permit” activities before they are undertaken. Based upon the notification, the Corps may require a full scale permit application if the proposed activity might have significant impact upon navigable wetlands or other waters. Otherwise, the landowner may proceed with the proposed activity without an individual permit. The Corps might apply a similar approach to activities in any headwater, tributary streams and wetlands which are not determined to have a significant nexus as a class of waters.

Detailed scientific studies will be time-consuming and expensive. The Corps and EPA must reflect cost and other practical considerations in determining whether a “significant nexus” exists on a case-by-case basis or for classes of wetlands/waters. It will be impossible for the Corps and EPA to carry out a detailed hydrologic and/or ecological analyses for the tens of thousands of Section 404 jurisdictional determinations each year. Cost, available staff, and expertise requirements must be reflected.

We suggest that the Corps and EPA in their guidance or regulations reflect cost and other practical considerations in their guidance or rule-making by:

- Designating classes of wetlands and waters which, like wetlands adjacent to navigable waters, bear such a strong relationship to navigable waters that they justify a presumption of “significant nexus”. Kennedy notes 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.” Kennedy also observes that “the Corps can reasonably interpret the Act to cover the paths of such impermanent streams.” This suggests that the Corps has the authority to designate categories of tributaries and wetlands, perhaps on a watershed basis, meeting the significant nexus test.
- Shifting a least a portion of the information gathering burden with regard to determination of significant nexus to permit applicants. Given the limitations upon staff and budgets, that the Corps of Engineers and EPA should require that project applicants conduct much of the needed data gathering such as hydrologic studies. This is particularly true for larger projects.
- Encouraging use of both quantitative data and qualitative judgment. The Corps and EPA should encourage the use of quantitative data where such data is reasonably available. But, the agencies also need to allow the use of field observations and professional judgment to document “nexus” and “significance”.

- Use future conditions hydrological studies, if available, or otherwise require that there be no change in the hydrograph due to the proposed development from any flood or storm up to and including storms and floods which have a one percent annual chance of occurrence.

Landscape/watershed context needs to be considered. One wetland may play a small role in protecting the water quality of a downstream navigable water or the flooding of the navigable water. But thousands of wetlands in a watershed may substantially contribute to water quality and flood retention. This was recognized in the Kennedy opinion when he referred to significant nexus of wetlands and other waters “either alone or in combination with similarly situated lands in the region.”

Pollution is, of course, not the only issue in “restoring and maintaining” the physical, chemical, and biological integrity of waters” Many types of wildlife such as fish (e.g., salmon), amphibians (e.g. salamanders), mammals (e.g. moose and deer), and insects (e.g. dragon flies, mosquitoes), as well as migratory birds utilize and link complexes of wetlands and other waters even where there may be a limited or no hydrologic connections. The cumulative impacts of pollution, fills, drainage and other activities destroy ducks and other water fowl, song birds, frogs, and other wildlife.

We suggest that the Corps and EPA in their guidance or regulations reflect landscape context by:

- Requiring that regulatory staff consider landscape/watershed hydrology and ecology (to the extent this is practical) in evaluating significant nexus for individual permits.
- Requiring that regulatory staff consider watershed plans, pollution control plans, special area management plans and other plans in establishing landscape context and in making significant nexus determinations.

Cumulative impacts need to be considered. The Corps and EPA should recognize in their guidance and/or regulations that, in deciding whether a “significant” nexus exists, existing and potential future, cumulative threats to waters should be considered. It is the potential for pollution or other impacts that must count. See Appendix A. The Corps should encourage quantitative assessments and documentation in its guidance but also recognize that field surveys and professional judgment may be used to help identify future threats.

We suggest that the Corps and EPA in their guidance or regulations address cumulative impacts by:

- Requiring that regulatory staffs assume that if one activity is permitted, similar activities may be permitted and the cumulative impact of all be considered. A similar standard has been applied in state and thousands of local government floodway regulations for several decades.

- Requiring that regulatory staff reflect land use and watershed plans projecting “build out” and other growth if such plans exist.

Guidance is needed for determining both “nexus” and “significance”. The Corps and EPA will need to develop guidance concerning determination of both “nexus” and “significance”. “Nexus” refers to connection. “Significance” refers to the magnitude of the importance of the connection to CWA goals (e.g., impact on navigation, impact on wildlife, impact on recreational uses, etc.). See In *Environmental Protection Inf. Ctr. V. Pacific Lumber*, (N.D. Cal. 1-9-2007).

We suggest that the Corps and EPA in their guidance or regulations address nexus and significance by

- Recognizing that a broad range of types of hydrologic and ecological connections may establish a “nexus”;
- Encouraging use of quantitative data but also allowing professional judgment for determining both nexus and significance;
- Reflecting landscape context in determining both nexus and significance;
- Reflecting cumulative impact in determining both nexus and significance.
- Considering any “threat” to navigable waters to be “significant”. The Corps should provide that any chemical, physical, or biological connection between a wetland/water body and a navigable body of water that threatens individually or cumulatively the body of water chemically, physically, or biologically should be considered “significant” for Clean Water Act jurisdiction. More specific factors relevant to determination of “significant” may include (note, these are simply examples): impact on a rare or endangered species of plants or animals in navigable waters; violation of federal, state, or local pollution standards; violation of flooding or erosion hazards standards; or impact on water levels in waters used for navigation.

More detailed recommendations pertaining to determination of both “nexus” and “significance” are set forth above in the conclusions and recommendations portion of this paper.

APPENDIX A: LANDSCAPE CONTEXT, CUMULATIVE IMPACTS AND “SIGNIFICANT NEXUS”

Kennedy in his *Rapanos* opinion suggests that a regulatory agency in assessing significant nexus should consider the relationship of a water body to navigable waters “either alone or in combination with similarly situated lands in the region”. Kennedy, therefore, opens the door for introduction of fact-finding and analyses concerning importance of wetlands and other waters in watershed contexts. His opinion also opens the door to analysis of cumulative impacts of existing and potential activities on such waters. This is consistent with existing Corps regulations that: “(1) The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case.” See, 33 CFR Part 320.

It will be critically important for the Corps of Engineers and EPA to consider both hydrologic and ecological context and cumulative impacts in determining whether a significant nexus exists in specific circumstances or in defining categories of wetlands and/or tributaries with a significant nexus. The Wisconsin Supreme Court in *Hixon v. Public Servs. Comm’n*, 146 N.W.2d 577 (Wis. 1966) provided a lucid explanation why the broader hydrologic context and cumulative impacts must be considered in evaluating proposed fills into waters. Here the Wisconsin Supreme Court affirmed the denial of a permit under state law to maintain a breakwater on the grounds that the breakwater was an unnecessary obstruction to navigation, did not allow for free flow of water, and was detrimental to the public interest. The court observed:

There are over 9,000 navigable lakes in Wisconsin covering an area of over 54,000 square miles. A little fill here and there may seem to be nothing to become excited about. But one fill, though comparatively inconsequential, may lead to another, and another, and before long a great body of water may be eaten away until it may no longer exist. Our navigable waters are a precious natural heritage; once gone, they disappear forever.

Id. at 589.

A number of lower courts have endorsed consideration of cumulative impacts in Section 404 wetland cases. For example, in *United States of America v. Gerke Excavating, Inc.* No. 04-3941 (7th Cir. 2005) the court sustained CWA jurisdiction for a ditch that flowed into a nonnavigable water which flowed into another nonnavigable water and finally into a navigable water. The court noted in this case (now on appeal) the interrelationships between the different water bodies and their impact on navigability:

Obviously, filling in a 5.8 acre tract (not all of it wetlands—we do not know how much of it is) is not going to have measurable effect on the depth of the Wisconsin or Mississippi Rivers. But that cannot be the test. The sum of many

small interferences with commerce can be large, and so to protect commerce Congress must be able to regulate an entire class of acts if the class affects commerce, even if no individual act has a perceptible effect.

See also *United States v. Buday*, 138 F.Supp. 2d 1282, 1293 (D. Mont, 2001) in which the district court held in a criminal enforcement action that that wetlands surrounding a small, intermittent, non-navigable tributary some 235 miles upstream from the navigable in fact Clark Fork River were jurisdictional under the CWA. It examined the potential cumulative impacts of polluting activities on interstate commerce:

Buday does not argue, and Solid Waste Agency does not suggest, that federal legislation cannot regulate the quality of waters that flow across state lines and that are substantially involved in interstate commerce. In Wickard v. Filburn, 317 U.S. 111... (1942), a farmer who grew his own wheat for his own consumption and seed was held to be subject to federal regulation because the wheat he did not introduce into interstate commerce had a substantial effect on interstate commerce.[fn17] On the model of Wickard, "although [Fred Burr Creek's] own contribution to the [waters of the United States] may have been trivial by itself, that [is] not `enough to remove [it] from the scope of federal regulation where, as here, [its] contribution, taken together with that of many others similarly situated, is far from trivial.'" Lopez, 514 U.S. at 556, 115 S.Ct. 1624 (quoting Wickard, 317 U.S. at 127-28). Any activity that diminishes, increases, or pollutes the waters of Fred Burr Creek, though the water or the pollutant may be trivial in itself, is far from trivial when it is considered in connection with all the other, similarly slight and remote streams and creeks that contribute to the main waterways of the nation. Furthermore, I would not characterize what happened here as trivial in any sense of the law.

Not surprisingly, courts have been particularly willing to find CWA jurisdiction where toxic pollutants are involved and the possibility that these pollutants will enter navigable waters. See, for example, *Quivera Mining Co. v. United States Envtl. Prot. Agency*, 765 F.2d 126 (10 Cir. 1985), cert. denied, 474 U.S. 1055 (1986) (toxic mining wastes).

A court has held that in determining Clean Water Act jurisdiction in one case that it is irrelevant whether pollutants have, as yet, actually reached waters. See *North Carolina Shellfish Growers Association and North Carolina Coastal Federation v. Holly Ridge Associates*, 278 F.Supp.2d 654 (E.D.N.C. 2003). It is the potential for pollution that counts.

Many of the same sorts of considerations relevant to determination of cumulative environmental impact pursuant to NEPA are also (arguably) relevant to determination of a "significant nexus" in a permitting context. The Corps must prepare an Environmental Impact Statement on a proposed Section 404 permit if a proposed project will have significant individual or cumulative impacts upon the environment. See *Fritiofson v. Alexander*, 772 F.2d 1225 (5th Cir. 1985). In this case the 5th Circuit held that the Corps needed to prepare a cumulative impacts analysis for a proposed wetland alteration on

Galveston Island. The Fifth Circuit identified some of the factors relevant to such a review:

(A) meaningful cumulative-effects study must identify: (1) the area in which effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate....

This is not to suggest that an environmental impact statement should be prepared for each proposed wetland permit issued by the Corps of Engineers or for each determination of “significant nexus”. But, the experience gained with preparation of such statements including the guidelines for analysis of cumulative impact may be usefully applied to determination of significant nexus as well.

APPENDIX B: “SIGNIFICANT NEXUS” IN THE LOWER COURTS

Why Courts Have Focused on Significant Nexus

In SWANCC the Supreme Court stated that “It was the significant nexus between the wetlands and ‘navigable waters’ that informed our reading of the CWA (Clean Water Act) in *Riverside Bayview Homes*.” See *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (S.Ct., 2001). Many federal district and court of appeal decisions dealing with Clean Water Act jurisdiction since SWANCC have focused upon “significant nexus” as the test for CWA jurisdiction. The district court in *North Carolina Shellfish Growers Association and North Carolina Coastal Federation v. Holly Ridge Associates*, 278 F. Supp.2d 654 (E.D.N.C. 2003) characterized determining whether there is “significant nexus” to navigable waters as the critical factor in determining the scope of CWA jurisdiction for nonnavigable waters. The court stated:

Rather than broadly restricting the Corps authority to regulate nonnavigable waters under the CWA, SWANCC clarified that the critical factor for the exercise of jurisdiction under the CWA is a “significant nexus” between the body of water at issue and a traditional navigable water.”

Justice Kennedy was, therefore, not alone in his opinion in *Rapanos* in focusing on “significant nexus” as a test for Clean Water Act jurisdiction.

Why have the courts focused on significant nexus?

Determining whether a wetland or other water has a significant nexus with navigable water provides a court with scientific/analytical framework for deciding whether regulation of particular waters is necessary to achieve CWA goals. The terms “navigability” and “nonnavigability” may be used to divide waters into certain legal categories but navigability has little to do with the physical and biological connections between various types of waters and the achievement of Clean Water Act goals.

When faced with actual factual situations (see discussion of cases below), courts of original jurisdiction or on appeal in post-SWANCC contexts have with only two exceptions (*Rice v. Harken*, *United States v. Chevron Pipe Line Company*) found a connection between waters or wetlands and navigable waters sufficient for CWA jurisdiction. This connection has been variously characterized in the cases, often as a “significant nexus”. A number of cases also cite “separately bound up with” language from *Riverside Bayview* which is used somewhat interchangeably with “significant nexus” in several cases.

Focusing on the physical interrelationships between waters is sound from a scientific perspective. Pollutants from an upstream sources will ultimately reach downstream waters through continuous surface water flow in natural or artificial channels, temporary flows (floods) in natural or artificial channels, sheet flows, and ground water. It may take

some time and impacts may be reduced through evaporation, dilution and biodegradation. But, a portion of the precipitation and whatever pollutants the precipitation contains will typically reach navigable ocean waters, estuaries, rivers and streams, and lakes.

“Significant Nexus” in the Lower Courts

In post *SWANCC* contexts lower courts have found in favor of CWA jurisdiction where some combination of hydrologic and/or ecological connection, and some pollution or other threat to a navigable water also existed. This is true for both cases pre-*Rapanos* and post-*Rapanos*.

In his opinion in *Rapanos* Kennedy did not overrule earlier cases citing a significant nexus test nor did he suggest that the criteria applied by the courts in determining “significant nexus” were incorrect. He did suggest that more specific fact-finding was needed with regard to “significant nexus” in the *Rapanos* and *Carabell* cases and set forth some general guidance as to what would constitute a “significant nexus”. See discussion above.

Kennedy does suggest that there should be some outer limit to federal regulatory jurisdiction. More specifically, he disagrees with Stevens dissent in *Rapanos* because it “would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote and insubstantial, that eventually may fallow into navigable waters. The deference owed to the Corps’ interpretation of the statute does not extend so far.” Nevertheless Kennedy would presumably support decisions like the Fourth Circuit decision in *U.S. v. Deaton*, 332 F.3d 698 (4th Cir. 2003) because the court made a specific, evidence-supported finding of significant nexus. In this case the court specifically reasoned:

In Riverside Bayview the Supreme Court concluded that the Corps regulation extending jurisdiction to adjacent wetlands was a reasonable interpretation (of the Clean Water Act) in part because of what SWANCC described as "the significant nexus between the wetlands and `navigable waters.'" SWANCC, 531 U.S. at 167. There is also a nexus between a navigable waterway and its nonnavigable tributaries. The Corps argues, with supporting evidence, that discharges into nonnavigable tributaries and adjacent wetlands have a substantial effect on water quality in navigable waters. The Deatons do not suggest that this effect is overstated. This nexus, in light of the "breadth of congressional concern for protection of water quality and aquatic ecosystems," Riverside Bayview, 474 U.S. at 133, is sufficient to allow the Corps to determine reasonably that its jurisdiction over the whole tributary system of any navigable waterway is warranted. The regulation, as the Corps reads it, reflects a reasonable interpretation of the Clean Water Act. The Act thus reaches to the roadside ditch and its adjacent wetlands.

No lower court since *SWANCC* has defined how the terms “significant” and “nexus” should be used. Instead courts have focused upon types of connections between various water bodies and navigable waters and whether pollution or other activities in such waters pose a threat to navigable waters. Connections establish a “nexus”. Physical, chemical or biological threats to navigable waters establish “significance”.

Types of Connections

From a pollution control perspective, the type of hydrologic connection between one water body and another is not so important. Pollution damages lakes, rivers, streams and estuaries when it reaches a water body through artificial ditches, pipes, canals, natural channels, sheet flow, or subsurface flows. It damages such water bodies whether it reaches them quickly or more slowly.

Courts in post *SWANCC* contexts have recognized many types of connections between contested waters and navigable waters combined with a threat to navigable waters as establishing a “significant nexus”.

Connection Through Surface Water in Natural or Artificial Channels

Courts have most often found Clean Water Act jurisdiction where there is a hydrologic, surface water connection in a defined natural or artificial channel between specific waters/wetlands and navigable waters. See, e.g., the *Deaton* decision above. Other cases include:

In *United States v. Hummel*, U.S. Dist. No. 00 C 5284 (N.D. Ill. 2003) the court observed that *SWANCC* requires demonstration of a “significant nexus” between a body of water at issue and a navigable water, and that a “significant nexus” can be demonstrated where a body of water is “linked through other connections two or three times removed from the navigable water.” The court held that there was a significant nexus between the wetlands and the navigable Des Plaines River despite there being “two steps removed from actually navigable water....”

In *U.S. v. Lamplight Equestrian Center*, Civ. No. 00-C-6486, 2002 U.S. Dist. LEXIS 3694 (N.D. Ill. 2002) the District Court of Illinois upheld CWA jurisdiction for a wetland adjacent to a tributary to navigable waters. The wetland drained through a man-made ditch, then through a 50 foot “delta” or “meandering drainage swale”, then into Brewster Creek, a nonnavigable stream, and then into the Fox River, a traditionally navigable water.

In *USA v. Adam Bros Farming, et al*, Civ. No.00-7409 (C.D. Cal. 2002) the District Court held, in part, that since non-navigable intermittent tributaries of navigable waters are still “waters of the United States” post *SWANCC*, then, by extension, CWA jurisdiction “extends to wetlands adjacent to any tributary, whether or not it is navigable, which is hydrologically connected under certain conditions with a traditionally navigable water.”

However, in *FD&P Enterprises v. United States Army Corps of Engineers*, 239 F.Supp. 2d 509 (D. N.J. 2003) the court denied the plaintiff's motion for summary judgment because there remained a material fact as to whether there was a "substantial nexus" between the FD&P wetlands and the Hackensack River. Government had argued that the wetlands were jurisdictional as wetlands adjacent to tributaries of traditionally navigable waters. The court indicated that more than a hydrologic connection would need to be shown to establish an adequate nexus. On the other hand, the court recognized that broad considerations were relevant to establishment of "significant nexus". The court stated: "The Corps has submitted sufficient evidence such that a reasonable jury could find that the filling of the wetlands will have a substantial injurious impact upon the chemical, physical, and/or biological integrity of the Hackensack River. Under these circumstances, there would be a substantial nexus between the wetlands and the river, and the Corps would have jurisdiction under the CWA." Id at 517. This case was ultimately dismissed after a permit was issued.

Connection Through Diffused Surface Water or Sheet Flow

A number of courts have found a sufficient connection through diffused surface water or sheet flows (without a channel). For example, the court in *U.S. v. Lamplight Equestrian Center, Inc.* No. 00-6486, 2002 WL 370652 (N.D. Ill. 2002) held that there was a "significant nexus" and that CWA jurisdiction applied to wetland which drained through a main-made drainage ditch, then through a 50 foot delta or meandering drainage swale, then into a nonnavigable stream, and finally into a navigable water. In *United States v. Jones*, 267 F. Supp. 2d 1349 (M.D. Ga., 2003) the district court held that Oil Pollution Act applied to discharge of oil onto the ground and then into a storm drain that flowed into a drainage ditch that flowed into a creek that flowed into the navigable Ocmulgee River.

In *North Carolina Shellfish Growers Association and North Carolina Coastal Federation v. Holly Ridge Associates*, 278 F.Supp.2d 654 (E.D.N.C. 2003) the court held (Id. at 671 (citations omitted) that

An absence of a channelized flow between the two bodies of water does not necessarily prevent Cypress Branch from being considered a tributary of Batts Mill Creek. ... Numerous courts have also ... recognized that intermittent streams and tributaries are capable of carrying pollutants downstream during rain events and are therefore subject to regulation under the CWA. ... This position is consistent with the Supreme Court's holding in SWANCC which stressed that the CWA was enacted under Congress' "traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made." Where a hydrological connection exists between a body of water and a traditional navigable water such that pollutants discharged into the body can move downstream and

degrade the quality of the navigable water, the “significant nexus” required for CWA jurisdiction under SWANCC is clearly present.

Addressing the question more specifically of whether channelized flow is required for a tributary to be jurisdictional, the court relied on the Fourth Circuit decision in *United States v. Deaton*, supra, in concluding (Id. at 671-672, citations omitted) that it is not:

As the Fourth Circuit recently explained in United States v. Deaton, “[t]he power over navigable waters also carries with it the authority to regulate nonnavigable waters when that regulation is necessary to achieve Congressional goals in protecting navigable waters.” This is true whether the hydrological connection occurs in a channelized flow or a network of flat bottoms and braids, continuously or intermittently.

However, in another case, *City of Shoreacres v. Waterworth*, 04-20527 (5th Cir. 2005) the 5th Circuit Court of Appeals refused to overturn the Corp’s factual determination that certain wetlands connected by sheet flow to navigable waters were not subject to Clean Water Act jurisdiction. The court did not decide whether the Corp’s fact-finding was correct or whether sheet flow would have been a sufficient connection in itself for Clean Water Act jurisdiction because the Corps provided “ample mitigation to compensate for the loss of all aquatic areas on the site that will be filled in or otherwise degraded by the project”. These included the wetland areas connected by sheet flow.

Connection Through Intermittent Flow

A number of courts have found sufficient connection when the waters flow intermittently. For example, in *U.S. v. Lamplight Equestrian Center*, No. 00-C-6486, 200WL 360652 (N.D. Ill. 2002) the court held that “Water need not flow in an unbroken line at all times to constitute a sufficient connection to navigable water or its tributaries....” In *Headwaters v. Talent Irrigation District*, 243 F.3d. 526 (9th Cir. 2001) the court held that tributaries that flow intermittently are “waters of the U.S.” The court in *United States v. Buday*, 138 F.Supp. 1282, 1291-92 (D. Mont. 2001) held that (“(W)ater quality of tributaries...distant though the tributaries may be from navigable streams, is vital to the quality of navigable waters” As long as a tributary would flow into a navigable body of water during a significant rainfall the tributary is capable of spreading environmental damage and is a water of the U.S.”

Connection Through Subsurface Flows

Several courts have also found an adequate connection through subsurface flows although the Clean Water Act does not regulate ground water per se. See *Northern California River Watch v. City of Healdsburg*, No. 301-04686 WHA (N.D. Ca., 2004)

(Underground flows were potentially “tributaries” and as such provided an adequate connection.); *San Francisco Baykeeper et al v. Cargill et al*, No. 96-2161 (N.D. Cal. 2003) (“Saturated soils” between ponds and ocean noted.); *Idaho Rural Council v. Bosma*, 143 F.Supp.2d 1169 (D. Idaho 2001) (Discharges of dairy wastes “through underground hydrologic connections between natural ponds and manmade lagoons on the dairy’s property” were jurisdictional.) But see *Rice v. Harken Exploration Co.*, 250 F.3d 264 (5th Cir., 2001), reh’g (en banc) denied, 263 F.3d 167 (2001) in which the 5th Circuit held in an Oil Pollution Act case that discharges onto dry land which seeped through the ground into groundwater which, in turn, contaminated several intermittent streams was not jurisdictional under the Oil Pollution Act where there was little evidence in the record concerning how often the creek runs, how much water flows in it, and whether the creek ever flowed into a navigable body of water.

Connection through Ditches, Drains, Canals, Pipes

Courts in a many cases have recognized the connection provided by artificial drains and other man-made structures as sufficient for CWA jurisdiction. In most instances the waters were found to be jurisdictional as “tributaries”. See, e.g., *California Sportfishing Protection Alliance v. Diablo Grande*, 209 F.Supp. 2d 1059 (E.D. Ca. 2002) (Connection through an underground pipe enough.); *Headwaters, Inc. v. Talent Irrigation District*, 243 F.3d 526 (9th Cir. 2001) (Connection through irrigation canals.); *United States v. Jones*, 267 F. Supp. 2d 1349 (M.D. Ga., 2003) (Connection through storm drain that flowed into a drainage ditch that flowed into a creek that flowed into the navigable Ocmulgee River.)

Connection by Pumping Waters

Several courts have recognized that a valid connection may exist through pumping of waters. See *U.S.A v. Adam Bros Farming, et al*. Civ. No. 00-7409 (C.D. Cal., 2002. in which the court upheld as subject to CWA jurisdiction connection of waters which flow through a “depression” and then through a system of channels or “by pumping” or both to the Santa Maria River and the Pacific Ocean. See also *United States v. The Portland Meadows, Inc.*, No. 00-507, 2002 U.S. Dist. LEXIS 19132 (D. Or. Sept. 9, 2002) in which the court held that waters flowing through a ditch and then pumped into the Columbia Slough had a sufficient connection.

Ecological Connections

Some courts have also endorsed ecological connections. For example, in *Northern California River Watch v. City of Healdsburg*, No. 3 01-04686 WHA (N.D. Ca., 2004) the court held that the factors that should be examined in determining jurisdiction are “proximity to the river, the beneficial role of wetlands, the intertwined ecology and riparian habitat.”

The Supreme Court in *U.S. v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (S. Ct. 1985) recognized the importance of ecological connections:

We cannot say that the Corps' conclusion that adjacent wetlands are inseparably bound up with the "waters" of the United States—based as it is on the Corps' and EPA's technical expertise—is unreasonable. In view of the breadth of federal regulatory authority contemplated by the Act itself and the inherent difficulties in defining precise bounds to regulable waters, the Corps' ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act.

This holds true even for wetlands that are not the result of flooding or permeation by water having its source in adjacent bodies of open water. The Corps has concluded that wetlands may affect the water quality of adjacent lakes, rivers, and streams even when the waters of those bodies do not actually inundate the wetlands. For example, wetlands that are not flooded by adjacent waters may still tend to drain into those waters. In such circumstances, the Corps has concluded that wetlands may serve to filter and purify water draining into adjacent bodies of water....and to slow the flow of surface runoff into lakes, rivers, and streams and thus prevent flood and erosion...In addition adjacent wetlands may "serve significant biological functions, including food chain productions, general habitat, and nesting, rearing and resting sites for aquatic species."

Despite this recognition of the importance of ecological context, it is unclear how far the Supreme Court will go in supporting the use of ecological considerations alone in establishing significant nexus. In *Riverside Bayview*, the Supreme Court concluded in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (S.Ct. 2001) that the use of waters by migratory birds alone (the "migratory bird rule) was not sufficient for Clean Water Act jurisdiction.

Connection Due To Flood or Stormwater Considerations

Flood or stormwater connections may also constitute a reasonable nexus. Kennedy mentions "flood control" and "runoff storage" in the context of the CWA jurisdiction:

. [T]he rationale for the Clean Water Act wetlands regulation is, as the Corps has recognized, that wetlands can perform critical functions related to the integrity of other waters—functions such as pollutant trapping, flood control, and runoff storage. Accordingly, wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," 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. (Citations omitted, emphasis added)

Agencies can use flood and stormwater data (e.g., FEMA flood maps, local stormwater studies) and stormwater hydrology and hydraulics techniques to determine numerical relationship of particular wetlands and waters to downstream flooding. The impacts of various levels of watershed development may be quantitatively projected.

Factors Relevant to Determination of “Significance”

A broad range of factors may be relevant to the “significance” of various types of connections in terms of restoring and maintaining the “chemical, physical, and biological integrity” of the nation’s waters. Justice Kennedy in his *Rapanos* opinion referred to “significant nexus” in broad Clean Water Act goal terms:

T]he Corps’ jurisdiction over wetlands depends on the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense. 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...”

Several lower courts have related Clean Water Act jurisdiction to broad Clean Water Act goals as well. As already noted above, the court in *Northern California River Watch v. City of Healdsburg*, No. 3 01-04686 WHA (N.D. Ca., 2004) held that the factors that should be examined in determining jurisdiction are “proximity to the river, the beneficial role of wetlands, the intertwined ecology and riparian habitat.” In *FD&P Enterprises v. U.S. Army Corps of Engineers*, 239 F.Supp.2d 509 (D.N.J. 2003) the court suggested that a significant nexus exists if a reasonable jury could find that the “filling of the wetlands will have substantial injurious impact upon the chemical, physical, and/or biological integrity of the “navigable water.” Id. at 517.

The courts in many of the post-SWANCC cases have focused on potential pollution. In *North Carolina Shellfish Growers Association and North Carolina Coastal Federation v. Holly Ridge Associates*, 278 F.Supp.2d 654 (E.D.N.C. 2003) the court held that “Where a hydrological connection exists between a body of water and a traditional navigable waters such that pollutants discharged into the body can move downstream and degrade the quality of the navigable water, the “significant nexus” required for CWA jurisdiction under SWANCC is clearly present.” In *United States v. Deaton*, 332 F.3d 698 (4th Circuit 2003) the court reasoned that “discharges into nonnavigable tributaries and adjacent wetlands have a substantial effect on water quality in navigable waters” creating “a nexus between a navigable waterway and its nonnavigable tributaries.” In *U.S. v. Hubenka*, 438 F.3d 1026 (10th Cir. 2006) the court concluded that “Given the “breadth of congressional concern for protection of water quality” evidenced in the text of the Clean Water Act and its legislative history, *Riverside*, 474 U.S. at 133..., this court concludes that the potential for pollutants to migrate from a tributary to navigable waters downstream constitutes a “significant nexus” between those waters.”

In one 7th Circuit decision, the court noted the relevancy of impact on navigation. In this case, *United States of America v. Gerke Excavating, Inc.* No. 04-3941 (7th Cir. 2005) the court sustained CWA jurisdiction for a ditch that flowed into a nonnavigable water which flowed into another nonnavigable water and finally into a navigable water. This case is presently on remand for more detailed fact-finding pertaining to the existence or nonexistence of a “significant nexus”.

Significance is to be determined based, in part, upon landscape context as discussed above. As noted above but worth repeating, Kennedy states in his opinion that

“(W)etlands possess the requisite nexus, and thus come within the statutory phrase “navigable waters,” 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.

The potential impact of existing and reasonably anticipated future projects and activities upon navigable waters is also relevant to a finding of “significance”. See Appendix A. Not surprisingly, courts have been particularly willing to find CWA jurisdiction in both pre and post SWANCC cases where toxic pollutants are involved and the possibility these pollutants will enter navigable waters. See, for example, *Quivera Mining Co. v. United States Env'tl. Prot. Agency*, 765 F.2d 126 (10 Cir. 1985), cert. denied, 474 U.S. 1055 (1986) (toxic mining wastes); *Northern California River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006) (chlorides).

It is worth noting that in one post-SWANCC court of appeals decision broadly interpreting SWANCC and holding that specific waters were not subject to CWA jurisdiction, *Rice v. Harkin*, 250 F.3d 264 (5th Cir. 2001), the 5th Circuit focused on the lack of clear evidence concerning the impact or potential impact of activities on navigable waters. The court concluded (*Id.* at 272) that:

The Rices have offered significant evidence that the groundwater under Big Creek Ranch has been contaminated by oil discharges onto the surface of ranch land. But, the only evidence the Rices have produced of the hydrologic connection between this groundwater and the Canadian River is a general assertion by their expert that the Canadian River is down gradient from Big Creek Ranch. Drake's report briefly mentions a hydrologic connection between the groundwater and the Canadian River, but there is nothing in the report or in Drake's deposition to indicate the level of threat to, or any actual oil contamination of when or to what extent the contaminants in the groundwater will affect the Canadian River. There is also no evidence of any present or past contamination of the Canadian River. The only evidence in that record that any protected body of water is threatened by Harken's activities is Drake's general assertion that eventually the groundwater under the ranch will enter the Canadian river. The ground water under Big Creek Ranch is, as a matter of law, not protected by OPA. And, the Rices have failed to produce evidence of a close, direct and proximate link between Harken's

discharges of oil and any resulting actual, identifiable oil contamination of a particular body of natural surface water the satisfies the jurisdictional requirements of the OPA.

This language suggests that the result of the case might have been quite different if the Rices had provided the court with hydrologic models indicating the course and timing of pollutants entering the Canadian River.

Courts in other cases have held that in determining jurisdiction it is irrelevant whether pollutants have, as yet, actually reached waters. See *North Carolina Shellfish Growers Association and North Carolina Coastal Federation v. Holly Ridge Associates*, 278 F.Supp.2d 654 (E.D.N.C. 2003). It is the potential for pollution that counts.

Many of the same sorts of considerations relevant to cumulative environmental impact analysis pursuant to NEPA are also (arguably) relevant to determination of cumulative “significance”. See discussion in Appendix A.