McGeorge Law Review

Volume 34 | Issue 4 Article 7

1-1-2003

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I. INTRODUCTION

The United States Supreme Court's 2001 decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*[1] (*SWANCC*) called into question long standing regulations promulgated by the U.S. Army Corps of Engineers (Corps) defining "waters of the United States" for the purposes of section 404 of the Clean Water Act (CWA).[2] Specifically, the Court held that the Corps' use of the Migratory Bird Rule[3] to assert section 404 jurisdiction over a partially flooded, abandoned gravel pit in Illinois exceeded the agency's statutory authority.[4] Hence, this "isolated water"[5] was not subject to section 404 regulation.

On January 15, 2003, the Corps published in the Federal Register an Advanced Notice of Proposed Rulemaking (ANPR) soliciting input on the proper definition of "waters of the United States" for the purposes of section 404 regulation.[6] The Corps posed two questions in order to focus commentary.[7] First, it asked whether any other factor contained in the current definition of "waters of the United States" could be used to justify jurisdiction over isolated waters.[8] And second, it asked whether the regulations should define "isolated waters," and if

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1. Solid Waste Agency of N. Cook County v. United States Army Corps of Eng'rs, 531 U.S. 159 (2001) [hereinafter SWANCC].

2. 33 C.F.R. § 328.3(a) (2003). Although section 404's regulation of "dredge and fill" activities may sound mundane, section 404 is in fact the federal government's primary protective device for wetlands. J. Brian Smith, Comment, *Western Wetlands: The Backwater of Wetlands Regulation*, 39 NAT. RESOURCES J. 357, 379-86 (1999).

3. Conditions that would trigger jurisdiction under 33 C.F.R. § 328.3(a)(3) included habitat for birds covered by migratory bird treaties and later became known as the "Migratory Bird Rule." Advanced Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of "Waters of the United States," 68 Fed. Reg. 1991, 1994 (Jan. 15, 2003) [hereinafter ANPR].

4. *SWANCC*, 531 U.S. at 174.

5. The term "isolated water" has become shorthand for those wetlands that are encompassed by the *SWANCC* decision. *See id.* at 170-71 (discussing the Corps' jurisdiction over "isolated waters"); ANPR, 68 Fed. Reg. at 1994 (stating that the Court's holding "eliminates . . . jurisdiction over isolated, interstate, non-navigable waters where the sole basis for asserting . . . jurisdiction is the . . . use of the waters as habitat for migratory birds that cross State lines").

6. ANPR, 68 Fed. Reg. 1991. The Corps subsequently extended the comment period and has yet to issue a final rule. 68 Fed. Reg. 9613 (Feb. 28, 2003).

7. ANPR, 68 Fed. Reg. at 1994.

8. *Id.*

so, what factors should be included in the definition.[9] This Comment will use primarily Supreme Court precedent to examine each of these questions.

II. ALTERNATIVES TO THE MIGRATORY BIRD RULE

The explicit holding in *SWANCC* is specific to the facts of the case and the precise regulatory justification used by the Corps to invoke its jurisdiction.[10] The Court held "that 33 C.F.R. § 328.3(a)(3) (1999), as clarified and applied to petitioner's balefill site pursuant to the 'Migratory Bird Rule,' 51 Fed. Reg. 41217 (1986), exceeds the authority granted to [the Corps] under § 404(a) of the [Clean Water Act]."[11] Perhaps because of this specificity, the Corps sought comment on the feasibility of using an alternative Commerce Clause justification under 33 C.F.R. section 328.3(a)(3) for the assertion of jurisdiction.[12] The subparts of section 328.3(a) purportedly provide for CWA jurisdiction over waters that "are or could be used by interstate or foreign travelers for recreational or other purposes; or [f]rom which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or [w]hich are used or could be used for industrial purpose by industries in interstate commerce."[13] In order to respond to the Corps' inquiry, it is necessary to examine the reasoning of the *SWANCC* decision.

A. *The Meaning of* SWANCC

The Solid Waste Agency of Northern Cook County (SWANCC) is a collection of municipalities associated for the purposes of garbage disposal.[14] SWANCC purchased a 533-acre abandoned gravel pit entirely within the state of Illinois for the disposal of non-hazardous baled waste.[15] Since mining operations had been abandoned for decades, portions of the pit contained permanent pools of water and vegetation, including trees.[16] During the process of permitting the new landfill, SWANCC consulted with the Corps, who initially concluded that the site was not within their CWA jurisdiction.[17] After further inquiry, the Corps reversed itself, claimed jurisdiction over the project, and subsequently denied SWANCC a permit under section 404.[18] The assertion of jurisdiction was based on its findings that "the water areas and spoil piles had developed a natural

9. *Id.*
10. *SWANCC*, 531 U.S. at 174.
11. *Id.*
12. ANPR, 68 Fed. Reg. at 1994.
13. 33 C.F.R. § 328.3(a)(3)(i)-(iii) (internal subdivisions omitted).
14. *SWANCC*, 531 U.S. at 162-63.
15. *Id.* at 163.
16. *Id.*
17. *Id.* at 164.
18. *Id.* at 165.

character" and that "the water areas are used as habitat by migratory bird [sic] which cross state lines."[19]

SWANCC filed suit alleging that the use of the Migratory Bird Rule to assert jurisdiction over a nonnavigable, isolated, intrastate water such as the gravel pit in question exceeded the statutory authority of the Corps or, in the alternative, the statute exceeded the Commerce Clause authority of Congress.[20] The United States Court of Appeals for the Seventh Circuit found the assertion of jurisdiction to be proper, leading to the Supreme Court's grant of certiorari and subsequent reversal.[21]

The Court was called on to decide if the waters wholly contained in a manmade pit fell within the scope of the statute.[22] The text of section 404(a) gives the Corps the power to regulate dredge and fill operations affecting "navigable waters."[23] The term "navigable waters" is further defined by statute as "the waters of the United States, including the territorial seas."[24] The Court recognized that it had previously held that the definitional term "navigable" is of "limited import."[25] This prior conclusion ratified Corps regulations subjecting nonnavigable wetlands adjacent to waters navigable in fact[26] to section 404(a).[27] But the question the Court had previously reserved was the propriety of asserting jurisdiction over wetlands not reasonably adjacent to navigable bodies of water.[28] That is, the Court did not express an opinion on those wetlands that do not have a "significant nexus" with navigable waters.[29] The wetlands in SWANCC's gravel pit lacked this "significant nexus," giving the Court reason to decide this issue.

The Corps offered a number of arguments in an attempt to persuade the Court to extend its prior precedent to include the SWANCC gravel pit. The Corps was not able to persuade the Court that Congress had intended to authorize its expansive regulatory definition of "navigable waters" as any and all "waters of the United States." It also did not demonstrate that Congress acquiesced to its promulgated regulations.[30] The failure of a 1977 bill intended to overturn the regulatory definition of "waters of the United States" was not enough to

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19. *Id.* at 164-65.

20. *Id.* at 165-66.

21. *Id.* at 166.

22. *Id.* at 167.

23. *Id.* (quoting 33 U.S.C § 1344(a) (2001)).

24. *Id.* (quoting 33 U.S.C. § 1362(7) (2001)).

25. *Id.* (quoting United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 133 (1985)).

26. *Id.* Federal regulation of the Nation's waterways was historically based on the power of Congress to regulate those waters capable of being used in interstate commerce—those that were "navigable in fact." *Id.* at 172. A stream may be "navigable in fact" simply because it is deep enough to float a log, thereby transporting it to a sawmill and into commerce. United States v. Appalachian Elec. Power Co., 311 U.S. 377, 405-06 (1940).

27. *SWANCC*, 531 U.S. at 167, 172 (citing *Riverside Bayview Homes*, 474 U.S. at 135-39).

28. *Id.* at 167-68 (citing *Riverside Bayview Homes*, 474 U.S. at 131-32 n.8).

29. *Id.*

30. *Id.* at 168-70.

demonstrate Congress's "acquiescence" to the Corps' interpretation.[31] Consequently, even though the Court let stand its prior conclusion that the term "navigable" was of "limited import," it was not willing to read it completely out of the statute.[32] "[I]t is one thing to give a word limited effect and quite another to give it no effect whatever. The term 'navigable' has at least the import of showing us what Congress had in mind. . . ."[33] "In order to rule for respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are *not* adjacent to open water. But we conclude that the text of the statute will not allow this."[34]

The Corps also asked the Court to extend *Chevron* deference[35] to its regulations.[36] Although the Court stated that it believed the scope of the statute to be clear, it nevertheless engaged in an analysis of the issue. It is here, in dicta, that the Court raised issues concerning the constitutionality of a statute that would allow the Corps to exercise section 404 jurisdiction over the waters in question.[37] Without deciding whether the existing regulations would be a proper exercise of Commerce Clause authority or impermissibly impact federalism, the Court concluded that an arguably ambiguous statute cannot support such an expansive regulatory definition.[38] Absent clear congressional authorization, the Court was not willing to allow an agency to push the outer limits of Congress's constitutional power.[39] "We thus read the statute as written to avoid the significant constitutional and federalism question raised by [the Corps'] interpretation, and therefore reject the request for administrative deference."[40] Though the Court raised questions (bordering on doubts) about the ability of Congress to regulate isolated waters under the Commerce Clause post-*Morrison* and post-*Lopez*, no final conclusions were drawn.[41]

Unfortunately for the Corps and its search for an interstate commerce alternative to the Migratory Bird Rule, *SWANCC* is not a constitutional decision but is instead one based on statutory construction. Even though the Court raises issues concerning the Commerce Clause and the balance of power between states

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31. *Id.* at 170.

32. *Id.* at 172.

33. *Id.*

34. *Id.* at 168.

35. A court extending *Chevron* deference will not invalidate a regulation unless it is arbitrary, capricious or otherwise not in accordance with the law. Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 843-44 (1984). The regulation need only be a reasonable interpretation of the statute, not necessarily the best interpretation. *See, e.g.*, Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 703 (1995).

36. *SWANCC*, 531 U.S. at 172 (citing *Chevron*, 467 U.S. 837).

37. *Id.* at 172-74.

38. *Id.*

39. *Id.* at 172-73.

40. *Id.* at 174.

41. *Id.* at 173-74 (citing United States v. Morrison, 529 U.S. 598 (2000) and United States v. Lopez, 514 U.S. 549 (1995)).

and the federal government, the only holdings in the opinion concern the jurisdictional power granted to the Corps by the CWA statute.[42] Consequently, the authority of the Corps under the CWA to regulate the dredge and fill of wetlands does not extend to isolated waters regardless of the constitutionality of a more explicit and far-reaching statute.

B. The Application of SWANCC *to the Corps' Issues*

The first issue raised by the Corps in the ANPR solicitation for comments is whether any other factor contained in the current regulatory definition of "waters of the United States" could be used to justify its jurisdiction over isolated waters post-*SWANCC*.[43] In seeking an alternative regulatory justification for exercising jurisdiction over isolated waters, the Corps has focused narrowly on the express holding in *SWANCC*: "We hold that 33 CFR § 328.3(a)(3) (1999), as clarified and applied to petitioner's balefill site pursuant to the 'Migratory Bird Rule,' 51 Fed. Reg. 41217 (1986), exceeds the authority granted to respondents under § 404(a) of the CWA."[44] The Corps seems to interpret *SWANCC* as having eliminated "CWA jurisdiction over isolated, intrastate, non-navigable waters where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross State lines in their migration."[45]

In focusing on a constitutional justification (i.e. the Migratory Bird Rule) for the exercise of federal authority, the Corps is misinterpreting *SWANCC* at a fundamental level. The Court explicitly stated that the exercise of jurisdiction over isolated waters is beyond the Corps' statutory grant of authority.[46] The extent of Congress's Commerce Clause authority to regulate wetlands is simply irrelevant.

The Corps' inquiry can be focused on the three adjectives used to modify "waters" in the *SWANCC* holding: "nonnavigable," "intrastate," and "isolated."[47] Each adjective will be dealt with in turn. First, nonnavigability is easily disposed of. Navigability in fact is not required to subject wetlands to regulation under the CWA. The *SWANCC* Court implicitly (if not explicitly) reaffirmed its prior holding in *United States v. Riverside Bayview Homes, Inc.* that Congress intended to "regulate at least some waters that would not be deemed 'navigable' under the classical understanding of that term."[48] Consequently, the fact that the

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42. *See supra* note 40 and accompanying text (presenting the Court's holding as a matter of construction and not constitutionality).

43. ANPR, 68 Fed. Reg. 1991, 1994 (Jan. 15, 2003).

44. *SWANCC*, 531 U.S. at 174.

45. ANPR, 68 Fed. Reg. at 1994.

46. *See supra* Part II.A (reaching the conclusion that *SWANCC* was decided on statutory interpretation grounds and not on constitutional grounds).

47. *SWANCC*, 531 U.S. at 172; ANPR, 68 Fed. Reg. at 1994.

48. *SWANCC*, 531 U.S. at 167 (quoting United States v. Riverside Bayview Homes, Inc., 474 U.S. 121,

SWANCC gravel pit was not navigable in fact does not in and of itself remove it from the Corps' jurisdiction.

Second, the term "intrastate" is the true gravamen of the Corps' inquiry. The question of Congress's constitutional authority that was not fully engaged by the Court in *SWANCC* is implicated. Although the majority refers to "intrastate" waters in passing, the term does not enter explicitly into any analysis relevant to the holding.[49] This is not surprising considering that the Court's analysis (other than the *Chevron* dicta) dealt with statutory construction. It was the Court's finding that the statutory authority of the Corps extended only to waters with a "significant nexus between the wetlands and 'navigable waters'" which turns *SWANCC*, and not a lack of congressional constitutional authority.[50] While it may in fact be the case that a migratory bird nexus could serve as a Commerce Clause justification for the scope of current regulation,[51] the plain fact remains that CWA statutory authority, as currently written, does not extend to waters isolated from those that are considered navigable. Consequently, any alternative Commerce Clause justification for regulating SWANCC's gravel pit, such as the collection of shellfish, interstate recreational use, or the use of water in interstate commerce, should also fail under the reasoning of *SWANCC*.[52]

Based on this conclusion, it follows that determining whether the water in question is "intrastate" or "interstate" is of no consequence to the analysis under *SWANCC*. According to the Court's construction of the statute, it would not have mattered if the gravel pit had straddled the Illinois/Indiana border. The fact remains that the pit was isolated from navigable water. Minus a nexus to the regulatory justification (navigable waters), any additional Commerce Clause argument is doomed to fail. Waters factually analogous to SWANCC's gravel pit are simply not within the Corps' statutory grant of jurisdiction.[53] Even the dissent in *SWANCC* acknowledged that the Court has not only invalidated the Migratory Bird Rule, but has also drawn a line that "invalidates . . . the Corps' assertion of jurisdiction over all waters except for actually navigable waters, their tributaries, and wetlands adjacent to each."[54]

This leaves the examination of the term "isolated." Since *SWANCC* seems to have foreclosed CWA regulation of waters based solely on a Commerce Clause justification, it is necessary to determine what constitutes an isolated water in

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133 (1985)).

49. *Id.* at 174.

50. *Id.* at 167-68.

51. The Court stated that the application of the Migratory Bird Rule would raise "significant constitutional questions" but declined to reach the issue because it was able to decide the case by narrowly construing the statute. *Id.* at 172-74. The Court did recognize that the protection of migratory birds is a "national interest of very nearly the first magnitude." *Id.* at 173 (quoting Missouri v. Holland, 252 U.S. 416, 435 (1920)).

52. *See supra* Part II.A (noting the non-constitutional nature of the *SWANCC* holding).

53. *See supra* Part II.A (discussing the Court's consideration of the extent of that jurisdiction).

54. *SWANCC*, 531 U.S. at 176-77 (Stevens, J., dissenting).

order to ascertain the scope of the Corps' jurisdiction. At the minimum, it should be clear that waters analogous to the abandoned gravel pit in *SWANCC* are isolated, but for a more refined inquiry, it is necessary to examine the Supreme Court's decision in *United States v. Riverside Bayview Homes, Inc.*[55]

III. DEFINING "ISOLATED" WATERS

The second part of the Corps' solicitation of comments concerns the factors that should be used to define "isolated" waters for the purpose of the CWA.[56] While the Supreme Court has not addressed the technical, hydrological and ecological factors that should be considered, its decisions on the subject do impart some common sense guidelines for the inquiry.

A. *The Jurisdictional Extension of* United States v. Riverside Bayview Homes, Inc.

In *United States v. Riverside Bayview Homes*, the Supreme Court addressed the issue of wetlands adjacent to navigable waters and their inclusion in the regulations promulgated by the Corps.[57] *Bayview Homes* concerned the Corps' assertion of jurisdiction over an 80-acre parcel of land near the shores of Lake St. Clair in Michigan.[58] The property in question was found by the Corps to meet its regulatory definition of wetlands[59] based on the presence of the requisite vegetative and hydrologic conditions.[60] The Sixth Circuit found that the Corps did not have CWA jurisdiction by inferring an additional definitional requirement that the adjacent navigable water flood or inundate the lands with some frequency.[61] The Supreme Court granted certiorari and reversed.[62]

The regulatory definition of wetlands subject to CWA jurisdiction are those lands "inundated *or saturated* by surface *or ground water* at a frequency and

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55. The Court returns to *Riverside Bayview Homes* to determine the definition of "Waters of the United States." *Id.* at 167-68 (citing United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985)).

56. *See supra* note 9 and accompanying text (introducing the Corps' inquiry concerning the definition of "isolated waters").

57. 474 U.S. 121 (1985) [hereinafter *Bayview Homes*].

58. *Id.* at 124.

59. Wetlands are lands "inundated *or saturated* by surface *or ground water* at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." *Id.* at 129 (citing 33 C.F.R. § 323.2(c) (1985)). The current wetlands definition is located at 33 C.F.R. § 328.3(b) (2002).

60. *Id.* at 124.

61. *Id.* at 125. The Sixth Circuit was worried that the current regulatory definition might work a regulatory taking of private property and therefore needed to be limited. *Id.* The Supreme Court characterized this concern as "spurious," *id.* at 129, since a valid exercise of government power at law is not limited by the need to pay compensation in equity. Therefore, if CWA regulation works a taking, the landowner can bring an inverse condemnation suit. *Id.* at 126-29.

62. *Id.* at 126.

duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[63] On the facts of *Bayview Homes*, it was found that the requisite vegetation was present and that the soil saturation was caused by ground water.[64] Furthermore, it was determined that the vegetative and hydrologic conditions extended from the property in question to a navigable water.[65] "*Together*, these findings establish that respondent's property is a wetland adjacent to a navigable waterway."[66] As the definition of wetlands used in *Bayview Homes* is currently valid,[67] it would be fair to say that contiguous wetlands extending from the edge of a navigable water are "adjacent" and therefore within the jurisdiction of the Corps.

Justice White's opinion also extended *Chevron*[68] deference to the Corps' regulations defining wetlands *adjacent* to navigable waters as "waters of the United States."[69] Digging deeper into legislative history and the subsequent regulatory interpretation of the Corps, the Court determined that adjacent wetlands did not have to depend on the navigable water for inundation.[70] As an example, the Court stated that "wetlands that are not flooded by adjacent waters may still tend to drain into those waters."[71] Furthermore, "wetlands adjacent to lakes, rivers, streams, and other bodies of water may function as integral parts of the aquatic environment even when the moisture creating the wetlands does not find its source in the adjacent bodies of water."[72] The Court validated the Corps' interpretation that wetlands "inseparably bound up with the 'waters' of the United States" were properly regulated under section 404.[73]

> "The regulation of activities that cause water pollution cannot rely on . . . artificial lines . . . but must focus on all waters that together form the entire aquatic system. Water moves in hydrologic cycles, and the pollution of this part of the aquatic system, regardless of whether it is above or below an ordinary high water mark, or mean high tide line, will affect the water quality of the other waters within that aquatic system.
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> "For this reason, the landward limit of Federal jurisdiction under Section 404 must include any adjacent wetlands that form the border of or are in

63. *Id.* at 129 (quoting 33 C.F.R. § 323.2(c) (1985)).

64. *Id.* at 130-31.

65. *Id.* at 131.

66. *Id.* (emphasis added).

67. 33 C.F.R. § 328.3(b) (2002).

68. Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 842-45 (1984).

69. *Bayview Homes*, 474 U.S. at 139 (emphasis added). "We are not called upon to address the question of the authority of the Corps to regulate discharges of fill material into wetlands that are not adjacent to bodies of open water and we do not express any opinion on that question." *Id.* at 131 n.8 (internal citations omitted).

70. *Id.* at 134.

71. *Id.*

72. *Id.* at 135.

73. *Id.* at 134.

> reasonable proximity to other waters of the United States, as these wetlands are part of this aquatic system."[74]

This leads to the logical conclusion that areas with vegetative and hydrological attributes that meet the definition of wetlands that themselves extend to "navigable" waters will be deemed "waters of the United States" and therefore subject to the CWA statute.

B. Scope of the SWANCC *Jurisdictional Limitation*

In *Bayview Homes*, the question of the Corps' regulatory jurisdiction over waters that were "not adjacent" was explicitly reserved.[75] In *SWANCC*, the Court found occasion to reach this issue and held that the statutory authority of the Corps limited its jurisdiction to wetlands "inseparably bound up with the 'waters' of the United States."[76] At a minimum, it is clear that a man made pit that eventually develops the definitional vegetative conditions is nonetheless outside the scope of section 404 regulation in the absence of a nexus to navigable waters.[77] To determine the parameters of this "nexus" is to determine what wetlands are subject to CWA regulation.

It is clear from *Bayview Homes* that definitional wetlands which are contiguous with a navigable water have the requisite nexus required under the statute.[78] What is uncertain is whether definitional wetlands with some lesser degree of connection are nevertheless within the jurisdiction of the CWA. The vernal pool serves as a useful wetland example for this analysis.

Vernal pools are quite common in California and support numerous endangered species.[79] The U.S. Fish and Wildlife Service describes them as follows:

> Vernal pools are a unique kind of wetland ecosystem. Central to their distinctive ecology is the fact that they are vernal or ephemeral, occurring temporarily—typically during the spring—and then disappearing until the next year. They are wet long enough to be different in character and species composition from the surrounding upland habitats, and yet their prolonged

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74. *Id.* at 133-34 (quoting 42 Fed. Reg. 37128 (1977)).

75. *Id.* at 131 n.8.

76. SWANCC, 531 U.S. 159, 167 (2001).

77. *See generally id.* (discussing the "significant nexus between the wetlands and 'navigable waters,'" in *Bayview Homes*).

78. *Bayview Homes*, 474 U.S. at 130-31.

79. *See* Endangered and Threatened Wildlife and Plants; Critical Habitat Designation for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon, 67 Fed. Reg. 59884 (Sept. 24, 2002) [hereinafter Critical Habitat Designation] (discussing vernal pools in California and Oregon).

annual dry phase prevents the establishment of species typical of more permanent wetlands.[80]

The Corps' assertion of jurisdiction over these pools has been called into question by the holding in *SWANCC*.[81] By definition, the topography that gives rise to vernal pools lacks significant drainage.[82] "Vernal pools typically occur in landscapes that, at a broad scale, are shallowly sloping or nearly level, but on a fine scale may be quite bumpy. Complex micro-relief results in shallow, undrained depressions that form vernal pools."[83] While some pools are filled by run off from surrounding uplands, others are filled exclusively by rainfall.[84] It is likely that the Corps' call for comments on the proper scope of wetlands for the purpose of CWA regulation is, in part, an effort to include as many areas similar to vernal pools as possible in the definition. To do this, the areas in question will have to meet the regulatory definition of wetlands and the statutory limitation of being adjacent to a navigable water.

1. Is a Vernal Pool a Wetland?

"The term *wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[85] Therefore, regulated land must be: (1) at least saturated (2) at some frequency (3) that plant life adapted to saturated soils is normally prevalent.[86]

It is clear that vernal pools are at least saturated since by definition they are areas subject to seasonal flooding due to poor drainage.[87] While it is true that they are not saturated continuously,[88] the regulation does not require that this be so.[89] What is required is a frequency of saturation that supports a prevalence of plant life adapted to such conditions.[90] The vegetation endemic to vernal pools

80. *Id.*

81. Michelle J. Taylor, Note, Solid Waste Agency Northern Cook County v. Army Corps of Engineers: *The United States Supreme Court Invalidates the Migratory Bird Rule and Raises Questions About the Commerce Clause*, 79 U. DET. MERCY L. REV. 301, 317 (2002).

82. Critical Habitat Designation, 67 Fed. Reg. at 59885.

83. *Id.*

84. *Id.*

85. 33 C.F.R. § 328.3(b) (2002).

86. *Id.*

87. Critical Habitat Designation, 67 Fed. Reg. at 59884.

88. Some pools may not fill at all in a given year. *Id.* at 59885. The regulatory definition of wetland accounts for this by requiring only that plant life adapted to saturated soils be "normal[ly]" prevalent. 33 C.F.R. § 328.3(b) (2002).

89. *Id.*

90. *Id.*

certainly seems to meet this definition.[91] "Vernal pool plant communities are able to resist [non-native species] invasion because of the severe ecological constraints [seasonal flooding and drying] on plants living in vernal pool environments."[92]

2. When Is a Vernal Pool "Adjacent?"

A vernal pool could most likely be characterized as adjacent in a factual situation similar to that of *Bayview Homes*. If it could be shown that the requisite vegetative characteristics formed an unbroken connection between the pool and a navigable waterway, it should be characterized as adjacent.[93] It is important to keep in mind that a "navigable water" does not have to be navigable in fact; it need only be tributary to a waterway that is navigable in fact.[94] This *Bayview Homes* type of connection might be established by the swales that interconnect the pools themselves.[95] If they were sufficiently saturated to produce a predominance of adapted vegetation, they would provide the necessary nexus for section 404 jurisdiction.[96]

A closer question concerns vernal pools that are not connected by a contiguous band of adapted vegetation but nonetheless periodically drain across the surface into a navigable water. Many vernal pool complexes drain into tributaries and rivers via the connective swales often associated with vernal pool topography.[97] These swales may have some characteristics of a wetland but often are not sufficiently saturated for the establishment of the predominance of wetland-adapted vegetation.[98] The Court's *Chevron* analysis in *Riverside Bayview Homes* implicitly endorses an aquatic system approach as a reasonable agency interpretation of the statute.[99] Pollution released into adjacent wetlands "will affect the water quality of the other waters within that aquatic system."[100] Therefore, navigable waters need not be the source of wetland saturation. "For example, wetlands that are not flooded by adjacent waters may still tend to drain into those waters."[101] Consequently, if the Corps was to adopt a regulatory

91. *See, e.g.*, Norfolk v. United States Army Corps of Eng'rs, 968 F.2d 1438, 1443-44 (1st Cir. 1992) (discussing the environmental and ecological impact of a proposed landfill on a specific vernal pool characterized as part of the overall wetland resource).

92. Critical Habitat Designation, 67 Fed. Reg. at 59885.

93. *Bayview Homes*, 474 U.S. 121, 130-31 (1985).

94. *Id.* at 123.

95. Critical Habitat Designation, 67 Fed. Reg. at 59885.

96. *See Bayview Homes*, 474 U.S. at 130-31 (finding section 404 jurisdiction appropriate when considering such circumstances).

97. Critical Habitat Designation, 67 Fed. Reg. at 59885.

98. *Id.*

99. *See Bayview Homes*, 474 U.S. at 131-35 (quoting the Corps' justification for an ecosystem approach to defining "Waters of the United States").

100. *Id.* at 134 (quoting 42 Fed. Reg. 37128 (1977)).

101. *Id.*

definition that included intermittent surface drainage as an appropriate nexus between a vernal pool and navigable waters, it is likely to be entitled to deference by the courts.[102]

There are some vernal pools that rarely, if ever, drain into navigable waters.[103] These pools would certainly be the most difficult to exercise jurisdiction over since they closely resemble the facts of *SWANCC*. However, these pools do have some arguable connections with navigable waters. First, they likely share an ecological connection with the navigable water primarily in the form of common bird habitat.[104] Second, many of them likely share a common water table with navigable waters thereby providing a subterranean hydrological connection.[105]

The Supreme Court is likely to be quite hostile to any suggestion that an ecological connection alone is enough to establish the proper nexus; the *SWANCC* dissent explicitly made this argument.[106] The majority in *SWANCC* sought to place some limit on the jurisdiction of the Corps whereas an ecological nexus would provide virtually universal wetland jurisdiction, thereby running afoul of *SWANCC*.[107] The same is likely true for a ground water nexus, as it would be difficult to find bodies of water that did not share this association with a navigable stream.[108] Though not specifically addressed, it is arguable that the gravel pit in *SWANCC* shares just such a ground water connection with some navigable body of water. The Court's desire to place a limit on the Corps' CWA jurisdiction casts doubt on the viability of such a theory post-*SWANCC*.[109]

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102. *See* Norfolk v. United States Army Corps of Eng'rs, 968 F.2d 1438, 1443-44, 1448-50 (1st Cir. 1992) (deferring to the Corps' determinations concerning environmental and ecological impact of a proposed landfill on the overall wetland resource including a vernal pool); *see generally* Driscoll v. Adams, 181 F.3d 1285, 1291 (11th Cir. 1999) (determining that a small-volume stream running only intermittently is "navigable water"); Quivira Mining Co. v. United States Envtl. Prot. Agency, 765 F.2d 126, 130 (10th Cir. 1985) (finding that creeks and arroyos connected to streams during intense rainfall are "waters of the United States"); United States v. Tex. Pipe Line Co., 611 F.2d 345, 347 (1979) (concluding that an oil spill into tributary involved "waters of the United States," even though there was no evidence that streams that connected the tributary with navigable waters were running at time of spill).

103. Critical Habitat Designation, 67 Fed. Reg. at 59884-85.

104. The Migratory Bird Rule at issue in *SWANCC* was used to exert jurisdiction over isolated bodies of water such as vernal pools. SWANCC, 531 U.S. 159, 164-65 (2001).

105. Critical Habitat Designation, 67 Fed. Reg. at 59884-85.

106. *SWANCC*, 531 U.S. at 176 n.2 (Stevens, J. dissenting).

107. *See id.* (Stevens, J., dissenting) (noting that hydrological and ecological connections are "present in many and possibly most, 'isolated' waters").

108. The Corps has expressed the opinion that individual pools and drainage swales are connected via groundwater. Critical Habitat Designation, 67 Fed. Reg. at 59884-85.

109. *But see* Norfolk v. United States Army Corps of Eng'rs, 968 F.2d 1438, 1451 (1st Cir. 1992) (asserting that *Bayview Homes* calls for deference to be given to regulations dealing with groundwater connectivity for the purposes of defining "adjacent").

IV. CONCLUSION

Though the Supreme Court raised questions concerning the constitutionality of a statute authorizing the regulation of isolated waters under the CWA, *SWANCC* itself is not a constitutional decision.[110] Instead, the Court interpreted the statute to limit the jurisdiction of the Corps to those waters that are "adjacent" to a navigable waterway.[111]

In seeking to define those waters subject to regulation, the Corps should keep the reasoning of *SWANCC* in mind and focus not on the Commerce Clause, but instead on the factors necessary to establish the required nexus. This nexus clearly involves definitional wetlands contiguous with navigable waters and most likely includes wetlands that periodically drain into navigable waters. But, attempting to establish this nexus ecologically or though attenuated ground water connections is most likely reaching beyond the jurisdiction granted by the CWA statute.

110. *See supra* Part II.A (concluding that *SWANCC* was decided on statutory interpretation grounds).

111. *SWANCC*, 531 U.S. at 168.

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