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Groundwater Jurisdiction Under the Clean Water Act: The Tributary Groundwater Dilemma

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GROUNDWATER JURISDICTION UNDER THE CLEAN WATER ACT: THE TRIBUTARY GROUNDWATER DILEMMA

*Philip M. Quatrochi**

I. INTRODUCTION

Over the past several years, groundwater has become an increasingly important source of irrigation and drinking water in the United States.[1] The United States uses twice as much water per capita as any other nation in the world,[2] and ninety percent of the United States's fresh water is groundwater.[3] Groundwater sources also supply approximately half of the drinking water nationally.[4] Despite the United States's reliance on groundwater and the serious harm that can result from groundwater contamination, no federal statute comprehensively addresses the prevention of groundwater pollution.

Surface water contamination long has been a major concern of both the public and Congress, but groundwater contamination historically has received little national attention.[5] It generally was believed that groundwater was pristine and that contaminants percolating through the ground would adhere to the soil or would degrade by natural processes.[6] It is now known that the soil and rock layers of the earth

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[1] *See* JOSEPH L. SAX & ROBERT H. ABRAMS, LEGAL CONTROL OF WATER RESOURCES 786 (1986).

[2] PETER ROGERS, AMERICA'S WATER 4 (1993).

[3] *See* ZACHARY A. SMITH, GROUNDWATER IN THE WEST 4 (1989).

[4] *See id.*

[5] 1 OFFICE OF TECHNOLOGY ASSESSMENT, PROTECTING THE NATION'S GROUNDWATER FROM CONTAMINATION 20 (1984) [hereinafter PROTECTING THE NATION'S GROUNDWATER].

[6] *Id.*

have a finite capacity to filter out contaminants and to protect groundwater.[7] There is also a growing public awareness of the decline of groundwater quality and the possible threat to human health from groundwater contamination.[8]

The Clean Water Act[9] (CWA) contains provisions that are applicable to groundwater,[10] but attempts to assert CWA authority to prevent groundwater pollution have met with mixed results in the courts.[11] The major dispute has been over whether the CWA's protection of "navigable waters"[12] includes the protection of groundwater.[13] Although courts generally have excluded nontributary groundwater from coverage under the CWA,[14] courts have split on affording tributary groundwater the CWA protections.[15] Including or excluding tributary groundwater from the scope of the CWA can have far-reaching implications. Courts including tributary groundwater within the scope of the CWA allow that statute to protect both groundwater and the surface waters that groundwater feeds.[16] Attempts to protect the quality of surface waters may prove fruitless if contaminated tributary groundwaters pollute surface waters.[17]

This Comment explores how courts have interpreted the extent of groundwater jurisdiction under the CWA and analyzes the competing methodologies that have led to different conclusions on CWA groundwater jurisdiction. Section II explores the hydrological characteristics of groundwater and the legal doctrines applicable to groundwater. Section II also examines the specific provisions of the CWA relevant

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[7] NATIONAL RESEARCH COUNCIL, GROUND WATER VULNERABILITY ASSESSMENT: CONTAMINATION POTENTIAL UNDER CONDITIONS OF UNCERTAINTY 13 (1993).

[8] *Id.* at 20.

[9] 33 U.S.C. §§ 1251–1387 (1988 & Supp. V 1993).

[10] *See infra* notes 84–91 and accompanying text.

[11] *See infra* section III.

[12] 33 U.S.C. § 1311(a). "Navigable waters" are defined further by the CWA as "waters of the United States." 33 U.S.C. § 1362(7); *see infra* notes 107–11 and accompanying text.

[13] *See generally* Exxon Corp. v. Train, 554 F.2d 1310 (5th Cir. 1977); United States v. GAF Corp., 389 F. Supp. 1379 (S.D. Tex. 1975); *see infra* notes 134–92 and accompanying text.

[14] Nontributary groundwater is groundwater that does not discharge into any surface waters. Tributary groundwater is groundwater that does discharge into surface waters. *See infra* notes 57–61 and accompanying text.

[15] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[16] *See, e.g.*, McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988); Kelley v. United States (*Kelley I*), No. 79–10199, slip op. at 3 (E.D. Mich. Oct. 28, 1980).

[17] *See* Mary Christina Wood, *Regulating Discharges into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act*, 12 HARV. ENVTL. L. REV. 569, 592 (1988) (citing United States v. Ashland Oil and Transp. Co., 504 F.2d 1317, 1326 (6th Cir. 1974)).

to groundwater, the administrative interpretations of this statutory language, and the relevant legislative history of the CWA. Section III examines the CWA/groundwater case law and compares the approaches of the Seventh and Tenth Circuits towards CWA groundwater jurisdiction. Section III also addresses two recent cases, *Village of Oconomowoc Lake v. Dayton Hudson Corp.*[18] and *Sierra Club v. Colorado Refining Co.*,[19] that reached opposite conclusions as to whether tributary groundwater is covered under the CWA. Section IV analyzes the different conclusions on groundwater jurisdiction under the CWA and suggests that all courts adopt the approach of the Tenth Circuit and give full effect to the intent of the CWA by including tributary groundwater within the coverage of the CWA.

II. GROUNDWATER AND THE CLEAN WATER ACT

The scientific principles behind groundwater and groundwater flow are helpful to understanding courts' analyses, particularly when tributary groundwater issues are raised. The legal principles governing groundwater, the language of the CWA, the CWA's legislative history, and administrative interpretations of CWA language are also important because they frequently are referred to in CWA groundwater cases and are used by courts as justifications for reaching particular conclusions.

A. *Scientific Groundwater Principles*

Groundwater movement is governed by the laws of physics and local geological formations and ground water travels at variable speeds and in different ways through different geologic formations.[20] The variability is primarily a function of the pressure of gravity and the permeability of the geologic formations.[21] Groundwater is stored in permeable formations that are bounded and contained by impermeable formations.[22] Permeable materials such as gravel easily permit

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[18] 24 F.3d 962 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994).

[19] 838 F. Supp. 1428 (D. Colo. 1993); *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[20] GETCHES, WATER LAW IN A NUTSHELL 223 (1984).

[21] *Id.* at 223. Groundwater formations generally are classified as aquifers, aquitards, aquicludes, and aquifuges. *Id.* Aquifers are formations "that transmit water freely[.]" *Id.* Aquitards "store water and allow some passage of water but not enough for a well[.]" *Id.* Aquicludes are "permeable enough to store water but do not transmit enough water to be useful[.]" *Id.* Aquifuges are impermeable formations, such as solid granite. *Id.*

[22] *Id.*

the flow of groundwater, while denser materials such as clay impede the flow of groundwater.[23] Groundwater also is found flowing in underground channels directly beneath surface rivers and streams.[24]

An important feature of groundwater hydrology is the aquifer, a groundwater formation that freely transmits water.[25] An aquifer is functionally an underground reservoir—a storage site for groundwater.[26] Initially, aquifers are "filled with water either by geological processes occurring when the rock was created . . . or by subsequent sources such as rainfall . . ."[27] Recharge of an aquifer occurs through precipitation falling into the aquifer where the aquifer is exposed to the surface, or through surface or underground streams flowing into the aquifer.[28] When an aquifer is hydraulically linked to surface waters, the groundwater is tributary to the surface water.[29] Aquifers also may connect to other aquifers through underground channels and link apparently separate surface bodies of water,[30] or may be completely isolated from other surface or subsurface waters.[31]

Because groundwater is by definition underground water, it is difficult to observe accurately. Although the technology currently exists for obtaining hydrogeologic information, there always will be some uncertainty about groundwater contamination because groundwater is inaccessible to direct observation.[32] The lack of time, money, and skilled personnel constrain accurate groundwater assessment, including contamination detection, protection, monitoring, and prevention activities.[33] Moreover, groundwater samples only reveal the quality of the groundwater at the specific moment in time that the samples are taken, providing little information about contamination sources or the potential for future contamination.[34]

The uncertainty of various corrective techniques, the length of time and the amount of money required to institute corrective measures, and the need for skilled professionals to implement such measures

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[23] *Id.* at 222.
[24] *See* WILLIAM GOLDFARB, WATER LAW 19 (2d ed. 1988).
[25] GETCHES, *supra* note 20, at 223.
[26] *See id.* at 224.
[27] *Id.* at 225.
[28] *Id.*
[29] *See id.* at 226.
[30] *See* GETCHES, *supra* note 20, at 226.
[31] *Id.*
[32] *See* PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 9.
[33] *Id.* at 8–9.
[34] *Id.* at 10.

hamper corrective actions for groundwater contamination.[35] Corrective actions are further complicated when there are multiple contaminants present because of the uncertainty in dealing with fluctuating contaminant concentrations.[36] Additionally, corrective actions may produce detrimental environmental side-effects.[37] Groundwater contamination also tends to be more concentrated and takes longer to decontaminate than surface water because the infiltration of rainwater, which dilutes contaminants, is limited.[38]

Thus, the peculiar nature of groundwater requires courts to address issues such as underground formations, groundwater flow, and detection or proof of contamination.[39] These issues are frequently important in CWA groundwater cases and are of particular importance when courts deal with tributary groundwater issues.[40]

B. *Legal Principles of Groundwater*

The legal rules governing ownership of groundwater, like those governing surface water, vary from state to state.[41] Because most groundwater resources originate from a common source, however, groundwater rights are generally more complex than surface water rights.[42] Currently, there are five major groundwater doctrines in use in the United States: absolute ownership,[43] prior appropriation,[44] groundwater as a public resource,[45] reasonable use,[46] and correlative rights.[47] Legislators cited this variety of groundwater rights systems

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[35] *See id.* at 8–9.

[36] *Id.* at 10.

[37] PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 10. For example, closing a well might allow continued migration of contaminants, or excavation may transfer contaminants to surface waters or the air. *See id.*

[38] *See* GOLDFARB, *supra* note 24, at 42–43.

[39] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[40] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[41] *See* ROGERS, *supra* note 2, at 91.

[42] *Id.*

[43] GETCHES, *supra* note 20, at 232–34. Absolute ownership means that the landowner owns and has an unlimited right to any water found beneath the owned land. *Id.* at 232–33.

[44] *Id.* at 234–36. Prior appropriation gives the strongest legal right to the person first using the water. *Id.* at 234.

[45] *Id.* at 236–37. Public resource jurisdictions acknowledge no private ownership rights in groundwater and consider it under the management of public property. *Id.* at 236.

[46] *Id.* at 238–39. Reasonable use allows a "landowner to withdraw water for reasonable beneficial uses . . . without liability for harm to adjoining landowners." *Id.* at 239.

[47] *Id.* at 239–42. Correlative rights seeks to give each landowner of a common groundwater supply a fair and just proportion of the supply. Each landowner is entitled to a reasonable share

in the legislative history of the CWA as a justification for leaving groundwater authority to individual states.[48]

Courts distinguish not only between different ownership rights to groundwater, but between different types of groundwater as well.[49] For example, courts distinguish between underground flows of surface watercourses, underground streams, and percolating groundwater, and important legal consequences depend on these distinctions.[50] Underground flow of surface streams refers to the saturated zone directly beneath a river or lake which is in direct contact with surface water.[51] When this underground flow can be identified, it is simply considered part of the watercourse.[52] An underground stream is "water that passes through or under the surface in a definite channel."[53] Percolating groundwater refers to all waters passing underground without a definite channel and to groundwater that is not linked directly to surface waters.[54]

Courts addressing groundwater within the context of the CWA additionally have looked at whether the groundwater in question was tributary or nontributary.[55] Tributary groundwater is groundwater that discharges into surface waters.[56] Nontributary groundwater is groundwater that does not flow into surface waters or that "has a velocity of flow . . . so slow that [the groundwater] is treated as not

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of the common groundwater supply, generally based upon the amount of land he owns. *Id.* at 240.

[48] *See* S. REP. No. 414, 92d Cong., 1st Sess. 73 (1971), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3739; *see infra* notes 119–29 and accompanying text. The legislative history of the CWA implies that Congress assumed that a federal groundwater program would be unworkable given the non-uniformity of state groundwater rights. *See id.*

[49] *See* GOLDFARB, *supra* note 24, at 18.

[50] *Id.*

[51] *See id.* at 19.

[52] *See id.*

[53] *Id.* Goldfarb also states, "[i]n water law, a subterranean stream is treated as a surface watercourse. There is a legal presumption against groundwater being an underground stream; that is, a claimant must produce convincing evidence that underground water flows in a definite and known channel, and does not 'percolate' as in an aquifer." *Id.* (citation omitted).

[54] *See* GOLDFARB, *supra* note 24, at 19. Sources of percolating water include precipitation, streamflow, irrigation return flow, and artificial recharge. *Id.* In many states, water rights to percolating waters are drastically different than rights to underground streams. Colorado, for example, distinguishes between tributary and nontributary percolating waters. *Id.* Groundwater that eventually will flow into a natural stream, above or below ground, legally is considered part of that same stream. *Id.*

[55] *See, e.g.*, Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 965 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994); Inland Steel Co. v. EPA, 901 F.2d 1419, 1422–23 (7th Cir. 1990).

[56] Wood, *supra* note 17, at 570.

flowing into surface waters."[57] Most groundwater, however, does flow into surface waters.[58] Moreover, it is doubtful whether any groundwater is nontributary, because all groundwater continually flows toward some point of discharge.[59] Categorizing groundwater as tributary or nontributary may be a completely artificial distinction, but it is nonetheless a distinction courts make.

C. *Federal Approaches to Groundwater Protection*

Currently, there is no comprehensive federal protection for groundwater resources.[60] As one commentator has noted, "[g]roundwater legislation is critical because this is the last part of the hydrological cycle to be regulated, and the hydrological imperatives require it to be integrated into the pattern of management immediately."[61] Despite the critical need for groundwater legislation, only a patchwork of federal legislation currently exists.

Several federal statutes have addressed peripherally the protection of the United States's groundwater. Congress enacted the Safe Drinking Water Act (SDWA)[62] in 1974 to "assure that water supply systems serving the public meet minimum national standards for protection of public health."[63] The SDWA authorizes the creation of drinking water standards and the establishment of a program to regulate underground injections in order to protect drinking water supplies.[64] The SDWA, however, falls short of protecting all groundwater because it only protects aquifers supplying public water systems.[65] Thus, many private wells used for purely domestic consumption are not covered by the SDWA.[66] The Resource Conservation and Re-

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[57] *Id.*

[58] *Id.*

[59] *See* JOSEPH S. DEVINNY ET AL., SUBSURFACE MIGRATION OF HAZARDOUS WASTES 47 (1990). Groundwater continually moves through aquifers as part of the hydrologic cycle, constantly flowing from its point of recharge to a point of discharge. *Id.*

[60] *See* PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 77.

[61] *Id.* at 195. For a detailed analysis of the United States's groundwater policy through 1984, see generally J. Stephen Dycus, *Development of a National Groundwater Protection Policy*, 11 B.C. ENVTL. AFF. L. REV. 211 (1984).

[62] 42 U.S.C. §§ 300f-300j-26 (1988 & Supp. V 1993).

[63] *Id.*

[64] *Id.*

[65] Wood, *supra* note 17, at 570.

[66] *Id.*

covery Act (RCRA)[67] protects only groundwater threatened by discharges from waste disposal facilities.[68] The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)[69] regulates the cleanup of hazardous waste disposal, but does not contain any preventative measures for protecting groundwater.[70] Several other federal laws also have limited applicability to groundwater protection, but they too fail to offer complete protection.[71]

Groundwater pollution has continued relatively unabated because no federal legislation or authority was concerned specifically with comprehensive groundwater protection.[72] In 1987, the independent National Groundwater Policy Forum led by Bruce Babbit, now Secretary of the Interior, stressed the urgency of federal involvement in groundwater protection and urged the enactment of a federal statute establishing groundwater protection.[73] However, disputes over the proper agency roles, coupled with the belief that state and local governments were better equipped to deal with their own groundwater problems, impeded progress towards any comprehensive groundwater legislation.[74]

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[67] 42 U.S.C. §§ 6901–99k (1988).

[68] *See* Wood, *supra* note 17, at 570.

[69] 42 U.S.C. §§ 9601–75 (1988).

[70] *See* WOOD, *supra* note 17, at 570.

[71] *See* PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 74 (citing the Surface Mining Control and Reclamation Act (SMCRA), 30 U.S.C. §§ 1201, 1202, 1211, 1221–30a, 1231–43, 1251–79, 1281, 1291–1309, 1311–16, 1321–28; the Uranium Mill Tailings Radiation Control Act (UMTRCA); the Hazardous Material Transportation Act (HMTA); the Hazardous Liquid Pipeline Safety Act (HLPSA)).

Two other statutes regulate the production of chemical substances: the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. § 136 and the Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601–92. *Id.* at 74–75.

The Coastal Zone Management Act of 1972 (CZMA), 16 U.S.C. §§ 1451–64, the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. §§ 1701–84, and the Water Research and Development Act of 1978 (WRDA) all contain provisions which can be used for groundwater protection. GOLDFARB, *supra* note 24, at 75.

[72] *See* ROGERS, *supra* note 2, at 6. Additionally, the United States has no comprehensive law or policy to protect the entirety of the nation's waters. This lack of a federal water policy has been referred to as a "policy drought." *Id.*

The Western Governors Association commented that:

> [a] principal characteristic of federal water policy is that policies are made in an ad hoc, decentralized manner. No agency of the executive branch or committee of Congress is responsible for keeping an eye on the "big picture." Thus, federal water policy lacks a unifying vision or even a set of guiding principles.

Id. It has been argued, however, that the cumulative effect of federal laws, agencies, and programs do, in sum, constitute a federal water policy. *Id.* at 7.

[73] *Id.* at 19.

[74] *See id.*

Other attempts to create a comprehensive federal groundwater statute also have failed. For example, the 100th Congress considered eighteen groundwater bills that were filed but never passed.[75] A measure finally considered in the House of Representatives, which merely addressed groundwater data gathering and research, likewise, was never passed.[76] One commentator has predicted some form of groundwater protection to be included in the expected reauthorization of the CWA.[77] Until such legislation is passed, however, federal groundwater protection must consist of the patchwork of protections offered by existing federal statutes.[78]

D. *The Language of the Clean Water Act Pertaining to Groundwater and Its Administrative Interpretation*

Congress declared that the objective of the CWA was "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[79] Whether the CWA governs groundwater, however, has been the subject of substantial dispute since the CWA's inception.[80] Certain sections of the CWA specifically address groundwater,[81] but it is unclear whether the CWA's pollution control provisions apply to groundwater.[82] A brief survey of the CWA provisions applicable to groundwater aids in understanding the judicial inclusion or exclusion of groundwater jurisdiction under the CWA.

Some provisions of the CWA clearly apply to groundwater. For example, section 102 includes groundwater within its mandate for developing comprehensive water pollution control programs.[83] Sec-

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[75] *Id.* at 195.

[76] *Id.* at 19.

[77] ROGERS, *supra* note 2, at 195 n.6.

[78] All 50 states also have addressed groundwater protection to some degree and have programs at various stages of development for groundwater protection. PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 6. Such programs, however, often are uncoordinated with surface water programs and are generally narrowly focused on sources, contaminants, and users. *Id.* at 7.

[79] 33 U.S.C. § 1251(a) (1988 & Supp. V 1993).

[80] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[81] *See, e.g.*, 33 U.S.C. §§ 1252(a), 1254(a)(5) (1988 & Supp. V 1993).

[82] *See* 33 U.S.C. § 1342 (1988 & Supp. V 1993).

[83] 33 U.S.C. § 1252(a). The statute provides:

> [t]he Administrator shall, after careful investigation, and in cooperation with other Federal agencies, State water pollution control agencies, interstate agencies, and the municipalities and industries involved, prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters *and*

tions 208,[84] 205(j),[85] 104,[86] and 106[87] provide for regional monitoring and planning aimed at both surface waters and groundwaters. Section 201 authorizes and creates grants for waste treatment management.[88] Sections 201 and 311 both relate to potential sources of groundwater contamination.[89] Section 304 provides for the development of specific water quality criteria, which would include groundwater quality.[90]

CWA provisions aimed directly at pollution control, however, contain ambiguous language which may or may not apply to groundwater. Some commentators have argued that underground waters that flow into surface waters constitute a "point source,"[91] which the CWA regulates.[92] Advocates of this theory argue that an underground channel that feeds into surface waters fits the CWA definition of a point source.[93] Advocates for applying pollution control provisions to groundwater also argue that Congress would have created a specific exemption for groundwater if Congress intended to exclude groundwater from the definition of a point source.[94]

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ground waters and improving the sanitary conditions of surface and *underground waters*.

Id. (emphasis added).

[84] 33 U.S.C. § 1288 (1988 & Supp. V 1993) (establishing areawide waste treatment management).

[85] 33 U.S.C. § 1285(j) (1988 & Supp. V 1993) (allotting grants for water quality management plans).

[86] 33 U.S.C. § 1254 (1988 & Supp. V 1993). This sections provides:

(a) The Administrator shall establish national programs for the prevention, reduction, and elimination of pollution and as part of such programs shall . . .

(5) in cooperation with the States, and their political subdivisions, and other Federal agencies establish, equip, and maintain a water quality surveillance system for the purpose of monitoring the quality of the navigable waters and *ground waters* and the contiguous zone and the oceans . . . .

Id. (emphasis added).

[87] 33 U.S.C. § 1256 (1988 & Supp. V 1993) (authorizing grants for state enforcement of pollution controls).

[88] 33 U.S.C. § 1281 (1988 & Supp. V 1993).

[89] 33 U.S.C. §§ 1281, 1321 (1988 & Supp. V 1993).

[90] 33 U.S.C. § 1314 (1988 & Supp. V 1993).

[91] The CWA defines a "point source" as:

any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

33 U.S.C. § 1362(14) (1988 & Supp. V 1993).

[92] Discussion of point source regulation for underground waters is beyond the scope of this Comment. For an extensive discussion, see Wood, *supra* note 17, at 575–86.

[93] *See id.* at 575.

[94] *See id.* at 576 (citation omitted).

Most attempts to prevent groundwater pollution using the CWA have stemmed from the CWA's National Pollution Discharge Elimination System (NPDES).[95] The CWA prohibits the discharge of any pollutants into "navigable waters" except as authorized under an NPDES permit or other CWA authority.[96] The CWA also prohibits the "discharge of dredged or fill material into the navigable waters" without a permit.[97] The CWA grants authority to the Environmental Protection Agency (EPA) to implement and enforce the permitting process[98] and grants limited permitting authority to the Chief of the Army Corps of Engineers (Corps).[99] The EPA also can authorize states themselves to operate their own permitting process.[100]

A substantial anomaly exists in the NPDES program, however.[101] When the EPA is the NPDES permitting authority, the CWA does not dictate explicitly whether the permitting program is to apply to groundwater.[102] Section 402(b)(1)(D),[103] in contrast, makes the EPA's approval of state NPDES programs contingent upon the state's demonstration of legal authority to "control the disposal of pollutants into wells."[104] Thus, although the CWA does not clearly require the EPA to issue an NPDES permit for discharges into groundwater, states are required to issue permits for groundwater discharges in order to take over an NPDES program from the EPA.[105]

The issue of whether an NPDES permit is required for the discharge of a pollutant into groundwater has given rise to the majority of case law regarding the extent of the CWA's groundwater jurisdic-

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[95] 33 U.S.C. § 1342 (1988 & Supp. V 1993).

[96] 33 U.S.C. §§ 1311, 1342 (1988 & Supp. V 1993). Section 1342(a)(1) provides:

> [e]xcept as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirement, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

Id. § 1342(a)(1).

[97] 33 U.S.C. §§ 1311(a), 1344(a) (1988).

[98] 33 U.S.C. § 1342(a).

[99] 33 U.S.C. § 1341(c) (1988).

[100] 33 U.S.C. § 1342(b).

[101] PARTHENIA B. EVANS, ET AL., THE CLEAN WATER ACT HANDBOOK, 1994 A.B.A. (Sec. Nat. Resources, Energy, & Envtl. Law 13).

[102] *Id.*; 33 U.S.C. § 1342(a).

[103] 33 U.S.C. § 1342(b)(1)(D).

[104] EVANS, *supra* note 101, at 13. The EPA's review of state permitting programs for well disposal is less stringent than for surface water. *See id.*

[105] *See id.*

tion.[106] Because the NPDES requires a discharger to possess a permit for discharge into "navigable waters," litigants have debated whether "navigable waters" include groundwater.[107] Although in the traditional sense groundwater is non-navigable, the CWA does not use the term "navigable waters" in that sense.[108] Rather, the CWA adopts a very broad interpretation of "navigable waters," defining them as "waters of the United States, including the territorial seas."[109] Thus, the CWA definition of "navigable waters" eliminates any requirement that the waters be navigable-in-fact.[110] To be protected under the CWA, waters merely need be "waters of the United States."[111]

The term "waters of the United States," in turn, has invited a variety of interpretations. Administrative interpretations of the term have taken a somewhat more limited view than the language implies.[112] In accord with the CWA's statutory authority,[113] the EPA and the Corps have issued identical regulations defining "waters of the United States."[114] Both the EPA's and the Corps's regulatory definition substantially narrow the expansive implications of "waters of the United States."[115] Although these regulations do not specifically ad-

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[106] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[107] *See infra* notes 141–92, 215–65, 282–315 and accompanying text.

[108] *See* The Daniel Ball, 77 U.S. (10 Wall.) 557, 563 (1870). The Court in *The Daniel Ball* found that navigable rivers were those rivers which were navigable-in-fact. *Id.* The Court imposed the additional requirement that the water be usable as a highway for commerce between states or foreign countries. *Id.* Thus, courts subsequently referring to navigable waters in the traditional sense make reference to this navigable-in-fact test of *The Daniel Ball*. *Id.*

[109] 33 U.S.C. § 1362(7) (1988).

[110] *See id.*

[111] *See supra* notes 107–10 and accompanying text.

[112] *See* 40 C.F.R. § 230.3(s)(3) (1994); 33 C.F.R. § 328.3(a)(3) (1994).

[113] 33 U.S.C. § 1361(a) (1988) gives the Administrator of the EPA the authority to "prescribe such regulations as are necessary to carry out his functions under this chapter." *Id.* 33 U.S.C. § 1341(c) grants authority to the Corps.

[114] *See* 40 C.F.R. § 230.3(s); 33 C.F.R. § 328.3(a).

[115] 40 C.F.R. § 230.3(s)(3); 33 C.F.R. § 328.3(a)(3). The full text of the EPA definition, which is identical to the Corps's definition, reads:

> [t]he term *waters of the United States* means:
>
> (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
>
> (2) All interstate waters including interstate wetlands;
>
> (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand-flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
>
> (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

dress groundwater, the regulations state that "waters of the United States" include "intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce."[116] The regulations do not, however, indicate whether this list is exclusive or, alternatively, whether this list cites only some of the types of waters that will be considered "waters of the United States."[117] Thus, the regulations do not answer definitively whether groundwater should be considered "waters of the United States."[118]

E. *Legislative History Regarding Groundwater and the Clean Water Act*

In CWA groundwater cases, courts often examine the legislative history of the CWA to determine whether Congress intended to include groundwater within the definition of "navigable waters."[119] The most frequently cited portion of this legislative history comes from the report of the Senate Committee on Public Works (Committee) on the CWA's applicability to groundwater which states, "[S]everal bills

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

(iii) Which are used or could be used for industrial purposes by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the United States under this definition;

(5) Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;

(6) The territorial sea;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

40 C.F.R. § 230.3(s)(3).

[116] *Id.*; 33 C.F.R. § 328.3(a)(3).

[117] *See* 40 C.F.R. § 230.3(s); 33 C.F.R. § 328.3(a).

[118] This Comment and relevant case law frequently use the terms "navigable waters" and "waters of the United States." When "navigable waters" is used in this Comment, it carries this broad, "waters of the United States" meaning, not the traditional, navigable-in-fact meaning.

[119] *See, e.g.*, Exxon Corp. v. Train, 554 F.2d 1310, 1325–29 (5th Cir. 1977); United States v. GAF Corp., 389 F. Supp. 1379, 1386 (S.D. Tex. 1975).

pending before the Committee provided authority to establish Federally approved standards for groundwaters which permeate rock, soil, and other subsurface formations. Because the jurisdiction regarding groundwaters is so complex and varied from State to State, the Committee did not adopt this recommendation."[120] The Committee recognizes the essential link between groundwater and surface waters and the artificial nature of any distinction. Thus the Committee bill requires in section 402 that each state include in its program for approval under section 402 affirmative controls over the injection or placement in wells of any pollutants that may affect groundwater. This scheme is designed to protect groundwaters and to eliminate the use of deep well disposal as an uncontrolled alternative to toxic and pollution disposal.[121] Courts deciding that groundwater is not "navigable water" cite to this passage as evidence that Congress acknowledged the impracticability of creating federal legislation to control groundwater pollution when rules governing groundwater substantially vary from state to state.[122]

In the House debate on the matter, Representative Les Aspin (D. Wisc.) advocated explicit groundwater protections.[123] In support of his amendment to bring groundwater within the permit provision of Title IV (NPDES), Representative Aspin pronounced:

> the amendment brings ground water into the subject of the bill, into the enforcement of the bill. Ground water appears, in this bill in every section, in every title except title IV. It is under the title which provides EPA can study ground water. It is under the title dealing with definitions. But when it comes to enforcement, title IV, the section on permits and licenses, then ground water is suddenly missing. That is a glaring inconsistency which has no point. If we do not stop pollution of ground waters through seepage and other means, ground water gets into navigable waters,

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[120] S. Rep. No. 414, 92d Cong., 1st Sess. 73 (1971), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3739

[121] *Id.*

[122] *See, e.g., Exxon*, 554 F.2d at 1325.

[123] Representative Aspin (D. Wisc.) recommendedthat the term "ground waters" should be included in the term "navigable waters." *Hearings on H.R. 11896 et al. before the House Committee on Public Works*, 92d Cong., 1st Sess. (1972), *reprinted in* LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, at 728 [hereinafter LEG. HIST.]. This would allow groundwater pollution to be regulated in the same manner as other water resources under the CWA. *Id.* Representative Aspin noted that sections 401 and 402 used the term "navigable waters," but failed to mention specifically groundwater. *Id.* at 127. He noted that groundwater specifically was mentioned in the other four titles of the bill, but was inexplicably lacking from title IV. *Id.*

> and to control only navigable waters and not the ground water makes no sense at all.[124]

Opponents of the Aspin Amendment argued that Congress determined that there was not sufficient information on groundwater to justify the types of controls proposed for "navigable waters."[125] After some debate, the House defeated the Aspin Amendment by a vote of 86 to 34.[126]

The Aspin Amendment, however, did not have the sole purpose of expressly mentioning groundwater in Title IV.[127] The Aspin Amendment also would have deleted exemptions for oil and gas well injections.[128] Several commentators have suggested that the oil and gas provisions rather than the inclusion of groundwater caused the Aspin Amendment's demise.[129] Furthermore, members of Congress simply may have assumed that groundwater was implicitly included in the definition of "navigable waters" in section 402, making the Aspin Amendment unnecessary.[130] Thus, the defeat of the Aspin Amend-

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[124] 118 CONG. REC. 10,666 (1972), *reprinted in* LEG. HIST., *supra* note 123, at 589 (remarks of Rep. Aspin).

[125] For example, Representative Clausen stated that not enough is known about groundwater to require such controls. *Id.* at 590–91 (remarks of Rep. Clausen (R. Cal.)). For other comments from the congressional debate, see *id.* at 596–97.

[126] *Id.* at 597.

[127] Wood, *supra* note 17, at 613–14.

[128] *See* LEG. HIST., *supra* note 123, at 589; United States Steel Corp. v. Train, 566 F.2d 822, 853 n.66 (7th Cir. 1977); *see also* Wood, *supra* note 17, at 613–14.

[129] *See* Wood, *supra* note 17, at 614 n.228 ("Since [inclusion of groundwater and elimination of the oil and gas exemption] were muddled in the debate, the rejection of the amendment does not necessarily indicate Congress's unwillingness to exempt all groundwater from federal regulation."); Alan W. Eckert, *EPA Jurisdiction Over Well Injection Under the Federal Water Pollution Control Act*, 9 NAT. RESOURCES L. 455, 457 (1976) ("[T]he tenacity of support for the 'oil and gas' exclusion . . . suggests that the opposition to the Aspin Amendment may have been primarily from the attempted tampering with that exclusion."); Note, *United States v. GAF Corp.: A Leak in the FWPCA?*, 6 ENVTL. L. 561, 564 n.23 (proposed elimination of oil and gas exemption "probably had a great deal to do with [the Aspin Amendment's] defeat").

[130] One commentator notes:

> [t]hough it is puzzling that section 402 does not refer to groundwater when other sections make simultaneous reference to groundwater and navigable water, this does not mean that all groundwater, or even some, falls outside section 402. First, section 402 does refer to wells, if not groundwater *per se*. By authorizing the states to control the disposal of pollutants into wells and by granting the federal government equivalent power, [footnote omitted] this section strongly suggests that groundwater is subject to federal regulation.
>
> Even if these other provisions indicate a legislative distinction between "groundwaters" and "navigable waters," it does not necessarily follow that tributary groundwater is excluded from regulation. Tributary groundwater is encompassed by the reference to navigable water . . . . The mention of groundwater in the other sections

ment does not necessarily imply that Congress had decided explicitly to exclude groundwater from the scope of Title IV.

The CWA's legislative history thus appears inconclusive on the intent of Congress in not expressly including groundwater in the definition of navigable waters. If the oil and gas exclusions had not been present in the Aspin Amendment, the Amendment's defeat may have revealed Congress's intent to exclude groundwater from the CWA's reach. Given the dual purpose of the Aspin Amendment, however, the Amendment's defeat cannot conclusively demonstrate Congress's intent to exclude groundwater.

There is no clear answer as to whether the CWA jurisdiction includes groundwater. The language of the CWA, the administrative interpretations of the language, and the CWA's legislative history are all inconclusive. Thus, the courts, in attempting to resolve the question, have adopted varying interpretations of the CWA language, administrative interpretations, and legislative history with predictably incongruous results.

III. Judicial Interpretation of Groundwater As "Navigable Waters" Under the Clean Water Act

There are now more than two decades worth of cases interpreting the meaning of "navigable waters" under the CWA. Courts have used a variety of approaches to the problem, focusing on the language of the CWA, the overarching goals of the CWA, the EPA's and the Corps's regulations, and the CWA's legislative history.[131] The cases addressed in this section discuss whether groundwater is part of "navigable waters" and whether certain surface waters should be included in the definition of "navigable waters."[132] The analysis used to determine whether a discharge into groundwater is a violation of the CWA frequently mirrors the analysis courts use to decide whether a discharge into surface waters is prohibited.[133] Many of the ground-

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of the Act could simply refer to isolated, nontributary groundwater. The legislative comments are simply inconclusive.

Wood, *supra* note 17, at 614–15.

[131] *See, e.g.*, United States v. Earth Sciences, Inc., 599 F.2d 368, 373 (10th Cir. 1979) (focusing primarily on the broad intent of the CWA); Exxon Corp. v. Train, 554 F.2d 1310, 1325–29 (5th Cir. 1977) (focusing primarily on the legislative history).

[132] *See supra* note 115.

[133] *See, e.g.*, *Earth Sciences*, 599 F.2d at 374–75 (discussing whether surface water is navigable water); United States v. Ashland Oil and Transp. Co., 504 F.2d 1317, 1325 (6th Cir. 1974) (discussing whether a tributary of a "navigable water" is itself "navigable water").

water cases cite to the surface water cases and analogize to their comparable factual situations.[134]

A. *Case Law Development and Theory*

1. Groundwater as "Navigable Waters:" General Judicial Approaches

Courts generally have excluded nontributary groundwater from the CWA's definition of "navigable waters."[135] Case law on the applicability of the CWA to groundwater is generally divided, however, when the underground water is alleged to be a tributary of a surface body of water that meets the definition of "navigable waters."[136]

The first major case addressing the scope of "navigable waters" was *United States v. Ashland Oil and Transportation Co.*, decided in 1974.[137] *Ashland* did not deal with groundwater; rather, *Ashland* addressed whether "navigable waters" encompassed a non-navigable tributary of a navigable river.[138] The United States Court of Appeals for the Sixth Circuit focused on the definition of "navigable waters" as "waters of the United States," concluding that the term applied to all bodies of water, including tributaries.[139] The court observed that the CWA would be a mockery if Congress's "authority to control pollution was limited to the bed of the navigable steam itself. The tributaries of the river could then be used as open sewers as far as federal regulation was concerned."[140] For the *Ashland* court, the answer was clear: "[p]ollution control of navigable streams can only be exercised *by controlling pollution of their tributaries*."[141] Thus, the *Ashland* court acknowledged the broad, new meaning of "navigable waters" and extended the term well beyond its traditional meaning.[142]

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[134] *See, e.g.*, Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 964–65 (7th Cir.), *cert. denied*, 115 S. Ct. 322 (1994); Sierra Club v. Colorado Refining Co., 838 F. Supp. 1428, 1433–34 (D. Colo. 1993), *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[135] *See, e.g., Exxon*, 554 F.2d at 1330; McClellan Ecological Seepage v. Weinberger, 707 F. Supp. 1182, 1193–94 (E.D. Cal. 1988).

[136] *See infra* notes 137–91 and accompanying text.

[137] *Ashland Oil*, 504 F.2d at 1318.

[138] *See id.*

[139] *Id.* at 1325.

[140] *Id.* at 1326.

[141] *Id.* at 1327 (emphasis added).

[142] *See Ashland Oil*, 504 F.2d at 1326.

While *Ashland* dealt with tributary surface waters,[143] cases acknowledging the tributary versus nontributary groundwater distinction also emerged shortly after the CWA's enactment. *United States v. Phelps Dodge Corp.*, for example, recognized tributary groundwater jurisdiction under the CWA.[144] In that case, the United States District Court for the District of Arizona looked to the legislative intent behind the CWA and concluded that Congress enacted the CWA "to eliminate or to reduce as much as possible *all water pollution* throughout the United States both surface and underground."[145] The court recognized the broad scope of "navigable waters" under the CWA: "control must extend to all pollutants which are discharged into *any waterway*, including normally dry arroyos,[146] where any water which might flow therein could reasonably end up in any body of water, to which or in which there is some public interest, *including underground waters*."[147] The court concluded that the definition of "navigable waters" or "waters of the United States" includes *any* waterway through which water may flow into public waters.[148] Tributary groundwater fits squarely within this definition.[149] The court thus focused on the final destination of the pollution, not the above- or below-ground locus of the conduit.

In other early cases courts also excluded nontributary groundwater from the CWA[150] but were hesitant to decide tributary groundwater's status.[151] *United States v. GAF Corp.*, for example, addressed a corporation's failure to obtain appropriate EPA permits for two deep wells it was drilling for the disposal of organic chemical wastes.[152] The United States District Court for the Southern District of Texas addressed whether or not the CWA applied to subsurface wells.[153] The court concluded that the disposal of wastes into "underground waters

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[143] *See id.*

[144] *See* United States v. Phelps Dodge Corp., 391 F. Supp. 1181, 1187 (D. Ariz. 1975).

[145] *Id.*

[146] An arroyo is a "small steep-sided watercourse or gulch with a nearly flat floor: usually dry except after heavy rains." RANDOM HOUSE COLLEGE DICTIONARY 76 (revised ed. 1984).

[147] *Phelps Dodge*, 391 F. Supp. at 1187 (second emphasis added).

[148] *Id.*

[149] *See id. Kentucky v. Train* similarly viewed the CWA as applying to tributary groundwater. 9 Env't Rep. Cas. (BNA) 1280, 1282 (E.D. Ky. 1976). *Kentucky v. Train* found that the CWA granted authority over all "waters of the United States," which include "any subsurface waters having a clear hydrological nexus with . . . waters of the United States . . . ." *Id.*

[150] *See* United States v. GAF Corp., 389 F. Supp. 1379, 1383 (S.D. Tex. 1975).

[151] *See* Exxon Corp. v. Train, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977).

[152] *See GAF*, 389 F. Supp. at 1380.

[153] *Id.* at 1383.

which have not been alleged to flow into or otherwise affect surface waters does not constitute a 'discharge of a pollutant'. . . ."[154] The court inquired into the legislative history surrounding the CWA[155] and concluded that Congress clearly did not authorize regulation of such disposal wells.[156] Thus, the *GAF* court's holding excluded nontributary groundwater from the CWA, but the court did not address whether or not tributary groundwater was covered.[157] By noting that the waters in question where not alleged to flow into surface waters, however, the court suggested that tributary and nontributary groundwater were subject to different treatment under the CWA.[158]

Similarly, the United States Court of Appeals for the Fifth Circuit acknowledged the possibility of different treatment for tributary and nontributary groundwater under the CWA in *Exxon Corp. v. Train.* However, that court also refrained from deciding whether tributary groundwater constituted "navigable waters."[159] In *Exxon*, the EPA attempted to assert its authority to regulate a corporation's disposal of waste water into former oil wells approximately 5,000 feet deep.[160] The corporation challenged the EPA's authority to regulate such subsurface disposal under the CWA.[161] Relying on an extensive inquiry into different sections of the CWA and its legislative history,[162] the court agreed with Exxon that the CWA did not grant the EPA the authority to regulate such disposals.[163] The *Exxon* court, like the *United States v. GAF* court, expressly limited its holding to nontributary groundwater: "[s]pecifically, EPA has not argued that the wastes disposed of into wells here do, or might, 'migrate' from groundwaters back into surface waters that concededly are within its regulatory jurisdiction. . . . We mean to express no opinion on what the result would be if that were the state of facts."[164] Thus, while the court

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[154] *Id.* (emphasis added); 33 U.S.C. § 1311(a) (1988 & Supp. V 1993) (stating "[e]xcept as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.").

[155] *GAF*, 389 F. Supp. at 1386.

[156] *Id.* at 1384–85.

[157] *See id.* at 1383.

[158] *See id.*

[159] Exxon Corp. v. Train, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977).

[160] *Id.* at 1313.

[161] *Id.* at 1314.

[162] *Id.* at 1317–29.

[163] *Id.* at 1330; United States v. GAF Corp., 389 F. Supp. 1379, 1383 (S.D. Tex. 1975).

[164] *Exxon Corp.*, 554 F.2d at 1312 n.1.

concluded that nontributary groundwater was outside the scope of the CWA, the tributary groundwater issue remained unanswered.[165]

Although *Exxon* did not resolve the tributary groundwater issue, later cases have used *Exxon* both to support and undermine tributary groundwater inclusion under the CWA. In *Kelley v. United States* (*Kelley I*),[166] for example, the United States District Court for the Eastern District of Michigan maintained a citizen suit under the CWA[167] for the discharge of toxic chemicals into groundwater.[168] Noting that the discharge was alleged ultimately to affect surface waters, the court concluded that:

> the Fifth Circuit concedes that wastes which migrate from groundwaters back into surface waters are within the EPA's regulatory jurisdiction. *Exxon Corp. v. Train*, 554 F.2d [at 1312 n.1.]. This Court believes that the type of pollution of "navigable waters" which plaintiff complains of in the instant case is encompassed by the Federal Water Pollution Control Act . . . ."[169]

Thus, although the *Exxon* opinion clearly stated that the court expressed no opinion on tributary groundwater jurisdiction under the

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[165] *Id.* Other courts have followed the *Exxon* and *GAF* example by not directly deciding the tributary groundwater issue. *New York v. United States*, for example, addressed the chemical contamination of groundwater below a former air force base and the surrounding area. 620 F. Supp. 374, 375 (E.D.N.Y. 1985). The defendant argued that the CWA did not apply to discharges into groundwater, but only to pollution of navigable waterways. *Id.* at 381. The United States District Court for the Eastern District of New York declined to reach the defendant's argument because "it is clear that plaintiff has alleged that the pollutants threaten to contaminate . . . undisputably navigable waters." *Id.* Thus, the *New York* court avoided ruling on the groundwater issue. *Id.*

In *Town of Norfolk v. United States Corps of Engineers*, the United States Court of Appeals for the First Circuit deferred to the Corps's judgment and concluded that the CWA did not cover tributary groundwater. 968 F.2d 1438, 1451 (1st Cir. 1992). *Norfolk* addressed the Corps's attempts to construct a landfill. *Id.* at 1442. One of plaintiff's arguments was that the Corps failed to consider the possible impacts of the landfill on groundwater. *Id.* at 1450–51. The court stated that while the Corps's definition of groundwater does not address specifically whether groundwater is a part of "waters of the United States," the Corps has interpreted the definition to apply only to surface water. *Id.* at 1450. The First Circuit acknowledged that other courts have questioned whether groundwater should be covered if hydrologically connected to surface waters. *Id.* at 1451 (citing *Inland Steel Co. v. EPA*, 901 F.2d 1419, 1422 (7th Cir. 1990); McClellan Ecological Seepage v. Weinberger, 707 F. Supp. 1182, 1193–94 (E.D. Cal. 1988)). The court concluded, however, that because the determination involved an ecological judgment about the relationship between surface waters and groundwaters, the determination should be left to the EPA and the Corps. *Norfolk*, 968 F.2d at 1451.

[166] *Kelley I*, No. 79–10199 (E.D. Mich. Oct. 28, 1980).

[167] 33 U.S.C. § 1365 (1988 & Supp. V 1993) (authorizing citizens suits).

[168] *Kelley I*, No. 79–10199, slip op. at 2.

[169] *Id.* at 3.

CWA,[170] *Kelley I* interpreted *Exxon* as including tributary groundwaters within the EPA's jurisdiction.[171]

A second, unrelated case, *Kelley v. United States*, (*Kelley II*) reached the opposite conclusion.[172] Relying heavily on *Exxon*, the United States District Court for the Western District of Michigan held that groundwater was not a part of the "waters of the United States."[173] The plaintiffs alleged that toxic chemicals had been released into the ground at the United States Coast Guard Station in Traverse City, Michigan.[174] These chemicals contaminated groundwater and traveled through the groundwater towards the town and eventually into surface waters.[175] Defendants maintained that Congress did not intend for the CWA to cover groundwater because no mention of groundwater was made in most of the statutory provisions, including section 301(a).[176] The court delved into the CWA's legislative history and agreed with the defendants' interpretation of the statute.[177] Furthermore, the court concluded that *Kelley I* had misinterpreted *Exxon Corp. v. Train*.[178] The court in *Kelley II* explained that the *Exxon* decision did not concede that contaminated groundwater that eventually migrates into "navigable waters" is subject to the regulatory provisions of the CWA, but *Kelley II* stated that the *Exxon* case rather "express[ed] no opinion on what the result would be [under the CWA] if that were the state of facts."[179] *Kelly II* thus concluded that the remainder of the *Exxon* opinion and the "unmistakably clear legislative history" demonstrated that Congress did not intend to exert its authority over groundwater in the CWA.[180]

Some courts have held that the potential for groundwater to be tributary to surface waters may be enough to bring groundwater within the scope of the CWA. In *McClellan Ecological Seepage Situation v. Weinberger*, the United States District Court for the Eastern District of California held that Congress did not intend to require

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[170] Exxon Corp. v. Train, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977).

[171] *See Kelley I*, 79–10199, slip op. at 3; *see also Exxon*, 554 F.2d at 1312 n.1.

[172] *Kelley II*, 618 F. Supp. 1103, 1107 (W.D. Mich. 1985).

[173] *See id.*; *see also Exxon*, 554 F.2d at 1312 n.1.

[174] *Kelley II*, 618 F. Supp. at 1104.

[175] *Id.* at 1105.

[176] *Id.* Section 301(a) makes discharge of any pollution illegal if not made in compliance with the provisions of the CWA. 33 U.S.C. § 1311(a) (1988).

[177] *Kelley II*, 618 F. Supp. at 1105–06.

[178] *Id.* at 1106; *see* Exxon Corp. v. Train, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977).

[179] *Kelley II*, 618 F. Supp. at 1107 (citing *Exxon*, 554 F.2d at 1312 n.1).

[180] *Id.*

NPDES permits for discharges of pollutants to isolated groundwater.[181] The court also concluded, however, that permits might be required for discharges into groundwater that has a direct hydrological connection to surface waters that themselves constitute "navigable waters."[182] The court placed the burden of proof on the plaintiff, stating that the CWA claim would succeed only if the plaintiff could prove the existence of a natural connection between the groundwater and surface waters.[183]

After additional discovery, the court denied the government's motion for summary judgment in *McClellan Ecological Seepage Situation v. Cheney*.[184] The additional evidence showed that the waste pits did not discharge pollutants through the groundwater into "navigable waters."[185] Heavy pumping of groundwater caused groundwater in the area to move away from nearby "navigable waters."[186] Hydrologic experts for both sides agreed that without heavy pumping, the groundwater would move towards the surface waters.[187] The court indicated that it was not prepared to rule that the groundwater was outside of the scope of the CWA just because the groundwater was not presently migrating into "navigable waters."[188] The court stated:

> this court is very much concerned that if it were to grant summary judgment in favor of the Government at this time, it might inadvertently send out a signal that even where there is a natural hydrological connection between groundwater and surface waters, a manmade or artificially created process that temporarily interrupts that hydrological connection can serve to negate the permitting requirements of the Clean Water Act.[189]

The court thus concluded that it was necessary to determine whether the seepage had a "reasonably foreseeable and temporally imminent effect on surface waters of the United States."[190] Accordingly, the court denied the defendant's motion for summary judgment.[191]

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[181] McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988).

[182] *Id.*

[183] *See id.*

[184] 763 F. Supp. 431, 438 (E.D. Cal. 1989).

[185] *See id.* at 437.

[186] *Id.*

[187] *Id.*

[188] *Id.*

[189] *McClellan*, 763 F. Supp. at 437.

[190] *Id.*

[191] *Id.* at 438.

Thus, judicial approaches to groundwater under the CWA have been far from uniform.[192] The only consensus reached among the courts has been that the CWA does not cover nontributary groundwater.[193]

2. Wetlands as "Navigable Waters"

"Navigable waters" under the CWA frequently are discussed in cases addressing wetlands. As in CWA groundwater cases, courts in CWA wetlands cases must determine the extent of "navigable waters." CWA wetlands cases frequently engage in a similar analysis of "navigable waters," examining the CWA language, intent, legislative history, and regulations. The reasoning used in the wetlands cases is thus directly analogous to groundwater cases.

In *United States v. Riverside Bayview Homes, Inc.*, the United States Supreme Court concluded that, based on the broad intent of the CWA, wetlands are "waters of the United States."[194] The Court acknowledged CWA jurisdiction over wetlands and specifically addressed the Corps's definition of wetlands.[195] While noting that wetlands are not appropriately categorized as either "waters" or "lands," the Court concluded that the broad goal of the CWA to combat pollution of the nation's waters required the inclusion of wetlands under the CWA.[196] Including wetlands promotes this goal because wetlands often filter and purify water that drains into adjacent water bodies.[197] The Court determined that the Corps's definition of wetlands relied on the fact that there are ecological and groundwater connections between wetlands and "navigable waters."[198]

In *Deltona Corp. v. United States*, the United States Court of Claims accepted the Corps's view that adjacent wetlands were "navi-

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[192] *See, e.g.*, Exxon Corp. v. Train, 554 F.2d 1310, 1330 (5th Cir. 1977); McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182, 1193–94 (E.D. Cal. 1988).

[193] *Compare Kelley II*, 618 F. Supp. 1103, 1107 (W.D. Mich. 1985) (excluding tributary groundwater from the CWA) *with Kelley I*, No. 79–10199, slip op. at 2–3 (E.D. Mich. Oct. 28, 1980) (including tributary groundwater within the CWA); *see supra* notes 164–78 and accompanying text.

[194] United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985). For an extensive discussion of *Riverside*, see generally Guy V. Manning, *The Extent of Groundwater Jurisdiction Under the Clean Water Act After Riverside Bayview Homes*, 47 LA. L. REV. 859 (1987).

[195] *Riverside*, 474 U.S. at 132–33.

[196] *Id.*

[197] *Id.* at 134. Such reasoning also supports applying the CWA to groundwater because it serves many of the same environmentally stabilizing functions as groundwater. *See* PROTECTING THE NATION'S GROUNDWATER, *supra* note 5, at 5.

[198] *Riverside*, 474 U.S. at 134–35.

gable waters" that should receive the benefit of CWA protections.[199] The court looked to Congress's language in defining "navigable waters" as "waters of the United States" and determined that Congress intended this language to be interpreted broadly.[200] "In other words, the intent was to cover, as much as possible, all waters of the United States instead of just some."[201]

CWA wetlands cases are thus very similar to CWA groundwater cases. In wetlands cases, courts determine whether wetlands should be considered "navigable waters" and look to the intent of the CWA when making this determination. Many CWA groundwater cases utilize this same approach.[202] The wetlands cases provide another example of how courts have focused on the intent of the CWA to interpret "navigable waters" broadly.[203]

B. *The Seventh Circuit Approach*

1. Case Law Development

The interpretation of the CWA adopted by the United States Court of Appeals for the Seventh Circuit represents the evolution of that circuit's approach to "navigable waters" under the CWA. In both wetlands and groundwater cases, the Seventh Circuit began with a broad interpretation of "navigable waters," but recently has articulated a more constricted view of the term.

United States v. Byrd demonstrates the Seventh Circuit's initially broad interpretation of "navigable waters" in the wetlands context.[204] *Byrd* addressed the defendant's filling of wetlands without appropriate Corps permits.[205] The court determined that "navigable waters" comprise all waters within the confines of the United States and thus include wetlands.[206] The *Byrd* court focused on the broad intent of

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[199] *See* Deltona Corp. v. United States, 657 F.2d 1184, 1186 (Cl. Ct. 1981).

[200] *Id.*

[201] *Id.*

[202] *See, e.g.*, McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182, 1194 (E.D. Cal. 1988); United States v. Phelps Dodge Corp., 391 F. Supp. 1181, 1187 (D. Ariz. 1975).

[203] *See, e.g.*, United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 132–33 (1985); *Deltona*, 657 F.2d at 1186–87.

[204] United States v. Byrd, 609 F.2d 1204, 1209 (7th Cir. 1979).

[205] *Id.* at 1206.

[206] *Id.* at 1209 (citing United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1317 (6th Cir. 1974)).

the CWA when interpreting "navigable waters" and determined that "navigable waters" included wetlands.[207]

More recently, *Hoffman Homes, Inc. v. Administrator* addressed whether a developer's act of filling certain wetlands required an NPDES permit.[208] The parties conceded that the area in question—a small one-acre wetland not directly connected to any other body of water—was categorized properly as a wetland.[209] Petitioner, Hoffman Homes, however, argued that the CWA did not reach this type of small, isolated wetland.[210] The court looked to the EPA's definition of "waters of the United States," and determined that the use of the word "could"[211] indicated that waters with merely potential connections to interstate commerce were covered.[212] Despite this seemingly expansive interpretation of the EPA regulation, the court determined that the wetland was not covered by the CWA because the Corps failed to prove that migratory birds stopped at the wetland, and therefore the requisite connection to interstate commerce was lacking.[213] This opinion narrows the expansive interpretation of *United States v. Byrd* by requiring a specific connection between the water body and interstate commerce.[214]

United States Steel Corp. v. Train was the United States Court of Appeals for the Seventh Circuit's first major case on the issue of groundwater as "navigable waters," and the court adopted a broad interpretation of the CWA.[215] *Train* involved a challenge to an NPDES permit that limited the United States Steel Corporation's (U.S. Steel) disposal of pollutants into deep wells.[216] Citing *United States v. GAF Corp.*[217] and the legislative history of the CWA, U.S. Steel argued that

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[207] *See Byrd*, 609 F.2d at 1209.

[208] Hoffman Homes, Inc. v. Administrator, 999 F.2d 256, 258 (7th Cir. 1993).

[209] *Id.* at 258, 260.

[210] *See id.*

[211] *See* 40 C.F.R. § 230.3(s)(3); 33 C.F.R. § 328.3(a)(3). "Could" is used repeatedly in the regulation, referring to waters which "are or could be" used by interstate travelers, or to waters "from which shellfish are or could be taken." *See supra* note 115.

[212] *Hoffman*, 260 F.2d at 261.

[213] *See id.* at 261–62. The concurring opinion by Circuit Judge Manion agreed that the CWA did not cover the area in question. *Id.* at 262 (Manion, J. concurring). Judge Manion stated that regulation of isolated wetlands does not further the CWA's intent and stated that the CWA would not apply even if the Commerce Clause allowed isolated wetland regulation. *Id.* at 263 (Manion, J. concurring). Thus, isolated wetlands should not fall within CWA jurisdiction. *See id.*

[214] *See id.* at 261–62; *see generally* United States v. Byrd, 474 U.S. 121 (1985).

[215] *See* United States Corp. v. Train, 556 F.2d 822, 852 (7th Cir. 1977).

[216] *See id.* at 851–52.

[217] *See supra* notes 150–56 and accompanying text.

the EPA had no authority to control such disposal.[218] The court disagreed, stating "[the CWA] authorizes EPA to regulate the disposal of pollutants into deep wells, at least when the regulation is undertaken in conjunction with limitations on the permittee's discharges into surface waters."[219]

U.S. Steel argued that the deep wells were not connected to surface waters.[220] The court, however, stated that the EPA could have concluded "that too little is known about the effects of discharges into ground waters to justify allowing increases in them."[221] The court also rejected the *United States v. GAF Corp.* court's view that the legislative history, particularly the defeat of the Aspin Amendment, indicated that the EPA did not have authority over deep well injections.[222] The court noted that the amendment's oil and gas exclusion had led to the amendment's defeat, and this defeat should not be interpreted to exclude groundwater from the CWA.[223]

In 1990, the Seventh Circuit again addressed groundwater jurisdiction under the CWA in *Inland Steel Co. v. EPA*.[224] *Inland* addressed deep disposal wells that clearly were not connected hydrologically to navigable waters.[225] The court found that the CWA was intended to protect navigable waters and that injection of waste more than a quarter mile below the deepest known aquifer was not a discharge into navigable waters.[226] The court next proposed three possible effects of the disposal of pollutants through deep injection wells.[227] First, a well might end in "navigable waters," but the court dismissed this

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[218] *U.S. Steel*, 556 F.2d at 851–52.

[219] *Id.* at 852. The court independently concluded that the legislative history supported its interpretation of the statute. *Id.* The court cited Senator Muskie (D. Maine), who stated: "The Conferees intend that this provision [§ 502(6)(B)] assure that no injection or disposal occur in such a manner as to present a potential hazard to ground water quality." *Id.* The court also cited statements by Representative Kemp: "[f]or the first time ground waters have been give the same emphasis as surface waters . . . [the CWA is] an important step forward in the protection of the underground environment . . . ." *Id.* at 852–53.

[220] *See id.* at 852 n.61.

[221] *Id.*

[222] *Id.* at 853 n.66; *see supra* notes 122–29 and accompanying text.

[223] *U.S. Steel*, 556 F.2d at 853 n.66; *see supra* notes 122–29 and accompanying text.

[224] 901 F.2d 1419, 1422–23 (7th Cir. 1990).

[225] *Id.* at 1420.

[226] *Id.* at 1422. The court in *Inland* did not enclose navigable waters in quotations as other courts consistently have done. Other courts apparently set the term off in quotes to highlight the fact that "navigable waters" refers to a statutory definition and not waters that are navigable-in-fact. The *Inland* court's failure to do so may mean that it is using navigable waters in this traditional, navigable-in-fact sense.

[227] *Id.* at 1422–23.

possibility since the wells in question did not.[228] Second, a well connected to surface waters through groundwaters might be subject to regulation under the CWA.[229] Third, waters leaking through the upper casing of a well could pollute navigable waters directly, without the conduit of groundwater.[230] The court noted that the EPA believed that this possibility was too tenuous to subject deep injection wells to CWA jurisdiction.[231]

The court referred to its declaration in *United States Steel Corp. v. Train* that too little was known about deep injection wells to require the EPA to disregard the possibility that wastes discharged into these wells could find their way into "navigable waters."[232] *Inland* thus acknowledged the possibility that deep well disposal might be regulated under the CWA if the waters at the bottom of these wells were connected to surface waters.[233] The court declined, however, to rule on this issue because the wells in question were not so connected.[234]

2. *Village of Oconomowoc Lake v. Dayton Hudson Corp.*

In 1994, in the case of *Village of Oconomowoc Lake v. Dayton Hudson Corp.*, the Seventh Circuit revisited the issue of whether the CWA's provisions applied to tributary groundwater.[235] The court held that the CWA did not prevent discharges into groundwater from an artificial retention pond despite the possibility of a hydrological connection between the ground and surface waters.[236] In reaching its conclusion, the court relied on case law, the language and legislative history of the CWA, and the EPA's regulatory definition of "waters of the United States."[237]

The defendant, Dayton Hudson Corporation (Dayton Hudson), owned Target Stores, a retail chain that was constructing an 110-acre distribution warehouse facility in Oconomowoc, Wisconsin.[238] Dayton Hud-

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[228] *Id.* at 1422.

[229] *Inland*, 901 F.2d at 1422–23. The court noted that this is an unresolved question that it did not need to decide because the wells here were not connected to surface waters. *Id.*

[230] *Id.* at 1423.

[231] *Id.*

[232] *Id.* (citing United States Steel Corp. v. Train, 556 F.2d 822, 852 n.61 (7th Cir. 1977)).

[233] *Id.* at 1422–23.

[234] *See Inland*, 901 F.2d at 1422–23.

[235] *See* Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 965 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994).

[236] *See id.* at 965–66.

[237] *Id.*

[238] *Id.* at 963–64.

son designed a six-acre artificial retention pond to collect the rainwater runoff from the facility, which included twenty-five acres of paved parking.[239] The trucks used to transport goods to and from the warehouse naturally would drip oil on the parking lot, and this oil would collect in the pond along with storm water runoff.[240] The pond was designed to retain oil and other pollutants while "exfiltrating" the water into the ground.[241]

The Village of Oconomowoc Lake (Village), a nearby municipality, feared that the retention pond would allow hydrocarbons and other pollutants to contaminate the Village's groundwater.[242] The Village thus attempted to prevent the construction by alleging violations of the Clean Air Act[243] and the CWA because the necessary permits were not obtained.[244] Specifically, the Village claimed that construction of the warehouse facility required an NPDES permit because the defendant intended to discharge runoff from the retention pond into the groundwater that would migrate into nearby surface waters and wetlands.[245]

In the United States District Court for the Eastern District of Wisconsin, Dayton Hudson claimed that the Village had failed to state a CWA claim because the storm water would only discharge into groundwater, which is not included in the definition of "waters of the United States."[246] The district court agreed with this argument, finding support in *Kelley II*, which held that the CWA did not cover groundwater contamination.[247] The district court rejected the Village's attempt to distinguish *Kelley II* by arguing that the polluted storm water would migrate into nearby wetlands and surface waters.[248] The court found that *Kelley II*'s facts were very similar to the instant case because the plaintiffs in *Kelley II* also had alleged that polluted groundwater would migrate into surface waters.[249] The court found

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[239] *Id.* at 964.

[240] *Oconomowoc Lake*, 24 F.3d at 963.

[241] *Id.* at 964.

[242] *Id.* at 963.

[243] *Id.* The Clean Air Act claim was dismissed because "vehicular emissions are not attributed to the buildings served as points of origin or destination." *Id.* at 964.

[244] Village of Oconomowoc Lake v. Dayton-Hudson Corp., No. CIV.A.93-C-0797, 1993 U.S. Dist. LEXIS 20058, at *1 (E.D. Wis. Sep. 24, 1993), *affirmed*, 24 F.3d 962, *cert. denied*, 115 S.Ct. 322 (1994).

[245] *Id.* at *9.

[246] *Id.*

[247] *Id.* at *9–*10 (citing *Kelley II*, 618 F. Supp. 1103, 1105–07 (W.D. Mich. 1985)); *see supra* notes 170–78 and accompanying text.

[248] *Oconomowoc*, 1993 U.S. Dist. LEXIS 20058, at *10.

[249] *Id.*

that the decision in *Kelley II* supported its conclusion that "[t]he fact that groundwater pollution will eventually migrate into waters of the United States does not, therefore, bring such pollution within the terms of the CWA."[250] Thus, the district court dismissed the CWA complaint for lack of subject matter jurisdiction.[251]

The United States Court of Appeals for the Seventh Circuit affirmed the district court's holding.[252] The circuit court, like the district court, identified the main issue in the case as the scope of the term "waters of the United States."[253] Although the court acknowledged that the CWA is a broad statute that may reach waters that are not navigable, the court noted that the CWA does not impose federal authority over every drop of water.[254]

Additionally, the circuit court focused on the EPA's regulatory definition of "waters of the United States."[255] The court observed that the proposed pond would be artificial while the EPA's definition speaks only of "natural" ponds.[256] The court declared that the EPA's definition of "waters of the United States" would not even cover a one-acre wetland 750 feet from a small creek.[257] Thus, the court concluded that an artificial retention pond farther from surface waters could not possibly fall within the CWA's jurisdiction.[258] Although the EPA has noted the potential connection between underground waters and surface waters,[259] the court stated that "collateral reference to a problem is not a satisfactory substitute for focused attention in rule-making or adjudication."[260]

The Seventh Circuit also concluded that the legislative history of the CWA demonstrated that the omission of groundwater from the

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[250] *Id.*

[251] *Id.* at *1–*2.

[252] Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 966 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994).

[253] *See id.* at 963.

[254] *Id.* at 964–65. The court makes reference to Justice Story's view that every drop of water is subject to federal regulation, noting that "'It was said of the late Justice Story, that if a bucket of water were brought into his court with a corn cob floating in it, he would at once extend the admiralty jurisdiction of the United States over it.'" *Id.* at 965 (citing Note, 37 AM. L. REV. 911, 916 (1903)).

[255] *Oconomowoc*, 24 F.3d at 965.

[256] *Id.*; *see also supra* note 115.

[257] *Oconomowoc*, 24 F.3d at 965 (citing Hoffman Homes, Inc. v. Administrator, 999 F.2d 256, 260–61 (7th Cir. 1993)); *see supra* notes 208–14 and accompanying text.

[258] *Id.* at 965.

[259] *Id.* at 965–66 (citation omitted).

[260] *Id.* at 966.

scope of the CWA was intentional rather than an oversight.[261] The court noted that Congress had proposed adding groundwater to the scope of the CWA, but that such proposals were consistently defeated.[262] The court also noted the oft-cited statement from the Senate Committee on Public Works, disfavoring CWA authority over groundwater "[b]ecause the jurisdiction regarding groundwaters is so complex and varied from State to State."[263] The court concluded that "[a]s the statute and regulations stand, however, the federal government has not asserted a claim of authority over artificial ponds that drain into ground waters."[264]

Oconomowoc thus solidified the Seventh Circuit's restrictive approach to groundwater under the CWA. While *United States Steel Corp. v. Train* and *Inland Steel Co. v. EPA* left the tributary groundwater issue unresolved,[265] *Oconomowoc* excluded even tributary groundwater from the CWA.[266]

C. *The Tenth Circuit's Approach*

1. Case Law Development

The United States Court of Appeals for the Tenth Circuit also has addressed the extent of "navigable waters" under the CWA. Unlike the Seventh Circuit, however, the Tenth Circuit consistently has interpreted "navigable waters" broadly.

United States v. Earth Sciences, Inc. addressed a gold-leaching operation that discharged toxic solutions containing cyanide into the Rito Seco Creek.[267] The court examined whether the Rito Seco was a "navigable water" under the CWA.[268] The court stated that "[i]t seems clear Congress intended to regulate discharges made into *every creek, stream, river or body of water that in any way may affect interstate commerce.* Every court to discuss the issue has used a commerce power approach and agreed upon that interpretation."[269] The court

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[261] *Id.* at 965; *see also supra* notes 120–21 and accompanying text.

[262] *Oconomowoc*, 24 F.3d at 965.

[263] *Id.* (citing S. Rep. No. 414, 92d Cong., 1st Sess. 73 (1971), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3739); *see supra* notes 120–21 and accompanying text.

[264] *Oconomowoc*, 24 F.3d at 966.

[265] *See* Inland Steel Co. v. United States, 901 F.2d 1419, 1422 (7th Cir. 1990); United States Steel Corp. v. Train, 556 F.2d 822, 851–52 (7th Cir. 1977).

[266] *Oconomowoc*, 24 F.3d at 965.

[267] United States v. Earth Sciences, Inc., 599 F.2d 368, 370–71 (10th Cir. 1979).

[268] *Id.* at 373–75.

[269] *Id.* at 375 (emphasis added).

cited the legislative history of the CWA from the Senate, which stated that waters of the United States should "be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes."[270] The court adopted this broad interpretation of the CWA and "navigable waters" and thus held that the CWA applied to a creek that was not navigable-in-fact.[271]

Shortly after the *Earth Sciences* decision, the Tenth Circuit addressed "navigable waters" again in *United States v. Texas Pipe Line Co.*[272] In that case, the court considered discharges from an oil pipeline into a sporadically flowing tributary of the Red River.[273] Here, the court followed the reasoning of *Earth Sciences* and held that there was a discharge into a "navigable water."[274] Even though the tributary barely was flowing at the time of the discharge, the court determined that the discharge would flow into the Red River during a significant rainfall.[275] The court again based its holding on its perception of the intent of the CWA—to "cover all tributaries to waters like the Red River."[276]

Quivira Mining Co. v. United States EPA continued the Tenth Circuit's broad interpretation of the CWA.[277] Quivira Mining Company (Quivira) discharged pollutants into Arroyo del Puerto and San Mateo Creek in New Mexico.[278] Quivira argued that these discharges fell outside the jurisdiction of the CWA because the creek and arroyo were not "waters of the United States."[279] The court, while acknowledging that neither the Arroyo del Puerto or San Mateo Creek were navigable in fact, disagreed:

> surface flow occasionally occurs, at times of heavy rainfall, providing a surface connection with navigable waters independent of the

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[270] *Id.* at 375 (citing S. CONF. REP. No. 92-1236, 92d Cong., 2d Sess., *reprinted in* 1972 U.S.C.C.A.N 3668, 3822).

[271] *See Earth Sciences*, 599 F.2d at 375. The court found the mining operation to be a "point source" under the CWA. The court did not address the fact that some of the contaminants reached the creek through groundwater; rather, the court simply focused on the fact that this was a point source. *Id.* at 584.

[272] *See* 611 F.2d 345, 346 (10th Cir. 1979).

[273] *Id.*

[274] *See id.* at 347; *see also Earth Sciences*, 599 F.2d at 375.

[275] *Texas Pipe Line Co.*, 611 F.2d at 347.

[276] *Id.* The court also noted that "Congress did not in this Act use the term 'navigable waters' in the traditional sense; Congress intended to extend the coverage of the act as far as permissible under the Commerce Clause." *Id.*

[277] Quivira Mining Co. v. United States EPA, 765 F.2d 126, 129 (10th Cir. 1985).

[278] *Id.* at 127.

[279] *Id.*

> underground flow. Additionally, the waters of the Arroyo del Puerto and San Mateo Creek soak into the earth's surface, become part of the underground aquifers, and after a lengthy period, perhaps centuries, the underground water moves toward eventual discharge at Horace Springs or the Rio San Jose.[280]

The court focused on the intermittent flow of the Arroyo del Puerto and San Mateo Creek into indisputably "navigable waters" as its primary justification for including the two bodies of water within the CWA's scope.[281] The court also mentioned the underground flow but did not address the issue of whether the underground flow alone would be enough to bring the waters under the jurisdiction of the CWA.[282]

2. *Sierra Club v. Colorado Refining Co.*

In 1994, *Sierra Club v. Colorado Refining Co.* addressed the applicability of the CWA to tributary groundwater.[283] The United States District Court for the District of Colorado analyzed the CWA using the CWA's statutory language and legislative history and an extensive investigation of case law.[284] The district court concluded that a discharge into groundwater that reaches "navigable waters" is prohibited by the CWA.[285]

Sierra Club alleged that Colorado Refining Company's (CRC's) unpermitted discharges into Sand Creek violated section 301 of the CWA.[286] Specifically, Sierra Club alleged that CRC illegally had discharged refinery pollutants without a permit into Sand Creek in Adams County, Colorado.[287] CRC responded that groundwater discharges are not regulated by the CWA, even if the pollution discharged into the groundwater eventually may migrate through the groundwater into surface waters.[288] CRC claimed that Sierra Club's first cause of action rested solely on allegations that the refinery contaminated groundwa-

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[280] *Id.* at 129.

[281] *See id.*

[282] *See Quivira Mining Co.*, 765 F.2d at 129.

[283] Sierra Club v. Colorado Refining Co., 838 F. Supp. 1428, 1433 (D. Colo. 1993), *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[284] *Id.* at 1432–34.

[285] *Id.* at 1434.

[286] *Id.* at 1431 (citing 33 U.S.C. § 1311(a)). Sierra Club also alleged that CRC's discharges to Sand Creek violated CRC's NPDES permits and the CWA and that CRC's failure to determine the impact of discharges on Sand Creek violated the CWA. *Id.* at 1429–30.

[287] *Id.* at 1431.

[288] *Sierra Club*, 838 F. Supp. at 1432.

ter that would flow into Sand Creek.[289] The groundwater, Sierra Club alleged, became contaminated from oil spills and leaks at the refinery and was migrating into Sand Creek itself.[290] Sierra Club maintained that it had made several allegations that CRC was discharging directly into Sand Creek as well as into the groundwater.[291] Regardless, the court ruled that it was unclear whether Sierra Club alleged that discharges were made directly into Sand Creek and concluded that at least part of the first cause of action alleged discharges that reached Sand Creek through the soil and groundwater.[292] The district court therefore determined that it "must decide whether the [CWA's] prohibition of the discharge of any pollutant into 'navigable waters' encompasses discharges which reach 'navigable waters' through groundwater."[293]

The court began its discussion by noting that some courts unequivocally have excluded nontributary groundwater from the CWA.[294] Tributary groundwaters that migrate groundwater back into surface water have not been so categorically excluded, and the court conducted an investigation of the case law on tributary groundwater.[295]

First, the district court distinguished the cases CRC relied on in arguing that groundwater discharges are not prohibited by the CWA.[296] The *Sierra Club* court noted that the holding in *Exxon Corp. v. Train* expressly was limited to nontributary groundwater.[297] The court also distinguished *United States v. GAF Corp.*, which found no violation of the CWA because the groundwater was not alleged to affect surface waters.[298] The court also noted that *United States Steel Corp. v. Train* highlighted the distinction between tributary and nontributary groundwater and held that the EPA can regulate disposal into deep wells, at least when the regulation occurs in conjunction with limitations on discharges into surface waters.[299]

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[289] *Id.*

[290] *Id.*

[291] *Id.*

[292] *Id.*

[293] *Sierra Club*, 838 F. Supp. at 1432.

[294] *Id.*

[295] *Id.* at 1432–34.

[296] *See id.* at 1432.

[297] *Id.*; *see also supra* notes 157–69 and accompanying text.

[298] *Sierra Club*, 838 F. Supp. at 1432 (citing United States v. GAF Corp., 389 F. Supp. 1379, 1383 (S.D. Tex. 1975)).

[299] *Sierra Club*, 838 F. Supp. at 1432; *see also supra* notes 215–23 and accompanying text.

The court then examined the contradictory holdings in CWA groundwater case law.[300] *Kelley I*, for example, interpreted *Exxon* as acknowledging the EPA's jurisdiction over wastes that migrate from groundwaters to surface waters.[301] *Kelley II* reached the opposite conclusion, however, and the court noted that it "relied considerably on the opinion in *Exxon*, despite that court's distinction between tributary and nontributary groundwater."[302] *McClellan v. Weinberger* concluded that groundwater was within the scope of the CWA if it was naturally connected to surface waters.[303] *New York v. United States* also appeared to assume applicability of the CWA to groundwater, declining to address whether the CWA applied to groundwaters because it was clear the alleged pollutants threatened to contaminate indisputably "navigable waters."[304] The court also noted that *Inland Steel Co. v. EPA* "tentatively" acknowledged that the legal concept of "navigable waters" might include groundwaters connected to surface waters.[305] *Town of Norfolk v. United States Corps of Engineers*, on the other hand, concluded that deference should be given to the Corps's interpretation that the CWA applies only to surface waters.[306]

After reviewing these cases and their respective holdings, the *Sierra Club* court acknowledged that the case law clearly was in conflict on whether "navigable waters" included groundwater and that there was little Tenth Circuit authority on the matter.[307] The court noted, however, that in *United States v. Earth Sciences* and *Quivira Mining Co. v. United States EPA*, the Tenth Circuit broadly interpreted the scope of the CWA.[308] Although *Earth Sciences* did not deal with groundwater,[309] the *Sierra Club* court concluded that the *Earth Sciences* court's observations were still pertinent, particularly its conclu-

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[300] *See Sierra Club*, 838 F. Supp. at 1433.

[301] *Id.* (citing *Kelley I*, No. 79–10199, slip op. at 3 (E.D. Mich. Oct. 28, 1980)); *see also supra* notes 165–69 and accompanying text.

[302] *Sierra Club*, 838 F. Supp. at 1433 (citing *Kelley II*, 618 F. Supp. 1103, 1107 (W.D. Mich. 1985)).

[303] *Sierra Club*, 838 F. Supp. at 1433 (citing McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182 (E.D. Cal. 1988)); *see also supra* notes 179–82 and accompanying text.

[304] *Sierra Club*, 838 F. Supp. at 1433 (citing New York v. United States, 620 F. Supp. 374 (E.D.N.Y. 1985)); *see also supra* note 164.

[305] *Sierra Club*, 838 F. Supp. at 1433 (citing Inland Steel Co. v. EPA, 901 F.2d 1419, 1422 (7th Cir. 1990)); *see also supra* notes 224–37 and accompanying text.

[306] *Sierra Club*, 838 F. Supp. at 1433 (citing Town of Norfolk v. United States Corps of Engineers, 968 F.2d 1438, 1451 (1992)); *see also supra* note 163.

[307] *Sierra Club*, 838 F. Supp. at 1433.

[308] *Id.*

[309] *United States v. Earth Sciences, Inc.* dealt with discharges into normally dry arroyos. 599 F.2d 368, 374–75 (10th Cir. 1979); *see also supra* notes 272–76 and accompanying text.

sion that "[i]t seems clear Congress intended to regulate discharges into every creek, stream, river or body of water that in any way may affect interstate commerce."[310] *Quivira* similarly emphasized that "it was the clear intent of Congress to regulate waters of the United States to the fullest extent possible."[311]

The *Sierra Club* court concluded that the Tenth Circuit "has chosen to interpret the terminology of the Clean Water Act broadly . . . ."[312] Thus, the court found that the CWA prohibits discharges of pollutants that reach "navigable waters" through groundwater.[313] The court found that the Sierra Club's allegations that CRC's discharges migrated into Sand Creek through the groundwater beneath the refinery stated a cause of action under the CWA.[314] The court thus denied CRC's motion to dismiss.[315]

D. *Comparing the Seventh Circuit and Tenth Circuit Approaches*

The case law from the Seventh and Tenth Circuits demonstrates how these two circuits have taken different approaches to the CWA and its application to groundwater. The Seventh Circuit began with a broad approach in *United States Steel Corp. v. Train* and *Inland Steel Co. v. EPA*, suggesting the possibility that tributary groundwater was subject to the CWA.[316] *Village of Oconomowoc Lake v. Dayton Hudson Corp.* then rejected this possibility, excluding all forms of

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[310] *Sierra Club*, 838 F. Supp. at 1433 (citing *Earth Sciences*, 599 F.2d at 375).

[311] *Sierra Club*, 838 F. Supp. at 1434 (citing Quivira Mining Co. v. United States EPA, 765 F.2d 126, 130 (10th Cir. 1985)); *see also supra* notes 276–81 and accompanying text. Another recent case from the Tenth Circuit expressed no doubt that the CWA protects tributary groundwater. Friends of Santa Fe County v. LAC Minerals, Inc., 892 F. Supp. 1333, 1358 (D.N.M. 1995). The court looked to the *Quivira* decision and noted that "the decision and other decisions demonstrating the Tenth Circuit's expansive construction of the Clean Water Act's jurisdictional reach, foreclose any argument that the CWA does not protect groundwater with some connection to surface waters." *Id.*, at 1358. The court acknowledged that a minority of courts have held otherwise, citing *Village of Oconomowoc Lake v. Dayton Hudson Corp.*, but stated that "most courts to have considered the issue have held that hydrologically connected groundwaters are regulated waters of the United States." *Id.* Although the requisite hydrological connection to surface waters was found lacking in *Friends of Santa Fe*, the court's language demonstrates that another district in the Tenth Circuit is following the same approach as *Sierra Club*. *See id.* at 1358.

[312] *Id.*

[313] *Id.*

[314] *Id.* The court dismissed CRC's claim that the legislative history of the CWA precluded its application to groundwater. *Id.* at n.4. The court stated that commentators like Mary Wood have concluded that this legislative history is inconclusive. *Id.*

[315] *Id.* at 1434.

[316] *See* Inland Steel Co. v. EPA, 901 F.2d 1419, 1422 (7th Cir. 1990); United States Steel Corp. v. Train, 566 F.2d 822, 851–52 (7th Cir. 1977).

groundwater from the CWA.[317] The Tenth Circuit, in contrast, consistently has interpreted "navigable waters" broadly.[318] *Sierra Club* reflected this broad approach in its holding that tributary groundwater is protected by the CWA.[319]

United States v. Byrd stated that "navigable waters" comprise all waters within the confines of the United States and thus found the CWA to apply to wetlands.[320] *United States Steel Corp. v. Train* protected groundwater by allowing CWA regulation of deep well disposal when undertaken in conjunction with surface water regulations.[321] *Inland Steel Co. v. EPA* then declined to rule on whether discharges into tributary groundwater could be regulated by the CWA.[322] The court in *Village of Oconomowoc Lake v. Dayton Hudson Corp.* ruled where *Inland* declined to rule, however, taking a narrow view of "navigable waters" by excluding even tributary groundwater from the CWA.[323]

The Tenth Circuit, in contrast, consistently has interpreted "navigable waters" broadly. The Tenth Circuit found jurisdiction over surface tributaries that were not navigable-in-fact in *United States v. Earth Sciences Inc.*, *United States v. Texas Pipe Line Co.*, and *Quivira Mining Co. v. United States EPA*.[324] The Tenth Circuit court also let the *Sierra Club v. Colorado Refining Co.* decision stand, allowing the District Court of Colorado expressly to include tributary groundwater within the CWA.[325]

Although Tenth Circuit cases look to the CWA's language, legislative history, and administrative interpretations to analyze groundwater cases, the cases continually focus on the intent of the CWA.[326] All

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[317] *See* Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 966 (7th Cir.), *cert. denied*, 115 S. Ct. 322 (1994).

[318] *See, e.g.*, Quivira Mining Co. v. United States EPA, 765 F.2d 126, 130 (10th Cir. 1985); United States v. Earth Sciences, Inc., 599 F.2d 368, 373 (10th Cir. 1979); Sierra Club v. Colorado Refining Co., 838 F. Supp. 1428, 1434 (D. Colo. 1993), *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[319] *Sierra Club*, 838 F. Supp. at 1434.

[320] United States v. Byrd, 609 F.2d 1204, 1209 (7th Cir. 1979).

[321] United States Steel Corp. v. Train, 556 F.2d 822, 852 (7th Cir. 1977).

[322] Inland Steel Co. v. EPA, 901 F.2d 1419, 1422–23 (7th Cir. 1990).

[323] Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 965–66 (7th Cir.), *cert. denied*, 115 S. Ct. 322 (1994).

[324] Quivira Mining Co. v. United States EPA, 765 F.2d 126, 130 (10th Cir. 1985); United States v. Texas Pipe Line Co., 611 F.2d 345, 347 (10th Cir. 1979); United States v. Earth Sciences, Inc., 599 F.2d 368, 375 (10th Cir. 1979).

[325] Sierra Club v. Colorado Refining Co., 838 F. Supp. 1428, 1434 (D. Colo. 1993), *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[326] *See, e.g.*, *Quivira*, 765 F.2d at 130; *Texas Pipe Line Co.*, 611 F.2d at 347; *Earth Sciences*, 599 F.2d at 373; *Sierra Club*, 838 F. Supp at 1433–34.

of the Tenth Circuit cases refer to and have interpreted broadly the intent of the CWA.[327] *Earth Sciences* relied on the intent of the CWA to maintain the integrity of the nation's waters.[328] *United States v. Texas Pipe Line Co.* found that the CWA was intended to cover all tributaries of "navigable waters."[329] *Quivira Mining Co. v. United States EPA* noted that the goal of the CWA was to eliminate discharges into navigable waters.[330] *Sierra Club v. Colorado Refining Co.* included tributary groundwater within "navigable waters" because of the declared goal and policy of the CWA to restore and maintain the integrity of the nation's waters.[331]

The Seventh Circuit has used more formalistic reasoning than the Tenth Circuit in reaching its holdings. *United States Steel Corp. v. Train* concluded that the legislative history and statutory construction of the CWA indicate that the CWA did cover groundwater.[332] *Hoffman Homes Inc. v. Administrator* looked to the EPA's regulations to determine if a wetland was covered by the CWA.[333] *Village of Oconomowoc Lake v. Dayton Hudson Corp.* relied on a strict reading of the EPA's regulatory definition in deciding that an artificial retention pond was not covered by the CWA.[334] *Oconomowoc* acknowledged that the CWA is a broad statute, but that court stated that the CWA does not grant federal authority over every drop of water.[335] The Seventh and Tenth Circuits have thus taken different approaches to the tributary groundwater issue, and each circuit makes sound arguments for its respective position.

IV. Why Courts Should Consider Tributary Groundwater Part of "Navigable Waters" Under the CWA

The case law from the inception of the CWA through the present reveals that courts have been unable to reach unanimity on whether tributary groundwater should be considered part of "navigable wa-

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[327] *See, e.g., Quivira*, 765 F.2d at 130; *Texas Pipe Line Co.*, 611 F.2d at 347; *Earth Sciences*, 599 F.2d at 373; *Sierra Club*, 838 F. Supp at 1433–34.

[328] *Earth Sciences*, 599 F.2d at 373.

[329] *Texas Pipe Line Co.*, 611 F.2d at 347.

[330] *Quivira*, 765 F.2d at 129.

[331] *Sierra Club*, 838 F. Supp. at 1434.

[332] United States Steel Corp. v. Train, 556 F.2d 822, 851–53 (7th Cir. 1977).

[333] Hoffman Homes Inc. v. Administrator, 999 F.2d 256, 261 (7th Cir. 1993).

[334] Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 965 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994).

[335] *Id.* at 964.

ters."[336] The conflicting views of the *Oconomowoc* and *Sierra Club v. Colorado Refining Co.* decisions demonstrate that courts still are divided on the tributary groundwater issue and show how different methodologies are employed to reach contrary conclusions.[337] *Sierra Club* gave effect to the broad intent of the CWA to protect the nation's waters, basing its holding on the expansive application that "navigable waters" has received in the Tenth Circuit.[338] *Oconomowoc*, on the other hand, looked to the legislative history and the EPA's interpretation of the CWA, deciding that tributary groundwater intentionally was omitted from CWA jurisdiction.[339]

Courts should follow the approach and reasoning of the Tenth Circuit and *Sierra Club* and should seek to promote the intent of the CWA by interpreting "navigable waters" to include tributary groundwater. Only by including tributary groundwater within "navigable waters" can the CWA fulfill its stated objective of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters."[340] Excluding tributary groundwater from CWA jurisdiction undermines the broad policy goals of the CWA because pollutants that legally cannot be discharged into surface waters still may find their way into surface waters through polluted tributary groundwater.[341]

As noted above, the CWA's language, legislative history, and administrative interpretations do not address definitively whether groundwater is included within the scope of the CWA.[342] The CWA states that a permit must be obtained for any discharge into "navigable waters."[343] The CWA then defines "navigable waters" as "waters of the United States, including the territorial seas."[344] Based on this language alone, it would appear that any groundwater falls within the scope of the CWA. Administrative regulations have further defined "waters of the United States," but these regulations express a narrower view than the CWA language itself implies.[345] While these regulations provide examples of navigable waters, they do not ad-

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[336] *Compare Oconomowoc*, 24 F.3d at 965 *with* Sierra Club v. Colorado Refining Co., 838 F. Supp. 1428, 1433–44 (D. Colo. 1993), *appeal dismissed*, 28 F.3d 113 (10th Cir. 1994).

[337] *See Oconomowoc*, 24 F.3d at 965; *Sierra Club*, 838 F. Supp. at 1433–34.

[338] *Sierra Club*, 838 F. Supp. at 1434.

[339] *See Oconomowoc*, 24 F.3d at 964–65.

[340] 33 U.S.C. § 1251(a) (1988 & Supp. V 1993).

[341] *See* Wood, *supra* note 17, at 592.

[342] *See supra* notes 112–18 and accompanying text.

[343] *See* 33 U.S.C. § 1342(a).

[344] 33 U.S.C. § 1362(7).

[345] *See* 40 C.F.R. § 230.3(s)(3); 33 C.F.R. § 328.3(a)(3); *see supra* note 115.

dress explicitly the status of groundwater.[346] As several cases have shown, arguments for the inclusion of tributary groundwater are supportable by the CWA and the CWA's legislative history.

Other jurisdictions have followed the Tenth Circuit's approach to tributary groundwater.[347] The most compelling argument for including groundwater within the definition of "navigable waters" is found in *Ashland*, the earliest major case to address the scope of "navigable waters" under the CWA.[348] *Ashland* stated that the CWA would be a mockery if Congress's "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."[349] While *Ashland* addressed the pollution of an above-ground tributary, the reasoning applies equally to tributary groundwater.[350] The CWA cannot effectively prevent the pollution of "navigable waters" if it is interpreted to allow a polluter to do indirectly what it is not allowed to do directly.[351] Courts should take the approach of *Ashland* and focus not on the nature of the water into which the pollution initially is discharged, but rather on the ultimate destination of the pollution.[352] It makes no sense to prohibit discharges directly into a stream, yet to allow discharges into groundwater even though the pollutants will migrate through the groundwater into the very same stream.

Furthermore, *United States v. Riverside Bayview Homes*, the only United States Supreme Court case to address the scope of "navigable waters," also supports the inclusion of tributary groundwater in the CWA.[353] *Riverside* broadly interpreted the CWA to include wetlands and noted that wetlands often filter and purify water that drains into adjacent water bodies.[354] The Court's reasoning thus suggests that groundwater hydrologically connected to "navigable waters" also falls within the jurisdiction of the CWA.[355] The Court's broad interpretation of "waters of the United States" is consistent with the goal of the

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[346] *See* 40 C.F.R. § 230.3(s)(3); 33 C.F.R. § 328.3(a)(3); *see supra* note 115.

[347] *See, e.g.*, United States v. Ashland Oil and Transp. Co., 504 F.2d 1317, 1326 (6th Cir. 1974); United States v. Phelps Dodge Corp., 391 F. Supp. 1181, 1187 (D. Ariz. 1975).

[348] *Ashland*, 504 F.2d at 1326.

[349] *Id.*

[350] *See id.*

[351] *See id.*

[352] *See id.*

[353] United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 134–35 (1985); *see supra* notes 193–98 and accompanying text.

[354] *Id.*

[355] *See id.*

CWA—to protect the nation's waters to the fullest extent.[356] *Riverside* bolsters those cases that have applied the CWA to tributary groundwater because of the CWA's broad intent while weakening those cases excluding tributary groundwater by relying solely on a close reading of the language or interpretation of legislative history.[357]

Some commentators have argued that groundwater pollution control should be left to the states because of the states' varying approaches to groundwater regulation.[358] The disparate state approaches, however, also support including tributary groundwater within "navigable waters." For example, one state might impose strict controls on tributary groundwater pollution, while a neighboring state has limited groundwater protections. Water pollution, however, does not obey state boundaries. Pollution from the unregulated states easily could migrate across state lines and foil the regulating state's attempts to protect both its groundwater and surface waters. Including tributary groundwater in the CWA's jurisdiction would facilitate uniform treatment of groundwater throughout the country and would help eliminate problems of interstate pollution migration.

The Tenth Circuit and *Sierra Club v. Colorado Refining Co.* approach does not impose federal authority over every drop of water, a concern of the Seventh Circuit expressed in *Village of Oconomowoc*

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[356] *See* 33 U.S.C. § 1251(a).

[357] *See* Town of Norfolk v. United States Corps of Engineers, 968 F.2d 1438, 1451 (1st Cir. 1992) (citing *Riverside* to support its conclusion that the determination of whether "waters of the United States" should include groundwater connected to surface waters was a matter of ecological judgment and should be left to the discretion of the EPA and the Corps. 968 F.2d at 1451); *but see* McClellan Ecological Seepage Situation v. Weinberger, 707 F. Supp. 1182, 1195–96 (E.D. Cal. 1988); *supra* notes 179–82 and accompanying text. *McClellan v. Weinberger* rejected plaintiff's argument that *Riverside* plainly required NPDES permits for discharges to groundwater. *McClellan v. Weinberger*, 707 F. Supp. at 1195. The court distinguished *Riverside* on the grounds that it involved surface waters only, not groundwaters. *Id.* at 1195. *McClellan v. Weinberger* also noted that *Riverside* addressed the reasonableness of the Corps's determination that the CWA required permits for filling wetlands, whereas in *McClellan v. Weinberger* the plaintiff's interpretation directly conflicted with the EPA's interpretation. *Id.* at 1195–96.

The *McClellan v. Weinberger* court, however, addressed isolated groundwater, not tributary groundwater, and the court repeatedly emphasized this fact. *Id.* at 1194–95. The court remanded the case for further discovery on whether the groundwater in question was hydrologically connected to "navigable waters" under the CWA. *Id.* at 1196. Thus, despite its emphasis on distinguishing *Riverside*, *McClellan v. Weinberger*'s remand for further discovery on the hydrological connection supports the conclusion that tributary groundwater is covered under the CWA. *See id.* at 1196.

[358] *See supra* notes 119–21 and accompanying text (discussing the legislative history of the CWA).

Lake v. Dayton Hudson Corp.[359] Rather, it imposes authority over tributary groundwater only.[360] Although it may be arguable that nontributary groundwater is covered by the CWA, the Tenth Circuit only includes tributary groundwater. Including tributary groundwater directly serves the intent of the CWA even when one reads "navigable waters" and "waters of the United States" to comprise only surface waters. Protecting tributary groundwater is imperative if these surface waters are to be adequately protected. Maintaining the integrity of tributary groundwater is simply a beneficial by-product of the protection of surface "navigable waters."

V. Conclusion

Although groundwater is acknowledged as a crucial part of the water systems of the United States, groundwater has not received the same extensive federal protections as surface waters. The CWA does offer some protection for groundwater, however. In the absence of comprehensive federal groundwater legislation the CWA can be an effective tool to prevent the pollution of tributary groundwater. The CWA contains provisions to protect the "navigable waters" and "waters of the United States" from contamination. While the CWA has not been applied to isolated, nontributary groundwater, some courts have construed the provisions to include tributary groundwater. Including tributary groundwater in the CWA enables the NPDES to apply to discharges into tributary groundwater as well as surface waters.

Courts have been divided on whether tributary groundwater is protected by the CWA. In order for the CWA to fulfill its stated objective "to restore and maintain the chemical, physical and biological integrity of the Nation's waters,"[361] courts should adopt the approach of the Tenth Circuit and *Sierra Club*. The Tenth Circuit and *Sierra Club* decisions interpreted the CWA broadly and attempted to give effect to the CWA's intent by protecting tributary groundwater. Although groundwater protection is not a stated goal of the CWA, the protection of tributary groundwater is necessary to protect the surface waters of the United States and to fulfill this intent of the CWA. Allowing tributary groundwaters to be excluded from the CWA un-

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[359] *See* Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 964 (7th Cir.), *cert. denied*, 115 S.Ct. 322 (1994).

[360] *Id.*

[361] *Id.*

dermines the CWA's protection of surface waters because polluted tributary groundwaters may contaminate surface waters. The Tenth Circuit approach eliminates this possibility by asserting CWA jurisdiction over tributary groundwater. All jurisdictions should adopt the Tenth Circuit approach and allow the CWA to truly protect the nation's "navigable waters" by protecting tributary groundwater.