

GROUND WATERS: ARE THEY BENEATH THE REACH OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS?

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INTRODUCTION

The importance of ground waters¹ to the hydrological cycle and to society can not be overestimated. In the United States over 60 billion gallons of ground water are utilized per day, which accounts for approximately 21.5% of our domestic, agricultural, and industrial water use.² Fifty per cent of the water supply for irrigation

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¹ BLACK'S LAW DICTIONARY 1962 (4th rev. ed. 1968), defines subterranean waters thusly: Waters which lie wholly beneath the surface of the ground, and which either ooze and seep through the subsurface strata, without pursuing any defined course or channel, (percolating waters), or flow in a permanent and regular but invisible course, or lie under the earth in a more or less immovable body, as a subterranean lake. . . .

YANNOCONE & COHEN, 2 ENVIRONMENTAL RIGHTS & REMEDIES 451-52 (1972) [hereinafter cited as YANNOCONE] summarizes the geological background thus:

Below a certain level underground, called the water table, the open spaces or pore spaces between the particles of clay, silt, sand, and gravel are completely filled with water under atmospheric or greater pressure. This part of the earth is the zone of saturation and the water confined in that area is called ground water. Often the terms zone of saturation and ground water reservoir are used interchangeably. The pore spaces of the material between the water table and the land surface are filled with a mixture of air, liquid water, water vapor and other gases. This part of the earth is called the zone of aeration, and the water contained therein is called vadose water. Hydrologists commonly refer to the vadose water in the soil zone just below the land surface as soil water and water in the layer immediately above the water table commonly is called capillary water.

² S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971), UNITED STATES CODE CONG. AND ADMIN. NEWS 3739 (1972). Summary Statement on Underground Water Resources, United States Geological Survey, Department of the Interior, in *Hearings on H.R. 1073 Before the Subcomm. on Public Health and Environment of the House Comm. on Interstate & Foreign Commerce*, 92d Cong., 1st Sess., at 104 (1971) [hereinafter cited as *House Hearings*]; MCGUINNESS, THE ROLE OF GROUND WATER IN THE NATIONAL WATER SITUATION, U.S. GEOL. SURVEY WATER SUPPLY PAPER NO. 1800, at 1121 (1963); MCGUINNESS, *Ground Water—A Key Resource*, GROUND WATER 24-29 (1965).

and livestock is derived from subsurface sources.³ Seventy-seven per cent of the public water systems depend upon ground water entirely or in part.⁴ One-third of the nation's largest 100 cities are supplied by ground water.⁵ Twelve to fifteen million families depend upon individual wells for water.⁶ Fifty per cent of our population is supplied by ground waters, and many areas of the United States are totally dependent upon this resource to meet their water needs.⁷ As evidenced by the construction of approximately 500,000 new wells per year, the use of ground waters is expected to increase as demand for water resources continues to rise.⁸

Pollution of ground waters has already occurred in some areas⁹ and further pollution threatens to cause irrevocable damage to ground waters currently in use, and slow dissemination into potential subterranean and surface water supplies.¹⁰ Ground waters flow slowly from areas of greater hydrolic pressure to areas of lesser hydrolic pressure.¹¹ Thus, they move steadily into other ground waters, and are the major supplier of water for rivers, lakes, and streams.¹² Since continual flow into other ground and surface waters occurs, and since much of the water presently being discharged from the

³ Testimony of Dr. Jay H. Lehr, Exec. Dir. of Nat. Waterwell Ass'n., in *Hearings on S. 433 Before the Subcomm. on the Environment of the Senate Comm. on Commerce*, 93d Cong., 1st Sess., at 155 (1973) [hereinafter cited as *Senate Hearings*]; *Leaky Legislation*, Wall Street Journal, June 7, 1972, reprinted in *Senate Hearings*, 155, 158 [hereinafter cited as *Leaky Legislation*].

⁴ *Id.*

⁵ Testimony of David Zwick, Pub. Int. Res. Group, in *Supplemental Hearings on H.R. 14899 Before the Sub. Comm. on Public Health and Environment of the House Comm. on Interstate & Foreign Commerces*, 92d Cong., 2d Sess., at 137 (1972) [hereinafter cited as *House Supp. Hearings*]; *Leaky Legislation*, *supra* note 3, at 155.

⁶ Testimony of Dr. Jay H. Lehr, in *House Supp. Hearings*, *supra* note 5, at 137; testimony of Dr. Jay H. Lehr, in *Senate Hearings*, *supra* note 3, at 155; *Leaky Legislation*, *supra* note 3, at 158.

⁷ Testimony of William Ruckelshaus, Admin. of Environmental Protection Agency, in *House Hearings*, *supra* note 2, at 357; W.B. CLAPHAM, *NATURAL ECOSYSTEMS* 53 (1973).

⁸ S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971) in UNITED STATES CODE CONG. AND ADMIN. NEWS 3739 (1972); Testimony of Frand E. Clarke, Acting Dir., U.S. Geol. Survey, Dept. of Interior, in *House Hearings*, *supra* note 2, at 103.

⁹ Cox & Walker, *Ground Water Implications of Recent Federal Law*, 11 GROUND WATER 16 (1973); WARNER, *DEEP WELLS FOR INDUSTRIAL WASTE INJECTION IN THE U.S.*, FEDERAL WATER POLLUTION CONTROL ADMIN., U.S. DEPT. OF THE INTERIOR, WATER POLLUTION RESEARCH SERIES BULL. No. 6 WP-20-10 (1967).

¹⁰ S. REP. NO. 91-414, 92d Cong., 2d Sess. (1971), in UNITED STATES CODE CONG. AND ADMIN. NEWS 3739 (1972).

¹¹ YANNOCONE, *supra* note 1, at 454.

¹² S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971) in UNITED STATES CODE CONG. AND ADMIN. NEWS 3739 (1972).

ground water reservoir has been moving throughout the system for hundreds or even thousands of years,¹³ pollution of subsurface waters in one location may cause the pollution of distant waters years, decades, or centuries in the future. Absent from ground waters are the organisms and necessary circulation which cause surface waters to possess a self-cleansing characteristic. Thus, once polluted, ground waters remain unusable for periods as long as several centuries.¹⁴ If our subsurface waters are to be preserved for continued beneficial use, ground water pollution must be abated before it occurs on a substantial scale.¹⁵

I. MECHANISMS FOR GROUND WATER POLLUTION CONTROL

Ground water pollution will cause permanent and irreparable harm unless control mechanisms are effectively utilized. The common law, the Safe Drinking Water Act,¹⁶ and the Federal Water Pollution Control Act¹⁷ are the currently available modes of ground water pollution abatement. If utilized in concert, these mechanisms should provide adequate protection to the nation's ground water resource.

A. *The Common Law*

Common law actions have been utilized to recover damages¹⁸ and

¹³ YANNOCONE, *supra* note 1, at 454.

¹⁴ S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971) in UNITED STATES CODE CONG. AND ADMIN. NEWS 3739 (1972); Cox & Walker, *Ground Water Implications of Recent Federal Law*, 11 GROUND WATER 16 (1973); YANNOCONE, *supra* note 1, at 454; Testimony of Edward Hockman, Special Projects Assistant, Environmental Protection Agency, in *House Supp. Hearings*, *supra* note 5, at 137.

¹⁵ For further authorities on ground water and ground water pollution, see VAN DE LEEDEN, GROUND WATERS: A SELECTED BIBLIOGRAPHY (1971). For an authority which has been effectively utilized in litigation and offered into evidence in federal and state courts, and which YANNOCONE calls the "finest available attempt to convey sophisticated scientific information to the layman without condescension and should be in the library of every attorney and scientist concerned with the problem of water for human needs and the maintenance of our environment," *supra* note 1, at 454, see COHEN, FRANKE & FOXWORTHU, AN ATLAS OF LONG ISLAND'S WATER RESOURCES (1968).

¹⁶ The Safe Drinking Water Act, 42 U.S.C. § 300f (Supp. IV, 1974).

¹⁷ Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1251 (Supp. II, 1972).

¹⁸ Damages were recovered in *Swift & Co. v. People's Coal & Oil Co.*, 121 Conn. 579, 186 A. 629 (1936); *Shelley v. Ozark Pipe Line Corp.*, 327 Mo. 238, 37 S.W. 2d 518 (1931); *Beatrice Gas Co. v. Thomas*, 41 Neb. 662, 59 N.W. 925 (1894); *Master v. Texas Co.*, 194 N.C. 540, 140 S.E. 89 (1927); *Cities Service Co. v. Eggers*, 186 Okla. 466, 98 P.2d 1114 (1940); *Ulmen v. Mt. Angel*, 57 Ore. 547, 112 P. 529 (1911); *Gilmore v. Royal Salt Co.*, 84 Kan. 729, 115 P. 541 (1911); *Augustine v. Hinnen*, 201 Kan. 710, 443 P.2d 354 (1968); *Sandstone Spring Water*

to enjoin ground water pollution.¹⁹ The inadequacies of common law abatement of pollution are magnified, however, when applied to subterranean waters. Common law actions are available only to plaintiffs who have a possessory interest in land damaged by ground water pollution.²⁰ In some jurisdictions a distinction is made between percolating²¹ and flowing ground waters, and recovery for damages caused by polluted percolating ground waters is barred by the absence of negligence or malice.²² In these jurisdictions, ground waters are presumed to be percolating, unless flow is conclusively demonstrated without underground excavation.²³ Further, a common law action to abate ground water pollution can not succeed without proof of negligence, nuisance, or trespass.²⁴ Even if these obstacles are surmounted, however, a common law action will fail unless plaintiff can sustain the burden of proving a causal connection between the damage suffered and the pollution alleged.²⁵ Since ground water movement is inherently difficult to trace, this causal connection is often difficult to demonstrate in the ground water context, rendering state common law remedies largely ineffective. The federal common law is equally ineffective in controlling ground

Co. v. Kettle River Co., 122 Minn. 510, 142 N.W. 885 (1913); Tevis v. McCary, 72 N.M. 134, 381 P.2d 208 (1963); Ballantine & Sons v. Public Serv. Corp., 86 N.J.L. 331, 91 A. 95 (1914); Ball v. Nye, 99 Mass. 582 (1868); Nelson v. C & C Plywood Corp., 154 Mont. 414, 465 P.2d 314 (1970). Injunctions were issued in *Love v. Nashville Agriculture & Normal Institute*, 146 Tenn. 550, 243 S.W. 304 (1922); *Haveman v. Beulow*, 36 Wash.2d 185, 217 P.2d 313 (1950).

¹⁹ For comprehensive examination of common law actions to abate ground water pollution, see Annot., 38 A.L.R.2d 1265 (1954); Davis, *Ground Water Pollution: Case Law Theories For Relief*, 39 Mo. L. REV. 117 (1974); Nixon, *Ground Water Pollution in the Western States-Private Remedies and Federal and State Legislation*, 8 LAND & WATER L. REV. 537 (1973); 61 AM. JUR. 2d, *Pollution Control* §§ 96, 97, at 903-05 (1972); 78 AM. JUR. 2d, *Waters* §§ 146-194, at 593-643 (1975).

²⁰ Annot., 38 A.L.R.2d 1265 (1954).

²¹ For a discussion as to the factual distinction between percolating and flowing ground waters, see note 1, *supra*.

²² *McGowan v. United States*, 206 F. Supp. 439, 442 (D. Mont. 1962); *Upton v. Bd. of Health*, 46 Mich. 542, 9 N.W. 845 (1881); *Rose v. Socony-Vacuum Corp.*, 54 R.I. 411, 173 A. 627 (1934). Comment, *Liability of Land Owner for Pollution of Percolating Waters*, 39 MARQ. L. REV. 1199 (1955).

²³ Annot., 38 A.L.R.2d 1265 (1954); *McGowan v. United States*, 206 F. Supp. 439, 442 (D. Mont. 1962).

²⁴ *Id.*, *United States v. 31.07 Acres of Land*, 189 F. Supp. 845 (D. Mont. 1960) (trespass); *McCoy v. Cohen*, 140 S.E.2d 427 (1965).

²⁵ Annot., 38 A.L.R.2d 1265, 1268 (1954). For example, causal relations were held not shown in *Continental Oil Co. v. Hinton*, 175 So.2d 512 (Miss. 1965); *McCoy v. Cohen*, 140 S.E.2d 427 (W. Va. 1965); *United Fuel Gas Co. v. Sawyers*, 259 S.W.2d 466 (Ky. 1953); *Panther Coal Co. v. Looney*, 185 Va. 758, 40 S.E.2d 298 (1946); *Reiserer v. Murfin*, 183 Kan. 597, 331 P.2d 313 (1958).

water pollution since, in addition to limitations imposed by common law doctrines, interstate pollution is also required.²⁶

B. *The Safe Drinking Water Act*

Designed to protect certain underground sources of drinking water,²⁷ the Safe Drinking Water Act (SDWA)²⁸ directed the Administrator of the Environmental Protection Agency (EPA)²⁹ to publish proposed regulations for state plans within 180 days after December 16, 1974.³⁰ Within 180 days after the proposed regulations' publication, the Administrator was to promulgate regulations defining the minimum standards which state plans must meet in order to be approved.³¹ These minimum requirements were to prohibit, in a state adopting a permit program, any underground injection³² not authorized by a permit, and, in a state adopting a program allowing injection by rule,³³ any rule authorizing underground injection endangering drinking water sources within the SDWA. The regulations were to adequately provide for inspection, monitoring, record-keeping, and reporting.³⁴ The Act also directed the Administrator to publish a list of states which, within 270 days of the list's publication,³⁵ were to submit a plan. Within 90 days of the submittal, the Administrator was to either approve or disapprove of the plan in its entirety or in part.³⁶ if the Administrator disapproved the State program, or if the state did not submit a proposed plan, the Administrator was directed to promulgate a plan applicable to that state;³⁷ and if the Administrator approved the state plan, the state then had primary enforcement responsibility for underground water sources.³⁸

²⁶ *Illinois v. Milwaukee*, 406 U.S. 91 (1972); *Reserve Mining Co. v. Environmental Protection Agency*, 514 F.2d 492 (8th Cir. 1974); *Texas v. Dankey*, 441 F.2d 236 (10th Cir. 1971).

²⁷ 42 U.S.C. § 300 (Supp. IV, 1974).

²⁸ 42 U.S.C. § 300f (Supp. IV, 1974). For an extensive analysis of the Safe Drinking Water Act, see T. Douglas, *Safe Drinking Water Act of 1974: History and Critique*, 5 ENV. AFF. 501 (1976).

²⁹ The Administrator of the Environmental Protection Agency is hereinafter referred to as "the Administrator."

³⁰ These regulations have been promulgated, 40 Fed. Reg. 59567 (1975).

³¹ 42 U.S.C. § 300h(a)(1) (Supp. IV, 1974).

³² Underground injection is the subsurface employment of fluids by well injection. *Id.* § 300h(d)(1).

³³ *Id.* § 300h(b)(1)(A)&(B).

³⁴ *Id.* § 300h(b)(1)(C).

³⁵ *Id.* § 300h-1(b)(1)(A).

³⁶ *Id.* § 300h-1(b)(1)(B)(2).

³⁷ *Id.* § 300h-1(c).

³⁸ *Id.* § 300h-1(b)(1)(B)(3).

In the absence of proper state action,³⁹ the Administrator was authorized to commence a civil action to require compliance with any requirement of an applicable underground injection control program. Citizens suits were also permitted against any violator or against the Administrator, where a failure to perform a non-discretionary act or duty is alleged, without regard to the amount in controversy or the citizenship of the parties.⁴⁰ Finally, the SWDA authorized judicial review of any regulation for state underground injection control programs in the United States Court of Appeals for the District of Columbia Circuit.⁴¹

The Safe Drinking Water Act was designed to protect a significant portion of America's underground drinking water supply. Although comprehensive in this regard, it should not be interpreted as being the only mode of ground water pollution control, nor should it be interpreted as a pre-emption of other mechanisms, such as the Federal Water Pollution Control Act.⁴² The SDWA only applies to ground water "which supplies or can reasonably be expected to supply any public water system."⁴³ Since ground waters which are distant from present population centers, or proximate to areas utilizing surface resources for drinking water, may not be waters which can reasonably be expected to supply a public drinking system, they are beyond its scope. Nor will the SDWA reach ground waters utilized for purposes other than for drinking, such as those ground waters which are used for irrigation and for industry.⁴⁴

In addition, the Safe Drinking Water Act does not affect underground drinking water which supplies non-public systems. It defines a "public water system" as "a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals."⁴⁵ It will not reach numerous smaller systems, including a significant proportion of the twelve to fifteen million private family operated wells which depend upon uncontaminated ground water.⁴⁶

³⁹ *Id.* § 300h-2.

⁴⁰ *Id.* § 300j-8. Section 300j-8(c) allows the Administrator or the Attorney General to intervene as a matter of right.

⁴¹ 42 U.S.C. § 300j-7(a)(1) (Supp. IV, 1974).

⁴² 33 U.S.C. § 1251 (Supp. II, 1972). For arguments that ground waters are within the FWPCA see text at notes 73-165, *infra*.

⁴³ 42 U.S.C. § 300h(d)(2) (Supp. IV, 1974).

⁴⁴ See *supra* note 3, and accompanying text.

⁴⁵ 42 U.S.C. § 300f(4) (Supp. IV, 1974).

⁴⁶ See text at note 6, *supra*.

The scope of the SDWA is further limited to states which, in the judgment of the Administrator, have drinking water sources which are endangered by underground injection.⁴⁷ If the listing of these states is interpreted as being discretionary, then the exclusion of a state may not be subject to judicial review, since citizen suits against the Administrator are allowed only when a failure to perform a non-discretionary duty is alleged.⁴⁸ The application of the SDWA is also limited to ground water pollution caused by the subsurface emplacement of fluids by well injection,⁴⁹ and thus, ground water pollution caused by point sources other than wells may be not affected by the Act.⁵⁰

Given its limitation to certain underground drinking water supplies and the possible exclusions from its coverage of a certain number of states and non-well subsurface discharges, especially considering the serious and permanent consequences of ground water pollution, the SDWA should not be interpreted as a pre-emption of other ground water pollution control mechanisms. Indeed, the authors of the statute wisely precluded pre-emption by including the following language:

Nothing in this section shall restrict any right which any person (or class of persons) may have *under any statute* or common law to seek enforcement of any requirement prescribed by or under this subchapter or to seek any other relief (emphasis added).⁵¹

C. *The Federal Water Pollution Control Act*

The objective of the Federal Water Pollution Control Act⁵² is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters"⁵³ by eliminating the discharge of pollu-

⁴⁷ 42 U.S.C. § 300h-1(a) (Supp. IV, 1974).

⁴⁸ Id. § 300j-8 (1974). For a discussion of judicial review of discretionary agency actions, see DAVIS, ADMINISTRATIVE LAW TEXT, §§ 28.05-30.06 (1972).

⁴⁹ 42 U.S.C. § 300h(d)(1) (1974).

⁵⁰ In contrast, the FWPCA encompasses discharges from point sources which are defined as "any discernable, confined, and discreet conveyance." 33 U.S.C. § 1362(14) (Supp. II, 1972).

⁵¹ 42 U.S.C. § 300j-8(c) (Supp. IV, 1974).

⁵² 33 U.S.C. § 1251 (Supp. II, 1972). For commentaries on the FWPCA, see McMahon, *The Federal Water Pollution Control Act Amendments of 1972*, 14 B.C. IND. & COM. L. REV. 672 (1973); Smith, *Highlights of the Federal Water Pollution Control Act of 1972*, 77 DICK. L. REV. 459 (1973); Rasmussen, *The Federal Water Pollution Control Act Amendments of 1972*, WIS. L. REV. 893 (1973). For legislative history, see UNITED STATES CODE CONG. & ADMIN. NEWS 3668-3833 (1972); A LEGISLATIVE HISTORY OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, U.S. Government Printing Office (1972).

⁵³ 33 U.S.C. § 1251(a) (Supp. II, 1972).

tants into navigable waters by 1985.⁵⁴ The Act defines navigable waters as "waters of the United States, including the territorial seas,"⁵⁵ and it forbids the discharge of any pollutant from any point source except when in compliance with a permit issued pursuant to the FWPCA.⁵⁶ It directs the Administrator⁵⁷ to promulgate effluent limitations for point sources which shall require the application of the best practicable technology by July 1, 1977, and the best available technology economically feasible by July 1, 1983.⁵⁸ The Act authorizes the Administrator to commence a civil action against any person discharging pollutants in violation of the applicable provisions of the FWPCA,⁵⁹ and citizens to sue any person alleged to be in violation of an effluent standard limitation or order promulgated under the FWPCA. Citizens can also sue the Administrator when a failure to perform a non-discretionary duty is alleged, without regard to the amount in controversy or the citizenship of the parties.⁶⁰

Since the Safe Drinking Water Act is limited in scope, and since the common law is limited in force, the FWPCA would appear to be the key to preventing the permanent and onerous consequences of ground water contamination. However, the Federal District Court for the Southern District of Texas has raised a serious question as to whether the FWPCA is applicable to ground waters in its decision of *United States v. GAF Corporation*.⁶¹ This decision is disturbing to those concerned with ground water pollution, since the control mechanisms outside the FWPCA are severely limited. The possible broad-ranging effect of the court's decision suggests that its holding should be subjected to close scrutiny. The remainder of this article will evaluate the court's reasoning in *GAF*, and marshal the arguments for and against inclusion of ground waters within the protection of the FWPCA.

⁵⁴ *Id.* § 1252(a)(1). For argument that ground waters are navigable waters as defined by the FWPCA see text at notes 114-143, *infra*. For argument that ground waters are within the FWPCA as tributaries or portions of navigable waters, see text at notes 152-163, *infra*.

⁵⁵ 33 U.S.C. § 1362(7) (Supp. II, 1972).

⁵⁶ *Id.* § 1311. Discharges of pollutants in accordance with the terms of a National Pollution Discharge Elimination System (NPDES) permit, (*Id.* § 1342) are in compliance with the Act.

⁵⁷ The FWPCA, like the SDWA, is administered by the Environmental Protection Agency. 33 U.S.C. § 1342 (Supp. II, 1972).

⁵⁸ 33 U.S.C. § 1311(b) (Supp. II, 1972). Section 1362(11) defines "effluent limitation" as: any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters. . . .

⁵⁹ 33 U.S.C. § 1319(a)(3) (Supp. II, 1972).

⁶⁰ *Id.* § 1365.

⁶¹ 389 F. Supp. 1379 (S.D. Tex. 1975) [hereinafter cited as *GAF*].

II. UNITED STATES v. GAF CORPORATION

The United States, as plaintiff, sought to enjoin defendant GAF from using two deep injection wells for the subsurface disposal of organic chemical wastes,⁶² contending that GAF could not discharge pollutants from the wells at issue, without first securing a permit issued pursuant to the FWPCA.⁶³ The defendant corporation argued that subsurface injections were beyond the jurisdiction of the FWPCA.⁶⁴

The defendant's motions to dismiss for lack of jurisdiction over the subject matter and for failure to state a claim were granted by the court⁶⁵ on the ground that the proposed subsurface injections of pollutants were not discharges within the scope of the FWPCA.⁶⁶ The court offered two bases for its holding. The first ground was the absence of effluent limitations promulgated by the EPA which were applicable to the proposed discharge.⁶⁷ A detailed consideration of this unsettled question is beyond the scope of this decision.⁶⁸

⁶² The United States applied to the court for a temporary restraining order to prevent the drilling process from proceeding beyond the stage where geological samples of the substrata could be taken. After the parties agreed to a preservation of the *status quo* for the duration of the action, the focus of the case shifted to plaintiff's request that the defendant be enjoined from using, as opposed to drilling, deep wells allegedly in contravention of the FWPCA; 389 F. Supp. at 1380. No dispute existed that the materials defendant proposes to discharge are pollutants since "pollutant" is defined in 33 U.S.C.A. § 1326(6) to mean, *inter alia*, "chemical wastes." 389 F. Supp. at 1383.

⁶³ No presentation was made to the court on the nature of the strata into which exit the wells in question. For the purposes of the decision it was assumed that the pollutants would be discharged into subterranean waters, 389 F. Supp. at 1383. Since ground waters percolate or flow from areas of greater to lesser hydrolic head (*see supra* note 1 and text at note 11), however, discharges into dry subsurface strata will eventually be reached by ground waters.

The action was brought under 33 U.S.C. § 1319(a)(3) which states:

Whenever . . . the Administrator finds that any person is in violation of section 1311, 1312, 1316, 1317, or 1318 of this title or is in violation of any permit condition or limitation . . . he shall . . . bring a civil action in accordance with subsection (b) of this section.

⁶⁴ 389 F. Supp. at 1381.

⁶⁵ *Id.* The action was dismissed for lack of jurisdiction over the subject matter, FED. R. Civ. P. 12(b)(1); and for failure to state a claim, FED. R. Civ. P. 12(b)(6).

⁶⁶ 389 F. Supp. at 1383.

⁶⁷ The court phrased its reasoning thus:

Even if defendant's proposed injection disposal would constitute a 'discharge of a pollutant' within the meaning of § 1311(a), the defendant will not be in violation of any applicable provision with the meaning of § 1319(a)(3). *Id.* at 1385.

It further stated: "It is only when the Administrator establishes effluent limitations under § 1312 that it becomes possible to violate the limitations and, with them, the section under which they were issued." *Id.* at 1387.

⁶⁸ For cases in accord with the GAF holding *see* Stream Pollution Control Bd. v. United States Steel Corp., 512 F.2d 1036, 1042 (7th Cir. 1975); Sierra Club v. Lynn, 502 F.2d 43, 63 (5th Cir. 1974). *But see* NRDC v. Train, 510 F.2d 692, 707 (D.C. Cir. 1974); United States

The second, clearly independent, ground for dismissing the action was that the proposed discharges of pollutants were not discharges under § 1311(a) of the FWPCA.⁶⁹ The court offered two distinct theories to support this finding. First it stated that "the disposal of chemical wastes into underground waters which have not been alleged to flow into or otherwise affect surface waters does not constitute a discharge of a pollutant within the meaning of Section 1311(a)."⁷⁰ If this rule is adopted, only ground waters which flow into or otherwise affect surface waters will be interpreted as within the ambit of the FWPCA. Since the opinion fails to identify the party who would bear the burden of proving or disproving that ground waters flow into or affect surface waters, and since the amount of flow or effect upon surface waters necessary to bring particular ground waters within the FWPCA is not defined, the portion of the nation's ground waters that would actually be protected under this holding is unclear. The court also based its finding of no discharge within the FWPCA upon its ruling that "the regulation of subsurface discharges is not within the enforcement purview of the [FWPCA]."⁷¹ Under this holding, all ground waters would be excluded from FWPCA regulation, irrespective of whether particular ground waters flow into or otherwise affect surface waters. Although the court's opinion is unclear as to which rule of law supports its finding of no discharge, its main thrust aims at supporting the latter broader holding, which would exclude all ground waters from the enforcement purview of the FWPCA.⁷²

Regardless of which rule the court did in fact apply to justify the finding of no discharge, the decision in *GAF* is arguably inconsistent with *Sierra Club v. Lynn*,⁷³ a decision of the Fifth Circuit Court of Appeals which includes the *GAF* district court within its jurisdiction. In *Lynn*, the Sierra Club alleged that the Department of Housing and Urban Development violated its duty under the FWPCA⁷⁴ when it offered to guarantee a private bond issue for the develop-

v. Holland, 373 F. Supp. 665, 667, 676 (M.D. Fla. 1974). Above cases distinguished in *GAF*, 389 F. Supp. at 1385, 1386. For analogous fact situation applying to § 13 of Rivers and Harbors Act of 1899, 33 U.S.C. § 407, see; *United States v. Pennsylvania Chem. Corp.*, 411 U.S. 655 (1973). But see *id.* at 411 U.S. 668, 689 for language indicating decision is inapplicable to FWPCA.

⁶⁹ 389 F. Supp. at 1383.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* at 1383-84.

⁷³ *Sierra Club v. Lynn*, 502 F.2d 43 (5th Cir. 1974) [hereinafter cited as *Lynn*].

⁷⁴ 33 U.S.C. § 1368(c) (Supp. II, 1972).

ment of a new ranch city that threatened to pollute the underground water supply of San Antonio, Texas.⁷⁵ The Fifth Circuit held that, in the absence of evidence that the new ranch city would pollute the ground water and degrade established standards of water quality, the plaintiff had failed to show a violation of the FWPCA.⁷⁶ Thus, plaintiff apparently failed only as a result of not sustaining a burden of proof. No ruling or inference was made that ground waters were beyond the reach of the Act. In fact, the *Lynn* court assumed that the FWPCA applied:

It is undisputed that the developer must meet any state or federal standards that may be established in the future. More importantly, the developer must act to prevent the Ranch from degrading the existing water quality in the aquifer. If the Ranch is discovered to be polluting the underground water supply, the developer has the legally enforceable duty to remedy the situation.⁷⁷

The court in *GAF* stated that the *Lynn* case was not "remotely similar" since in *Lynn* the allegedly jeopardized subsurface strata contained the water supply for the San Antonio, Texas Metropolitan area.⁷⁸ In effect, therefore, the court in *GAF* held that subsurface discharges are not within the FWPCA unless the particular ground waters are of sufficient importance to justify regulation. This exception for significant waters finds no basis in the statute, the legislative history, or in the reasoning of *GAF*. Rather than distinguishing *Lynn*, the court in *GAF* carved out an exception for underground metropolitan water supplies.

Further weaknesses are evident in the *GAF* opinion. The court relied upon legislative history to sustain the finding that the FWPCA does not apply to subsurface discharges.⁷⁹ Language from the applicable Senate Report,⁸⁰ and the rejection of an amendment by the House of Representatives,⁸¹ were held to demonstrate Congressional intent to exclude ground waters from the Act.⁸² The amendment would have expressly included ground waters within

⁷⁵ 502 F.2d at 48 (5th Cir. 1974).

⁷⁶ *Id.* at 64.

⁷⁷ *Id.* at 63, 64.

⁷⁸ 389 F. Supp. at 1383. Curiously, plaintiff "agreed that the case was not directly relevant." *Id.*

⁷⁹ 389 F. Supp. at 1383.

⁸⁰ S. REP. No. 92-414, 92d Cong., 2d Sess. (1971), in UNITED STATES CODE CONG. & ADMIN. NEWS 3667-3833 (1972).

⁸¹ 118 CONG. REC. 10666-69 (1972).

⁸² 389 F. Supp. at 1383.

the enforcement sections of the FWPCA,⁸³ and the court viewed its defeat as a strong indication of Congressional intent to exclude ground water from FWPCA regulation.⁸⁴ The House did not expressly decline to enact subsurface discharge regulation, however, when it defeated the Aspin Amendment. Only the first section of the amendment concerned inclusion of ground waters. The second section of the amendment, which was not discussed by the court, was directed at certain privileges enjoyed by the oil and gas companies,⁸⁵ which are presently embodied in § 1362(6) of the FWPCA.⁸⁶ A large part of the debate recorded in the Congressional Record concerned the propriety of the second section of the amendment, rather than the desirability of the first.⁸⁷ Congressman Roberts, for example, urged his colleagues to reject the amendment, notwithstanding his agreement with the ground water section.⁸⁸ Since inclusion of ground waters constituted only one section of the amendment, and since the other section involved an issue which received greater public attention than subterranean water regulation, the defeat of the proposed amendment should not be interpreted as a rejection of FWPCA ground water pollution abatement.

The court found additional support for its opinion in the following quotation from the Senate Report on the bill which became the FWPCA:⁸⁹

Several bills pending before the Committee provided authority to establish Federally approved standards for ground waters which permeate rock, soil, and other subsurface formations. Because the jurisdiction regarding ground waters is so complex and varied from State to State, the Committee did not adopt this recommendation.⁹⁰

The court stated that the above passage was "an unequivocal recital in the Senate Report that the regulation of subsurface discharges is

⁸³ 118 CONG. REC. 10666 (1972).

⁸⁴ 389 F. Supp. at 1384, *citing* Gulf Oil Corp. v. Copp Paving Co., 419 U.S. 186 (1974).

⁸⁵ 118 CONG. REC. 10666 (1972). "The second thing our amendment does is eliminate the inconsistency between the way we treat oil companies in this bill and the way we treat other companies." (remarks of Congressman Aspin).

⁸⁶ 33 U.S.C. § 1362(6) (Supp. II, 1972). For argument that this section indicates that ground waters are within the FWPCA, *see* text at notes 97-99 *infra*.

⁸⁷ 118 CONG. REC. 10666-68 (1972).

⁸⁸ "I agree with the gentleman in his basic Statement concerning ground water, but he is talking about two different things here. Mr. Chairman, I urge that this amendment be rejected." *Id.* (remarks of Congressman Roberts).

⁸⁹ S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971). UNITED STATES CODE CONG. AND ADMIN. NEWS 3669-3833 (1972).

⁹⁰ *Id.* at 3739.

not within the enforcement purview of the Act”⁹¹—a rigid conclusion, considering the ambiguity of the Senate Report language. In addition, the impact of the quoted passage on the regulation of effluent discharges into ground waters is difficult to judge. “Federally approved standards” can be interpreted as pertaining only to ambient water quality standards under § 1313 of the FWPCA.⁹² This interpretation of the language found in the Senate Report does not preclude promulgation of effluent limitations for subsurface discharges of pollutants, and it is consistent with the deference to state water quality standards expressed in the Senate Report.⁹³ Since effluent limitations are standards set for wastes to be discharged into the receiving waters, and are not directed at the quality of the receiving water per se, the promulgation of effluent limitations, unlike federal ambient water standards, would not affect state regulation of the receiving waters. A literal reading of the language in question supports the view that it refers only to ambient standards, since the Senate Report expresses concern over “federally approved standards for ground waters,” rather than standards for what is discharged into ground waters.⁹⁴ Thus, the court in *GAF* relied on legislative history which does not compel the conclusion that ground waters are not within the reach of the FWPCA.

Beyond its questionable interpretation of legislative history, the court lightly dismissed several strong arguments advanced by the United States for inclusion of ground waters within the FWPCA. The FWPCA defines “point source” as “any discernable, confined, and discreet conveyance, including, *but not limited to* any . . . well”⁹⁵ (emphasis added). The inclusion of wells in the definition of “point source,” the United States contended in *GAF*, is only explainable if the FWPCA applies to subsurface discharges.⁹⁶ The FWPCA also excludes from the definition of “pollutant” certain injection discharges made in connection with the production of oil and gas.⁹⁷ Again, the United States contended that the exclusion of oil and gas injection discharges from the definition of “pollutant”⁹⁸

⁹¹ 389 F. Supp. at 1383.

⁹² 33 U.S.C. § 1313 (Supp. II, 1972). An ambient standard pertains to the quality of the receiving water whereas an effluent standard pertains to what is discharged into the water from a particular point source.

⁹³ S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971).

⁹⁴ *Id.*

⁹⁵ 33 U.S.C. § 1362(14) (Supp. II, 1972).

⁹⁶ 389 F. Supp. at 1384.

⁹⁷ 33 U.S.C. § 1362(b) (Supp. II, 1972).

⁹⁸ *Id.*

is only necessary if subsurface discharges are within the reach of the Act.⁹⁹ Finally, the FWPCA forbids the approval of any state plan lacking the requisite authority to "control the disposal of pollutants into wells"¹⁰⁰ (emphasis added). The United States contended that the authority to control disposal wells at the federal level is therefore a necessary implied provision of the FWPCA.¹⁰¹

Reliance on the above provisions was rejected by the court as "an indirect route to arrive at a conclusion contrary to that which the straight path of legislative history leads."¹⁰² The court characterized plaintiff's arguments as "speculation as to what Congress might have meant when the legislative history is boldly conclusive as to what Congress must have meant."¹⁰³ Even if the legislative history is as unambiguous as the court suggests,¹⁰⁴ a serious question exists as to the propriety of relying upon legislative history rather than the language of the FWPCA itself,¹⁰⁵ which expressly includes disposal wells within the Act.¹⁰⁶

As an additional ground for dismissing the government's arguments, the court held that the sections of FWPCA cited by plaintiff in support of inclusion¹⁰⁷ were not intended to apply to the enforcement provisions of the Act.¹⁰⁸ Thus, the inclusion of "wells" within the FWPCA's definition of "point source"¹⁰⁹ applies to the requirement that a state plan must have adequate authority to control disposal well pollution,¹¹⁰ but not to federal regulatory authority.¹¹¹ This construction leads to a contradiction in result. By the court's reasoning, wells would not be point sources except in those states

⁹⁹ 389 F. Supp. at 1384.

¹⁰⁰ 33 U.S.C. § 1342(b)(1)(D) (Supp. II, 1972).

¹⁰¹ 389 F. Supp. at 1384.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ For arguments against the court's interpretation, see text at notes 79-99, *supra*.

¹⁰⁵ The Supreme Court has repeatedly held that legislative history can not be utilized to change the meaning of an unambiguous enactment. *United States v. Oregon*, 366 U.S. 643 (1961); *Ex Parte Collet*, 337 U.S. 55 (1949); *Packard Motor Car Co. v. NLRB*, 330 U.S. 485 (1947). As the Supreme Court succinctly stated in *Gesmo v. Walling*, 324 U.S. 244, 260 (1945):

The plain words and meaning of a statute cannot be overcome by a legislative history which, through strained processes of deduction from events of wholly ambiguous significance furnish dubious bases for inference in every direction.

¹⁰⁶ 33 U.S.C. § 1362(14) (Supp. II, 1972) includes wells in the definition of point source.

¹⁰⁷ 33 U.S.C. §§ 1362(6), (14), 1342(b)(1)(D) (Supp. II, 1972).

¹⁰⁸ 389 F. Supp. at 1384. The enforcement provisions of the FWPCA are found at 33 U.S.C. §§ 1311-28 (Supp. II, 1972).

¹⁰⁹ 33 U.S.C. § 1362(14) (Supp. II, 1972).

¹¹⁰ *Id.* § 1342(b)(1)(D).

¹¹¹ *Id.* § 1311(a).

with approved plans.¹¹² It is doubtful that Congress could have intended that wells be point sources in only certain states. In sum, imposition of limitations upon the applicability of a statute's definitional section to other provisions of the act, as imposed in the *GAF* opinion, contravenes sound principles of statutory interpretation,¹¹³ and makes little sense in the context of the legislation.

The United States failed to assert another strong argument, which is based upon the FWPCA's definition of navigable waters as "waters of the United States, including the territorial seas."¹¹⁴ Another provision of the FWPCA states: "it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985."¹¹⁵ If the statutory definition of "navigable waters"¹¹⁶ is substituted for the words "navigable waters" the later provision would read: "it is the national goal that the discharge of pollutants into the waters of the United States be eliminated by 1985." A third provision of the FWPCA defines "discharge of a pollutant" as "any addition of any pollutant to the navigable waters" is substituted, this provision would define "discharge of a pollutant" as "any addition of any pollutant to the waters of the United States."¹¹⁷

The phrase "waters of the United States" should be interpreted according to the common understanding of the words. *Colorado Public Interest Research Group v. Train*¹¹⁸ presented an analogous problem in interpreting the FWPCA. In *Colo. PIRG*, the EPA Administrator had promulgated regulations excluding certain radioactive materials from the statutory scheme,¹¹⁹ notwithstanding the inclusion of "radioactive materials" within the FWPCA's definition of pollutant.¹²⁰ Absent any qualification imposed upon the inclusion of "radioactive materials" by the provision defining "pollutant,"¹²¹ the court held that the term "radioactive materials" must be inter-

¹¹² *Id.* § 1342(b)(1)(D).

¹¹³ A definition is "[t]he process of stating the *exact* meaning of a word by means of other words." (emphasis added) BLACK'S LAW DICTIONARY 510 (4th rev. ed. 1968).

¹¹⁴ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹¹⁵ *Id.* § 1251(a)(1).

¹¹⁶ *Id.* § 1362(7).

¹¹⁷ *Id.* § 1362(12).

¹¹⁸ 507 F.2d 743 (10th Cir. 1974), *cert. granted*, 40 U.S.L.W. 3011 (U.S. July 22, 1975) (No. 74-1270) [hereinafter cited as *Colo. PIRG*.]

¹¹⁹ 40 C.F.R. § 125.1(x) (1973).

¹²⁰ 507 F.2d 743 (10th Cir. 1974), *cert. granted*, 40 U.S.L.W. 3011 (U.S. July 22, 1975).

¹²¹ 33 U.S.C. § 1367(6) (Supp. II, 1972) states that the term pollutant means "dredged spoil, solid waste, incinerator residue, sewage, garbage, sludge, munitions, chemical wastes, biological materials, radioactive materials" (emphasis added).

preted to include all radioactive materials.¹²² Similarly, the statute imposes no qualifications upon the definition of "navigable waters" as "waters of the United States."¹²³ Therefore, "waters of the United States"¹²⁴ should be interpreted as meaning all waters of the United States, including ground waters.

Interpreting the FWPCA's definition of navigable waters¹²⁵ according to the plain meaning of the words is also consistent with the historical development of the concept of navigability.¹²⁶ In *United States v. Phelps Dodge Corp.*,¹²⁷ waters which flow through normally dry arroyos¹²⁸ were held to be "waters of the United States."¹²⁹ The phrase "waters of the United States"¹³⁰ was interpreted by the court as meaning "just what it says: all the waters of the United States including the territorial seas."¹³¹ The court stated that the FWPCA "must extend to all pollutants which are discharged into any waterway . . . including underground waters."¹³² (emphasis added). The

¹²² 507 F.2d at 747.

¹²³ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ The Supreme Court once defined navigable waters as waters that . . . form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water. *The Daniel Ball*, 77 U.S. (10 Wall.) 557 (1870). *The Montello*, 87 U.S. (20 Wall.) 430, 441-42 (1894), expanded the definition to include waters having the capacity for commercial use. "Navigable waters" was subsequently held to encompass water bodies having a past history of commercial use which were no longer suitable for commerce because of physical or economic change. *Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921); *United States v. Appalachian Electric Power Co.*, 311 U.S. 377 (1940).

The concept of navigability was expanded by the FWPCA prior to the 1972 Amendments. See Act of Oct. 2, 1965, Pub. L. 89-234, § 5(a), 79 Stat. 907 (codified at 33 U.S.C. § 1160(c)(5) (1970), which provides that discharges into tributaries of interstate waters not themselves subject to the statute were subject to abatement if the discharges caused the water quality of the interstate waters to fall below required standards. See *Hearings on Activities of the Federal Water Pollution Control Administration — Water Quality Standards Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 90th Cong., 1st Sess. 661 (1967). But see *Save America's Vital Environment v. Butz*, 347 F. Supp. 521, 528 (N.D. Ga. 1972), for limitations on the navigability concept under the prior FWPCA.

¹²⁷ *United States v. Phelps Dodge Corp.*, 391 F. Supp. 1181 (D. Ariz. 1975) [hereinafter cited as *Phelps Dodge*].

¹²⁸ An arroyo is defined as "a small steep-sided watercourse or gulch, usually dry except after heavy rains, and with a nearly flat floor and U-shaped cross section." *AMERICAN COLLEGE DICTIONARY* 70 (22d ed. 1968).

¹²⁹ *United States v. Phelps Dodge Corp.*, 391 F. Supp. at 1185.

¹³⁰ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹³¹ 391 F. Supp. at 1185.

¹³² *Id.* at 1187.

Phelps Dodge court's reliance on the unambiguous definition of navigable waters in the FWPCA constituted an analysis superior to the *GAF* court's reliance on an unclear legislative history.¹³³

In *United States v. Holland*,¹³⁴ non-navigable canals and intertidal wetlands above the mean high water line¹³⁵ were held to be "waters of the United States" within the FWPCA's definition of "navigable waters."¹³⁶ The court in *Holland* held that since the definition of "navigable waters"¹³⁷ stands with no limiting language, the FWPCA is not limited to the traditional tests of navigability.¹³⁸ Therefore, the court indicated that the mean high water line could not be utilized as a barrier to shield pollution since the environment can not afford such safety zones, and since the mean high water line has no rational connection to the aquatic ecosystems which the FWPCA was intended to protect.¹³⁹ The reasoning of *Holland* is applicable to ground waters since intertidal wetlands above the mean high water line and water beneath the surface are equally non-navigable in fact.

Although the concept of including ground waters within the FWPCA's definition of "navigable waters"¹⁴⁰ may appear unlikely, it is consistent with the unambiguous wording of the statute,¹⁴¹ the analogies presented by other cases,¹⁴² and the language of other cases that expressly include subterranean waters within the definition.¹⁴³

¹³³ In *L.A. Darling Co. v. Water Resources Comm.*, 341 Mich. 654, 67 N.W.2d 890 (1953), the Supreme Court of Michigan was faced with a similar problem in interpreting a state statute making it unlawful to discharge injurious substances into "the lakes, rivers, streams or other waters" of the state. 67 N.W.2d at 894. An order of the Michigan Water Resources Commission directing the defendant to install a suitable system to abate ground water pollution was appealed on the ground that the state statute did not encompass subsurface waters. 67 N.W.2d at 892-93. The court rejected this argument and held that "waters of the state" pertained to all waters including ground waters. 67 N.W.2d at 893-94.

¹³⁴ 373 F. Supp. 665 (M.D. Fla. 1974) [hereinafter cited as *Holland*]. See *Water Pollution Control Act Amendments of 1972 Reach Polluting Activities Occuring Above Mean High Water Line—United States v. Holland*, 2 FLA. ST. L. REV. 799 (1974).

¹³⁵ The high water mark is "the line on the shore reached by the water at the high or flood tide." BLACK'S LAW DICTIONARY 1763 (4th rev. ed. 1968).

¹³⁶ 373 F. Supp. at 671, 673.

¹³⁷ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹³⁸ 373 F. Supp. at 671.

¹³⁹ *Id.* at 675, 676.

¹⁴⁰ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹⁴¹ *Id.* §§ 1251(a)(1), 1362(7), 1362(14).

¹⁴² *Colo. Public Interest Research Group v. Train*, 507 F.2d 743, 747 (10th Cir. 1974), cert. granted, 40 U.S.L.W. 3011 (U.S. July 22, 1975) (No. 74-1270); *United States v. Holland*, 373 F. Supp. 665 (M.D. Fla. 1974); *United States v. Phelps Dodge Corp.*, 391 F. Supp. 1181 (D. Ariz. 1975).

¹⁴³ *Sierra Club v. Lynn*, 502 F.2d 43 (5th Cir. 1974); *United States v. Phelps Dodge Corp.*,

Admittedly several of the FWPCA's sections tend to indicate that ground water is not navigable water within the Act. 33 U.S.C. § 1252(a) (Supp. II, 1972) requires the Administrator to "prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of *navigable waters and ground waters*" (emphasis added). 33 U.S.C. § 1254(a)(5) (Supp. II, 1972) requires the Administrator to "establish, equip, and maintain a water quality surveillance system for the purpose of monitoring the quality of the *navigable waters and ground waters*" (emphasis added). This language, however, does not take ground waters out of the FWPCA's definition of "navigable waters." The statutory definition of "navigable waters" as being "waters of the United States" is clearly stated and should not be defeated by the presence of these two non-enforcement sections of the Act. The definitional section applies "except as otherwise provided."¹⁴⁴ Therefore navigable waters are "waters of the United States . . ." "except as otherwise provided" as in §§ 1252(a) and 1254(a)(5) (Supp. II, 1972). Inclusion of ground waters within the regulatory scheme of the FWPCA as "waters of the United States" is also consistent with the rule promulgated by the Supreme Court which forbids "a narrow reading of pollution control legislation,"¹⁴⁵ and with decisions holding that Congress intended to assert FWPCA jurisdiction to the maximum extent.¹⁴⁶

Federal regulation of ground water pollution through the FWPCA would clearly represent a constitutional exercise of power under the commerce clause.¹⁴⁷ When the courts are faced with a challenge to Congressional power under the commerce clause, the exercise of Congressional power is upheld if the general activity which is sought to be regulated is reasonably related to, or has an effect upon, interstate commerce, and if the specific activities are those Congress intended to reach through the statute.¹⁴⁸ In recent years, the scope of the commerce clause has been broadly interpreted by the Su-

391 F. Supp. 1181 (D. Ariz. 1975); *L.A. Darling Co. v. Water Resources Comm'n*, 341 Mich. 654, 67 N.W.2d 890 (1953).

¹⁴⁴ 33 U.S.C. § 1362 (Supp. II, 1972).

¹⁴⁵ *United States v. Standard Oil Co.*, 384 U.S. 224, 226 (1960); *United States v. Penna. Ind. Chem. Corp.*, 411 U.S. 655, 669-70 (1973); *United States v. Republic Steel Corp.*, 362 U.S. 482, 491 (1960).

¹⁴⁶ *Natural Resources Defense Council v. Calloway*, 392 F. Supp. 685 (D.D.C. 1975); *California v. Environmental Protection Agency*, 511 F.2d 963 (9th Cir. 1975).

¹⁴⁷ U.S. CONST. Art. I, § 8, cl. 3.

¹⁴⁸ *Perez v. United States*, 402 U.S. 146 (1970); *Katzenbach v. McClung*, 379 U.S. 294 (1964); *Heart of Atlanta Motel v. United States*, 379 U.S. 241 (1964); *United States v. Darby*, 312 U.S. 100 (1941).

preme Court, where it has been utilized as a constitutional basis of legislation seeking to alleviate national problems.¹⁴⁹ The quality of ground waters has a sufficient nexus to interstate commerce to constitutionally validate inclusion of ground waters within the enforcement provisions of the FWPCA.¹⁵⁰

Even if it is not accepted that ground waters are within the purview of the FWPCA as "waters of the United States,"¹⁵¹ a significant portion of subterranean waters are still within its purview as tributaries or portions of navigable waters, since ground waters are the major supplier of water for rivers, lakes, and streams.¹⁵² This approach is consistent with the Senate Report,¹⁵³ which states:

The control strategy of the Act extends to navigable waters. The definition of this term means the navigable waters of the United States, portions thereof, tributaries thereof, and includes the territorial seas and the Great Lakes . . . Water moves in hydrolic cycles and it is essential that the discharge of pollutants be controlled at the source. Therefore, reference must be made to the navigable waters, portions thereof, and their tributaries."¹⁵⁴

In *United States v. Ashland Oil & Transportation Co.*,¹⁵⁵ the Sixth Circuit Court of Appeals affirmed a conviction for violation of 33

¹⁴⁹ *Katzenbach v. McClung*, 379 U.S. 294 (1964); *Heart of Atlanta Motel v. United States*, 379 U.S. 241 (1964) (holding that Congress could, under the commerce clause, prohibit private restaurant owners from discriminating against customers on the basis of race). See McMahon, *The Federal Water Pollution Control Act Amendments of 1972*, 14 B.C. IND. & Com. L. Rev. 672, 677-78 (1973).

¹⁵⁰ Since approximately 21.5% of the Nation's domestic, industrial, and agricultural water supply is derived from subsurface sources (*supra* note 2), the pollution of ground water resources would have a tremendous impact upon interstate commerce, affecting the desirability of entire regions for residence and commerce, especially in view of the relative permanence of ground water pollution. The ramifications of the pollution of a subterranean metropolitan water supply, as threatened in *Sierra Club v. Lynn*, 502 F.2d 43 (5th Cir. 1974), is posited as an extreme illustration of the potential impact of ground water pollution upon interstate commerce. The pollution of ground waters utilized for irrigation is another illustration of potential impact upon interstate commerce. Since ground waters are the major supply of water for rivers, lakes, and streams (see notes 11 and 12, *supra*, and accompanying text), and since they are in constant flow, the end result of ground water pollution is pollution of surface waters, a result which plainly is sufficiently related to interstate commerce to uphold federal regulation.

¹⁵¹ 33 U.S.C. § 1362(7) (Supp. II, 1972).

¹⁵² See text at note 12, *supra*.

¹⁵³ S. REP. No. 92-414, 92d Cong., 2d Sess. (1971) in UNITED STATES CODE CONG. & ADMIN. NEWS 3742 (1972).

¹⁵⁴ *Id.*

¹⁵⁵ *United States v. Ashland Oil & Transportation Co.*, 504 F.2d 1317 (6th Cir. 1974) [hereinafter cited as *Ashland Oil*].

U.S.C. § 1321(b)(5) (Supp. II, 1972) notwithstanding the fact that the water receiving the discharges was a non-navigable tributary thrice removed from the navigable water into which it eventually flowed.¹⁵⁶ The court held that the FWPCA encompasses non-navigable tributaries and portions of navigable waters,¹⁵⁷ stating that "it would make a mockery of the FWPCA" if the Act's authority was limited to the bed of the navigable water since "the tributaries which join to form the river could then be used as open sewers as far as federal regulation was concerned."¹⁵⁸ Limiting the FWPCA'S authority to surface tributaries would make a mockery of the Act, since the Act's provisions could then be circumvented by discharging the pollutants beneath the surface.¹⁵⁹

One of the two alternative rulings offered by the *GAF* court, that which would forbid discharges into ground waters which flow into or otherwise affect surface waters,¹⁶⁰ is consistent with the reasoning of the *Ashland Oil* court. To sustain a burden of proving that particular ground waters flow into or affect particular surface waters would be difficult, however, given the problems involved in tracing ground water movement. The court in *Ashland Oil* mitigated this problem by shifting the burden of proof away from the party alleging a violation of the FWPCA so as to force the alleged violator to prove that the tributary or portion in issue does not flow into or otherwise affect navigable waters.¹⁶¹ But even if the burden were shifted, the FWPCA would not reach a significant portion of ground waters which are not proximate to present population centers. These waters are often found in arid regions, where the population depends upon them more than in areas with alternative resources.¹⁶² Thus, effective long range abatement of ground water pollution is possible only if the wording of the FWPCA is followed so as to

¹⁵⁶ The court stated:

Little Cyprus Creek is a tributary to Cyprus Creek, which is a tributary to Pond River, which is a tributary to Green River. The stipulation indicates that of these, only Green River is actually a navigable river "in fact" in terms of water borne commerce.

504 F.2d at 1320.

¹⁵⁷ *Id.* at 1325.

¹⁵⁸ *Id.* at 1326.

¹⁵⁹ As an extreme illustration, subsurface discharges a few yards away from a navigable river would be beyond the reach of the FWPCA if ground waters are excluded.

¹⁶⁰ 389 F. Supp. at 1383.

¹⁶¹ 504 F.2d at 1329.

¹⁶² See text at note 7, *supra*.

include ground waters within the Act as "waters of the United States."¹⁶³

CONCLUSION

The objective of the FWPCA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹⁶⁴ If ground waters are beyond the reach of the FWPCA, as was held in *GAF* then this Congressional objective can never be achieved, since the entire regulatory scheme could be circumvented by subsurface discharges. Since in addition the Safe Drinking Water Act is limited in scope, and the common law is limited in force, the adoption of a rule excluding ground waters from the enforcement purview of the FWPCA would deprive the United States of an effective ground water pollution abatement scheme, a scheme which would be a reality if the currently available control mechanisms were utilized in concert. In fact, because ground water pollution is extremely long-lived, and because polluted ground waters eventually flow into and pollute other ground and surface waters,¹⁶⁵ continued ground water pollution could have a disastrous impact upon the quality of all the Nation's waters. This impact could be mitigated if the FWPCA is interpreted to encompass ground waters as "tributaries or portions of navigable waters." This interpretation, however, would not extend the FWPCA to all ground waters, and its effectiveness would turn largely upon which party would have to bear the burden of proving flow into or effect upon navigable water. Regardless, a significant portion of the nation's ground water resource would remain unprotected under this interpretation, including ground waters in areas which have the greatest dependence on ground waters.

The full objective of the FWPCA is achievable only if all ground waters are within the meaning of the Act, as "waters of the United States." This interpretation is consistent with the clear wording of the FWPCA, the holdings of analogous cases, and the objective of the statute. Since, if the FWPCA does not apply, other currently available mechanisms of ground water pollution abatement are inef-

¹⁶³ See text at notes 114-43, *supra*, for argument asserting that ground waters are within the FWPCA as "waters of the United States."

¹⁶⁴ 33 U.S.C. § 1251(a) (Supp. II, 1972).

¹⁶⁵ S. REP. NO. 92-414, 92d Cong., 2d Sess. (1971) in UNITED STATES CODE CONG. & ADMIN. NEWS. YANNAKONE, *supra* note 1, at 454.

fective alternatives, and since ground water pollution, if allowed to continue unchecked, will undermine the Congressional objective in enacting the FWPCA, the *GAF* opinion should be subjected to close scrutiny. The *GAF* court erred in its interpretation of the legislative history and of the language of the FWPCA and thus the opinion should not be followed. Ground waters are “waters of the United States” within the FWPCA’s definition of navigable waters, and, in view of the importance of uncontaminated ground water resources, and of the Act’s objective of restoring the Nation’s waters, the clear wording of the FWPCA should be followed.