

TIME TO BITE THE BULLET: A LOOK AT STATE IMPLEMENTATION OF TOTAL MAXIMUM DAILY LOADS (TMDLS) UNDER SECTION 303(d) OF THE CLEAN WATER ACT

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I. INTRODUCTION

When I was young, I spent my happiest summers on a western Kansas wheat farm in Stafford County owned by my great-aunt and great-uncle, a childless couple who took in my cousins, brothers, and me every summer.¹ Usually by early July, western Kansas temperatures rise to one-hundred degrees or more, day after day. Tree leaves curl, grass withers, and the earth itself shrivels, leaving large cracks in the fields of wheat stubble and alfalfa. Like many others, we endured July with only box fans and one window air conditioner, a “luxury” that my great-aunt only turned on for a few hours in the late evening. Aunt Sally’s free time did not begin until after the wheat was harvested, when she no longer had to ferry meals to the men in the fields, or drive to town for combine parts. Then, after regular chores were finished, and the dishes were washed and put away, she and her visiting sister, Aunt Lolly, would load all of the children in two cars and drive to Rattlesnake Creek. There, while the two women fished in the cool shade under the bridge, we children were free to explore the creek, running through its cool, shallow waters, watching minnows dart in front of our slow hands, and capturing frogs, turtles and perch.

Sadly, I cannot take my own children to the Kansas River, which flows only a mile from our home, for a summer’s swim, for fishing, or for wading and splashing, without the risk that the river will make them ill.²

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1. This note is dedicated to the memory of H. Lee “Harold” Figger and Celsa “Sally” Garza Figger, Kansas wheat farmers, who will be remembered forever by their great-nephews and nieces. It is also dedicated to my husband, Craig, with my heartfelt appreciation for his patience and support, to our children, Olivia, Michael, and Andrew, to my mentor, Professor Myrl L. Duncan, and to my many, many other friends, family, and neighbors who continually support and inspire me.

2. See *TMDL Program – Kansas Impaired Waters*, United States Environmental Protection Agency, Office of Water, Total Maximum Daily Load (TMDL) Program, 44-45, available at <http://www.epa.gov/OWOW/tmdl/states/kstmdltables.html> (last visited on May 17, 2000). The State

Moreover, this health hazard is not limited to the Kansas River. Human exposure to any stream in America carries a one-in-three chance of contact with deleterious pollutants.³ Despite massive federal spending to reduce the release of sewage,⁴ and federal regulations reducing the outpouring of industrial effluents into our nation's waters, at least one-third of the rivers in the United States remain unsafe for swimming, boating, or other forms of recreation.⁵

Federal Water Administration officials have concluded that federal regulations limiting or prohibiting the discharge of industrial and sewage materials into the nation's waters have drastically reduced the amount of water pollution from those sources.⁶ Those kinds of regulations, however, miss other significant sources of water contamination, generally classified as "nonpoint source" pollution.⁷ Nonpoint source pollution includes runoff from agricultural activities and animal grazing.⁸ According to EPA:

Agricultural activities that cause [nonpoint source] pollution include confined animal facilities, grazing, plowing, pesticide spraying, irrigation, fertilizing, planting, and harvesting. The major agricultural [nonpoint source] pollutants that result from these activities are sediment, nutrients,

of Kansas considers the waters of the Kansas River to be "impaired," or unsafe for recreational use.
Id.

3. See James Boyd, *The New Face of the Clean Water Act: A Critical Review of the EPA's Proposed TMDL Rules*, Resources for the Future, Discussion Paper 00-12, 4 (March, 2000) (noting that "30% to 40% of waters" across the nation fail state water quality standards, thirty-six percent of rivers and streams are classified as "impaired," and that another eight percent of rivers and streams are considered "threatened."). These figures were reported by the states as required under § 305 of the CWA, and compiled in the National Water Quality Inventory; 1996 Report to Congress, EPA841-F-97-003, U.S. Environmental Protection Agency, Office of Water, April, 1998, available at <http://www.epa.gov/ow/resources/9698>. See *id.* at n.2.

4. See OLIVER A. HOUCK, *THE CLEAN WATER ACT TMDL PROGRAM: LAW, POLICY, AND IMPLEMENTATION* 3 (1999) (reporting that the federal government has spent in excess of \$128 billion to aid construction of municipal sewage treatment facilities).

5. See The Associated Press, *River Pollution Worries Officials*, THE TOPEKA CAPITAL-JOURNAL, April 24, 2000 at 7-A. "Despite . . . tremendous progress in reducing water pollution, almost 40 percent of the Nation's waters assessed by states still do not meet water quality goals." *The Impact of the Proposed Total Maximum Daily Load Regulations on Agriculture and Silviculture, Hearings Before the Subcommittee on Department Operations, Oversight, Nutrition, and Forestry of the Committee on Agriculture and the Committee on Agriculture, House of Representatives*, 106th Cong. 225 (2000) (testimony of J. Charles Fox, Assistant Administrator for Water, United States Environmental Protection Agency) [hereinafter *Committee on Agriculture Hearings*], 2000 WL 23830802.

6. See *Committee on Agriculture Hearings*, *supra* note 5.

Pollution from a wide range of sources (e.g. storm water from city streets, agricultural lands, forestry operations, and others) degrade water resources. Fish in many waters contain unacceptable levels of mercury and other toxic contaminants. Beaches are too often closed due to poor water quality. Several years ago, after taking a hard look at the serious water pollution problems around the country, the Administration concluded that the current implementation of the existing programs was not fully addressing serious water pollution threats to public health, living resources, and the Nation's waters.

Id. at 225-26.

7. See Part II.A., *infra*, for a discussion on nonpoint source pollution.

8. See *Oregon National Desert Association v. Dombeck*, 834 F.2d 842, 849, n.9 (9th Cir. 1987) (holding that state water quality standards could not be enforced through the citizen suit provision of the Clean Water Act to halt nonpoint source water pollution from cattle grazing).

pathogens, pesticides, and salts.⁹

Early on in the life of the Clean Water Act, there were few Environmental Protection Agency programs limiting nonpoint source pollution from the federal level.¹⁰ Before the 1990s, federal programs initiated under the Clean Water Act¹¹ generally sought to control water pollution through the regulation of “point sources,”¹² and gave low priority to abatement of nonpoint source contamination.¹³ Yet, despite the achievement of a reduction in the amount of municipal and industrial point source water pollution, the nation’s waters remained sullied, chiefly because of an increasing amount of nonpoint source pollution.¹⁴ In the 1980s, using a long-ignored statutory mechanism within the 1972 Clean Water Act, § 303(d),¹⁵ environmental citizens groups caught the EPA by surprise with a series of lawsuits.¹⁶ Facing

9. *Managing Nonpoint Source Pollution from Agriculture*, EPA Pointer No. 6, (EPA841-F-96-004F), available at <http://www.epa.gov/owow/nps/facts/point6.htm> (last visited March 26, 2001).

10. See Oliver A. Houck, *TMDLs, Are We There Yet?: The Long Road Toward Water Quality-Based Regulations Under the Clean Water Act*, 27 ENVTL. L. REP. 10391, 10392 (1997).

11. See Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387. The Federal Water Pollution Control Act of June 30, 1948, ch. 758, was amended generally by Pub. L. No. 92-500, 86 Stat. 816, on October 18, 1972. The FWPCA is commonly referred to as “the Clean Water Act” (see Clean Water Act of 1977, Pub. L. No. 95-217, § 2, 91 Stat. 1566 (1977)).

12. Section 502(14) of the Clean Water Act, 33 U.S.C. § 1362 (1994). A point source is defined 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 . . . from which pollutants are or may be discharged.” *Id.*

13. See *Testimony of Carol Browner, Administrator, U.S. Environmental Protection Agency Hearings Before the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate*, (February 23, 2000) at 4, available at <http://www.epa.gov/owow/tmdl/22300.html> [hereinafter *Browner Testimony*] (last visited May 17, 2000).

14. See Oliver A. Houck, *TMDLs IV: The Final Frontier*, 29 ENVTL. L. REP. 10469, 10469-70 (1999). “What has gone wrong, of course, is that unregulated sources have blossomed like algae to consume the gains. . . . Every state and every major watershed in America is experiencing similar problems from similar sources.” *Id.* See also Elaine Bueschen, *Pfiesteria Piscicida: A Regional Symptom of a National Problem*, 28 ENVTL. L. REP. 10317, 10317 (1998).

15. See 33 U.S.C. §1313 (d) (1994).

16. See Oliver A. Houck, *TMDLs: The Resurrection of Water Quality Standards-Based Regulation Under the Clean Water Act*, 27 ENVTL. L. REP. 10329, 10329 (1997). During the 1980s, interested groups began filing citizen suits to compel the EPA to establish § 303(d) TMDL’s when the states failed to do so. See Jeffrey G. Miller, *Current Issues in Clean Water Act Litigation*, The American Law Institute – American Bar Association Continuing Legal Education, ALI-ABA Course of Study (June 26, 2000). To determine the nature of the EPA’s duties, courts had to interpret the applicable statutory provisions of the Clean Water Act, particularly § 303 (d). See *id.* Mandatory duties of the EPA arise under § 303(d)(2), which states in pertinent part:

Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred eighty days after the date of publication of the first identification of pollutants . . . for his approval, the waters identified and the loads established . . . The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and . . . shall incorporate them into its current plan

33 U.S.C. § 1313(d)(2) (1994). Other provisions of the Clean Water Act established deadlines for the states and EPA; § 303 did not set a deadline and no one acted. See Miller, *supra*, at 419-20. In the watershed case of *Scott v. City of Hammond, Indiana*, the Seventh Circuit Court of Appeals held that

litigation across the country for failing to develop control programs for waters that remained impaired despite the imposition of general water pollution programs, EPA slowly began to develop a program¹⁷ focusing on the “wide variety of human activities on the land”¹⁸ that produce stream and lake pollution.¹⁹

In 1996, EPA called for state compliance with its newly developed program, which uses a watershed approach designed to effect a sweeping clean-up of the nation’s waters. The EPA program, which includes both point and nonpoint sources of water contamination, is commonly referred to as the “TMDL” program.²⁰ “TMDL” stands for

a state’s prolonged failure to submit a state-generated TMDL for EPA approval was a constructive submission that TMDLs were not needed; EPA’s failure to approve or disprove the state submission manifested agency inaction, properly subject to judicial review. *See Scott v. City of Hammond, Indiana*, 741 F.2d 992, 996-98 (7th Cir. 1984). Ultimately, the constructive submission theory triggered a non-discretionary duty on the part of the EPA to develop TMDLs. *See Miller, supra*, at 420. A flood of litigation followed the *Scott* decision, and courts across the country agreed that § 303(d) of the Clean Water Act specified a non-discretionary duty on the part of EPA to develop TMDL programs for impaired waters of states failing to implement TMDLs on their own. *See e.g., Alaska Ctr. for the Env’t v. Reilly*, 762 F.Supp. 1422, 1426 (W.D. Wash. 1991); *Sierra Club v. Browner*, 843 F. Supp. 1304 (D. Minn. 1993); *Idaho Sportsmen’s Coalition v. Browner*, 951 F. Supp. 962 (W.D. Wash. 1996); *Kingman Park Civic Ass’n v. U.S. Env’t Prot. Agency*, 84 F. Supp.2d 1 (D.D.C. 1999). *See also* Robert D. Mowrey, *TMDL Implementation Issues and Trends*, 15 *Natural Resources & Environment* 112, 112 (2000).

17. *See Browner Testimony, supra* note 13, at 4. *See also* Houck, *supra* note 16, at 10329.

In the 1990s, water quality standards regulation has returned to the Clean Water Act and its players like the appearance of Banquo’s ghost. Driven forward by environmental litigation, the Act’s vestigial requirements for upgrading polluted waters by the application of standards have sprung out of the courtroom to catch the EPA and the states by surprise. More than 20 such lawsuits were pending at the time of this Article [July, 1997].

Id. See also Houck, *supra* note 10, at 10392-96.

In October 1973, rather promptly considering its many duties under the new Act, EPA published a proposed notice of a two-volume set of pollutants appropriate for the [§] 303(d) process. Then, nothing happened.

* * *

It was not until April 1991 that EPA began publishing guidelines for state implementation of §303(d), and October 1992 that it finally set a deadline for the submission of state WQLS lists.

* * *

In early 1996, EPA called for final 1996 state WQLS lists by April 1 of that year.

Id. at 10392-93, 10394-95, 10395-96.

18. *What is Nonpoint Source (NPS) Pollution? Questions and Answers*, U.S. EPA Office of Water, available at <http://www.epa.gov/owow/nps/qa.html> (last visited on October 1, 2000).

19. *See Testimony of J. Charles Fox before the Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure, U.S. House of Representatives*, (February 10, 2000) at 9, available at <http://www.epa.gov/owow/tmdl/2102000.html> [hereinafter *Testimony of Charles J. Fox*] (last visited May 17, 2000). “Until the early 1990’s, however, EPA and States gave top priority to implementing these general clean water programs and gave lower priority to the more focused restoration authorities of the TMDL program. . . . Where States fail to act, EPA will step in and identify the polluted waters or establish the TMDLs.” *Id.*

20. Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation; Final Rules, 65 Fed. Reg. 43,585, 43,586 (July 13, 2000) [hereinafter *Final TMDL Rule*], available at <http://www.epa.gov/fedrgstr/EPA-WATER/2000/July/Day-13/17831.htm>, (last visited on October 1, 2000). The EPA bases its authority for the new federal program on the statutory language of §303(d), federal regulations, and other provisions of the Clean Water Act. *See id.* The EPA cites the following provisions of the Clean Water Act as authority for establishing Total Maximum Daily Loads: “Clean Water Act sections 106, 205(g), 205(j), 208, 301, 302, 303, 305, 308, 319, 402, 501, 502 and 603; 33 U.S.C. §§ 1256, 1285(g), 1285(j), 1288, 1311, 1312, 1313, 1315, 1318, 1329, 1342, 1361, 1362, and 1373.” *Id. See also Guidance*

“Total Maximum Daily Load.”²¹ Technically, a TMDL is:

[A] calculation of the maximum amount of pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant’s sources. Water quality standards are set by States, Territories, and Tribes. They identify the uses for each waterbody, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources.²²

Simply explained, a TMDL creates a comprehensive plan to restore polluted waters by limiting pollutants from *any and all* sources, thereby bringing water quality to a level considered safe for the use designated by the state.²³ The EPA promulgated its Final TMDL Rule outlining its new approach to TMDLs that was published in the Federal Register on July 13, 2000.²⁴

The EPA’s new TMDL program, which poses yet another layer of federal regulation,²⁵ has engendered heated controversy in the agricultural community. One reason for agriculture’s objection to

for Water Quality-Based Decisions: The TMDL Process, Ch. 1, Introduction and Executive Summary (noting that TMDLs are established “by § 303(d) of the Clean Water Act and by EPA’s Water Quality Planning and Management Regulations [40 CFR Part 130]”), available at <http://www.epa.gov/OWOW/tmdl/decisions/dec1.html>. See also *Testimony of Charles J. Fox*, *supra* note 19, at 4, 6.

21. Because Total Maximum Daily Load is such a long phrase, this note will employ the acronym “TMDL” throughout.

22. *Total Maximum Daily Load (TMDL) Program, Introduction to TMDLs, TMDL Definition—What is a Total Maximum Daily Load (TMDL)?*, United States Environmental Protection Agency, Office of Water, available at <http://www.epa.gov/owow/tmdl/intro.html>. See also *Guidance for Water Quality-Based Decisions: The TMDL Process*, United States Environmental Protection Agency Office of Water, Ch. 1 Introduction and Executive Summary at *1, available at <http://www.epa.gov/OWOW/tmdl/decisions/dec1.html>, (last visited on October 1, 2000). There, EPA states that a TMDL is:

[A] tool for implementing State water quality standards . . . based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis for States to establish water quality-based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards.

Id.

23. See *Committee n Agriculture Hearings*, *supra* note 5, at 230. See also June F. Harrigan-Lum and Arnold L. Lum, *Hawaii’s TMDL Program: Legal Requirements and Environmental Realities*, 15 NAT. RESOURCES & ENV’T 12, 12 (2000). “TMDLs set an absolute upper limit on the amount of a pollutant that [an impaired water body] can receive from . . . point sources and nonpoint sources.” *Id.* See also *Final TMDL Rule*, *supra* note 20, at 43,588. The EPA believes that under § 303(d), the directive to create TMDLs for polluted waters “exists regardless of whether the waterbody is impaired by point sources, nonpoint sources or a combination of both.” *Id.*

24. See *Final TMDL Rule*, *supra* note 20, at 43,585. The Rule is to be codified at 40 C.F.R. Parts 9, 122, 123, 124, and 130. See *id.*

The rule lays out specific timeframes under which EPA will assure that lists of impaired waters and TMDLs are completed as scheduled, and necessary [NPDES] permits are issued to implement TMDLs . . . EPA believes that these regulations are necessary because the TMDL program which Congress mandated in 1972 has brought about insufficient improvement in water quality.

Id. at 43,586.

25. Farmers and ranchers must already comply with the federal regulations of the Federal Insecticide, Fungicide, and Rodenticide Act of 1982 (FIFRA), 7 U.S.C. §§ 136 *et seq.* (1994).

TMDLs is that this federal program may effectively result in restrictions on the manner in which landowners may use their land, whenever farming or ranching operations adversely impact the quality of nearby waters.

The federal government usually leaves matters of zoning or land-use restrictions to the states; however, state governance of land-use to restrict nonpoint source pollution has been ineffective or non-existent.²⁶ Accordingly, within the Final TMDL Rule, EPA asserts that § 303(d) of the Clean Water Act contains a congressional grant of authority for federal development of area-wide regulatory plans for rivers and streams spoiled by point or nonpoint pollution, triggered whenever state pollution control measures fail to attain clean water. Even with federal oversight to aid in the development of TMDLs, at the end, it is the states that must initiate and enforce local land-use restrictions²⁷ called for under specific TMDLs, and it is the states that must face the agricultural community.

Agriculture often receives protection from states, and has in the past received exemption from both state and federal water pollution regulation. Agricultural interest groups bear considerable influence in Congress, and have been treated favorably under past water pollution laws.²⁸ This favored status directly conflicts with the fact that traditional farming practices are the cause of many of our national water quality problems.²⁹ A comprehensive federal plan to address nonpoint source water pollution is long overdue. It is time for the states to bite the bullet and cooperate with the federal government to put TMDLs into effect for their impaired waters.

Part II of this Note begins with a description of the current

26. See David Zaring, Note, *Agriculture, Nonpoint Source Pollution, and Regulatory Control: The Clean Water Act's Bleak Present and Future*, 20 HARV. ENV'T L. REV. 515, 515-16 (1996). The author notes that past initiatives to encourage states to halt nonpoint source pollution under §§ 208 and 319 failed because of lack of adequate federal funding, and because of "the political costs of imposing burdensome regulations on powerful agricultural interests." *Id.* at 523.

27. See *Pronsolino v. Marcus*, 91 F. Supp.2d 1337, 1355 (N.D. Cal. 2000). See also J.B. Ruhl, *The Environmental Law of Farms: 30 Years of Making a Mole Hill out of a Mountain*, 31 ENVTL. L. REP. 10203, nn.123-26 (2001), citing Environmental Law Institute, *Almanac of Enforceable State Laws to Control Nonpoint Source Water Pollution* (1998). In a study of applicable laws in all fifty states, the author notes that "most states have a number of enforceable authorities that can be used to address various nonpoint source discharges." *Ruhl, supra*, at n.127.

28. See Zaring, *supra* note 26, at 515-16. The author states:

Agriculture represents the largest cause of nonpoint source pollution. Thus, agricultural interests who dislike the prospect of increased regulation of their discharges can subject those responsible for pollution controls to pressure and make nonpoint source pollution controls particularly lax. The agricultural interests, rooted in a discrete group that has both strong incentives to organize in order to avoid regulation and a relatively small, easily organized structure, have a particularly large influence on pollution control legislation passed by Congress [T]hese interest groups have greatly influenced the House of Representative's most recent nonpoint source pollution control effort.

Id.

29. See *id.*

contamination found in our nation's waters, the tightening agricultural economy, and the anxiety arising in the agricultural and ranching community over TMDLs. Part III presents a brief overview of the development of federal water pollution control in this country, and reviews the major provisions of the Clean Water Act dealing with nonpoint source pollution. Part IV examines the legislative history and statutory requirements of § 303 (d), the statutory provision of the Clean Water Act dealing with TMDLs. Part V discusses the formal opposition launched against TMDLs both in Congress and the courts, and reviews the first district court decision upholding the EPA's TMDL program. Part VI describes some of the alternatives for state implementation of TMDLs, and critiques the TMDL program initiated by the State of Kansas. Finally, this Note concludes that even though the federal government by default must create TMDLs when states fail to do so, responsible states should cooperate with EPA, and act to initiate the local procedures necessary to carry out this new federal initiative designed to achieve clean waters.

II. OUR NATION'S DIRTY LITTLE WATER SECRET AND AGRICULTURE

A. *New EPA Regulations Include Nonpoint Sources*

Many groups affected by or interested in the newly promulgated nonpoint source pollution rules are now facing each other across a line in the sand. Groups who advocate the need to reduce water pollution face mounting opposition from those who will have to shoulder the cost of abatement under the new regulations. The industries, manufacturers, and municipalities presently regulated by EPA fear that without the new regulations, they must either decrease discharges, or cease discharging altogether, so that affected waterbodies can meet state water quality standards. In effect, they must bear the consequences of pollution caused by others. The parties who traditionally enjoyed exemption from regulation strongly oppose the new program. Additionally, property rights advocates fear the imposition of new social responsibilities in an area traditionally free of federal regulation. At stake are the waters of this nation.

Recently, tensions between those who stand to be affected resurfaced as a result of litigation³⁰ establishing EPA's duty to create

30. See HOUCK, *supra* note 4, at 75. "Against a background of federal environmental programs in which litigation has played a central role, it is hard to think of any program more precipitously driven by citizen suits from absolute zero toward its statutory destiny than TMDLs." *Id.* See also 33 U.S.C. § 1365(a) (1994) (authorizing citizen suits against EPA in federal court for failure to perform a

TMDLs when states fail to act. Under pressure from environmental groups filing suit because of EPA inaction, the agency initiated new rules for timely establishment of TMDLs across the nation.³¹ The EPA's new federal TMDL regulations will be codified at 65 Fed. Reg. 43,585-43,670 (July 13, 2000), 40 C.F.R. 130.³²

The object of the TMDL program is to ensure nationwide compliance with existing state (and by default, federal) water quality standards. State water quality standards generally set the limits for total concentrations of designated pollutants that can safely remain in a body of water.³³ The concentration of pollutants allowed varies in amount from waterbody to waterbody, depending on the water's use.³⁴ For example, if a state designates a section of a river as a supply for public drinking water, the concentration of pollutants allowed should logically be lower than for a section of a river designated as a source for irrigation water only.

Where water segments fail to meet water quality standards, states must institute TMDLs for each pollutant identified as a problem.³⁵ The object of a TMDL is to "define the maximum amount of a pollutant that can be discharged into the water segment without violating the water quality standard."³⁶ The difficult task TMDLs are designed to achieve is "to enhance the quality of water"³⁷ for every waterbody across the country. TMDLs accomplish that task by looking at a watershed area, taking into consideration the amounts of pollutants generated by numerous sources, and then, most importantly, calculating and implementing reductions of concentrations of pollutants from each source needed for water quality.³⁸

non-discretionary duty). "Under the bill, citizens themselves may go to United States District Courts against those who violate effluent standards or compliance orders. Citizens may also go to court against the Administrator for failure to carry out non-discretionary duties under the law." SEN REP. NO. 92-414 (Public Works Committee) (1971) [to accompany S. 2770], *reprinted in* 1972 U.S.C.C.A.N. 3668, 3677.

31. See Mowrey, *supra* note 16, at 113.

Against this litigation backdrop, EPA has initiated three major rulemaking efforts (the most recent and significant in July 2000) to define exactly what a TMDL is and to establish a regulatory process and planning horizon for "establishing" and "implementing" each TMDL. The July 2000 rulemaking redefines what a TMDL consists of, requires for the first time that implementation plans be prepared, and sets an overall schedule for TMDL development.

Id.

32. See *Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation*, 65 Fed. Reg. 43,585-43,670 (July 13, 2000) (to be codified at 40 C.F.R. Parts 9, 122, 123, 124, and 130).

33. See PERCIVAL & MILLER, *ENVIRONMENTAL REGULATION, LAW, SCIENCE, AND POLICY*, 700 (3d ed. 2000).

34. See PERCIVAL ET AL., *supra* note 33, at 700-01.

35. See 33 U.S.C. § 1313(d) (1994).

36. PERCIVAL ET AL., *supra* note 33, at 730.

37. PERCIVAL ET AL., *supra* note 33, at 701.

38. See 33 U.S.C. § 1313 (d) (1994).

The TMDL program is designed to respond to a water quality problem identified long ago, but not addressed by the agency until recently— “nonpoint source” pollution. While the Clean Water Act does not provide a definition for nonpoint source pollution, it does define the term “point source.” Section 502(14) of the Act states:

The term ‘point source’ means 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 agricultural³⁹ stormwater discharges and return flows from irrigated agriculture.

By contrast, a “nonpoint source” refers to a source of water pollution that does not originate from an easily identified or controlled pipe, conduit, or container.⁴⁰ The EPA states:

Nonpoint source (NPS) pollution . . . comes from many diffuse sources. NPS pollution is caused by rainfall[l] or snowmelt moving over and through the ground. As the runoff moves, it picks up an[d] carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water. These pollutants include:

Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas . . .⁴¹

The origin of many of the nonpoint source contaminants washed by storm water runoff into streams and lakes are chemically-treated fields and cattle grazing.⁴²

B. Our Dirty Little Water Secret

Nonpoint source pollution poses a substantial problem that EPA seeks to abate through its TMDL program. The identity of the most significant nonpoint source of water pollution has been known for years. “Agriculture is the single largest nonpoint source of surface water pollution.”⁴³

Agricultural (and other) nonpoint source pollution detrimentally impacts humans, fish, and aquatic plants. Runoff from pesticides,

39. 33 U.S.C. § 1362 (14) (1994).

40. See *Oregon Natural Res. Council v. U.S. Forest Serv.*, 834 F.2d 842, 849 (9th Cir. 1987). That opinion describes nonpoint source pollution as “pollution that does not result from the ‘discharge’ or ‘addition’ of pollutants from a point source.” *Id.* at 849, n.9.

41. *What is Nonpoint Source (NPS) Pollution? Questions and Answers*, U.S. EPA Office of Water, available at <http://www.epa.gov/owow/nps/qa.html> (last visited on October 1, 2000).

42. See *id.*

43. Zaring, *supra* note 26, at 518, n.13. “It both introduces pesticides and herbicides into the nation’s waters and is the primary source of soil erosion in the country, which clogs surface waters with silt and sediment.” *Id.*

chemical fertilizers, and manure results in the introduction of carcinogens and excess nutrients into human drinking water supplies.⁴⁴ “Excessive sedimentation clouds the water, which reduces the amount of sunlight reaching aquatic plants; covers fish spawning areas and food supplies; and clogs the gills of fish.”⁴⁵ While surface water runoff seems harmless, the cumulative effect of excess nutrient runoff from fields and forests eventually results in a reduction of available habitat for flora and fauna.

Significantly, studies link a vast “dead zone” in the Gulf of Mexico with excess nutrients from farm fertilizers and animal wastes, carried downstream by the Mississippi River and its tributaries.⁴⁶ The accumulation of nutrients in the Gulf produced an expanse of hypoxic water⁴⁷ covering an area of 7,000 square miles.⁴⁸ No sea life can live in that area.⁴⁹

However, destruction of aquatic habitat stretches beyond the Gulf of Mexico. According to congressional findings, numerous harmful algal blooms have been documented recently, including “red tides in the Gulf of Mexico and the Southeast; brown tides in New York and Texas; ciguatera fish poisoning in Hawaii, Florida, Puerto Rico, and the United States Virgin Islands; and shellfish poisonings in the Gulf of Maine, the Pacific Northwest and the Gulf of Alaska.”⁵⁰

Furthermore, nonpoint source pollution is also the most significant source of non-marine pollution in rivers, streams, and lakes across America.⁵¹ Studies link nonpoint sources with sixty-five to seventy-five percent of the contamination in the dirtiest waters of the United States.⁵² Agricultural pollution from nonpoint sources impairs over one hundred-thousand miles of the rivers and two million acres of lakes in the United States.⁵³ In the State of Kansas and elsewhere, nonpoint source pollution accounts for one hundred percent of pollutants found

44. *See id.* at 520, n.29.

45. *Managing Nonpoint Source Pollution from Agriculture*, EPA Pointer No. 6, (EPA841-F-96-004F), *1, available at <http://www.epa.gov/owow/nps/facts/point6.htm> (last visited March 26, 2001).

46. Houck, *supra* note 14, at 10470, nn.15-22. The author notes that “the Mississippi River drains nearly 60 percent of the continental United States.” *Id.* at 10470, n.21. *See also* H.R. Res 602, 105th Congress (1998), noting the following: “(1) the recent outbreak of the harmful microbe *Pfiesteria piscicida* in the coastal waters of the United States is one example of potentially harmful algal blooms composed of naturally occurring species that reproduce explosively and that are increasing in frequency and intensity in the Nation’s coastal waters . . .” H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998).

47. *See* Houck, *supra* note 14, at 10470. Hypoxia is a condition of reduced available oxygen in the water, which is “harmful or fatal to fish, shellfish, and benthic organisms.” H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998). Generally, water is hypoxic when the available oxygen concentration in water falls below two percent. *See* Houck, *supra* note 14, at 10470.

48. *See* H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998).

49. *See* Houck, *supra* note 14, at 10470.

50. H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998).

51. *See* Houck, *supra* note 14, at 10470, nn.24-33.

52. *See* Zaring, *supra* note 26, at 517, n.8.

53. *See* Zaring, *supra* note 26, at 518, nn.16, 17.

in lakes.⁵⁴

In addition to accounting for one hundred percent of the pollution in lakes, nonpoint sources greatly contribute to river contamination in Kansas, a relatively non-industrialized, sparsely populated state. One example of this problem can be seen in the Arkansas River, which originates on the eastern side of the Rocky Mountains in Colorado and travels 1,450 miles through Kansas, Oklahoma and Arkansas before joining the Mississippi River.⁵⁵ As the Arkansas River flows into Wichita, Kansas, it is reasonably clean, but after it departs the city, state officials were quoted as describing the water as “too dirty to touch.”⁵⁶

One particular tributary of the Arkansas River, Cowskin Creek, is beset with extreme contamination. The creek contains excessive amounts of fecal coliform, bacteria, and chlordane, a colorless, odorless insecticide.⁵⁷ The most likely source of the contaminants found in Cowskin Creek is surface water runoff from livestock operations.⁵⁸

These and other contaminants threaten the existence of the Arkansas River Shiner, a minnow-like fish found only in the Arkansas River.⁵⁹ The U.S. Fish and Wildlife Service estimates that less than 100 of these fish are still alive.⁶⁰ Furthermore, the freshwater mussels of Kansas are disappearing.⁶¹ The Western fanshell and ten other mussels have been listed as endangered or threatened in Kansas. Significantly, mussels are indicators of water quality, and contribute to cleaner

54. See Zaring, *supra* note 26, at 517, n.10. Other states with lake pollution exclusively from nonpoint sources include Iowa, Mississippi, New Mexico, New Jersey, and West Virginia. See *id.*

55. See *State of Kansas v. State of Colorado*, 514 U.S. 673, 676 (1995). See also *Renick Bros., Inc. v. State of Kansas*, District Court of Gray County, No. 79C-58 (D. Ct. Gray Cty, KS) Findings of Fact and Conclusions of Law. There, Judge Reynolds described the course and history of the Arkansas River in Kansas as follows:

In the beginning God created the Arkansas River, among others, on the third day of Creation. He covered its generally rolling valley and banks with tough, hardy sagebrush and strong, durable buffalo grass after claiming it from the sea. He populated the valley and adjacent plains with herds of bison, elk, antelope and deer; the river being a thirst-quenching landmark. Then He introduced Man, who as an Indian society co-existed harmoniously with the primeval plain for unknown centuries. Some 1800 years A.D., ‘Western Civilization’ thrust its frontier into the Arkansas River Basin to wrest from it an agrarian cornucopia. . . . The river enters Kansas on its western boundary and flows through the western two-thirds of the State. Before its decline, the river flowed through the counties of Kearney, Finney, Gray, Ford, Kiowa, Edwards, Pawnee, Barton, Rice, Reno, Sedgwick, and Sumner, exiting the southern Kansas border through Cowley County. . . . [I]ts impact as an avenue of commerce is substantial, but difficult to measure.

Id. Although portions of the Arkansas River are totally dry, it is still treated as *de facto* navigable, because “the river has been and still is set apart as, and for, a public highway of commerce . . .” *Dana v. Hurst*, 122 P. 1041, 1047 (1911).

56. *River Pollution Worries Officials*, THE TOPEKA CAPITAL JOURNAL, April 24, 2000 at 7-A.

57. See *id.*

58. See *id.*

59. See Jean Hays, *Kansas Officials Aim to Protect Rare Arkansas River Minnow*, THE WICHITA EAGLE, July 4, 2000, available at LEXIS, The Wichita Eagle file.

60. See *id.* In an effort to preserve the shiners, the Fish and Wildlife Service will regulate land use activities within three hundred feet of both sides of the Arkansas River. See *id.*

61. See Jenny Upchurch, *They Work to Keep Kansas’ Mussels from Sleeping with the Fishes*, THE WICHITA EAGLE, September 3, 2000 at 1-A and 12A.

streams by removing “silt and chemical runoff from farm fields and encroaching development.”⁶²

In addition to adverse health and environmental consequences, nonpoint source pollution also results in economic damages.⁶³ Nationwide, harmful algal blooms from excess nutrient runoff caused an economic loss of approximately \$1,000,000,000 over the last decade due to loss of fish and shellfish habitat.⁶⁴ Increased sedimentation and contamination of our nation’s waters decreases the recreational value of rivers and lakes, and reduces the water storage capacity of reservoirs.⁶⁵ Nonpoint source pollution also raises the cost of water treatment, decreases navigability, and clogs irrigation ditches.⁶⁶ Bluntly put, nonpoint source problems create serious national health and economic welfare concerns; but even though nonpoint source pollution endangers the health and welfare of all U.S. citizens, the agricultural community strongly opposes its inclusion in TMDL regulation.

C. Why Farmers Fear TMDLs

The recent economic woes of the agricultural community, combined with a general distaste for governmental regulation, seem to present the strongest reasons for farmers’ opposition to EPA’s new TMDL program. Farmers face many economic challenges today. Increasing world market competition, increasing costs, and decreasing prices make survival in an unforgiving business even harder.⁶⁷ One recent example of escalating operating expenses for farmers can be seen in rising fuel costs, predicted to increase the average farmer’s yearly fuel bill by \$5,000.⁶⁸ Likewise, supplies used in agriculture that are derived from petroleum, such as fertilizers and herbicides, are also expected to increase in price.⁶⁹ While other businessmen may be able to pass on rising costs to the consumer, farmers cannot unilaterally raise their crop or livestock prices.⁷⁰

62. *Id.* at 1-A.

63. *See* Zaring, *supra* note 26, at 518, n.18.

64. *See* H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998).

65. *See id.*

66. *See* Zaring, *supra* note 26, at 518-19, n.18.

67. *See* Jonna Lorenz, *High Gas Prices Fuel Farmers’ Woes*, THE TOPEKA CAPITAL-JOURNAL, June 11, 2000 at 1-C. “‘Many farmers will be able to carry the extra burden, but for some already struggling from low market prices the added expense could lead to them going broke . . . Anybody who is inefficient to begin with can slip over the edge quickly,’ [Terry] Kastens said.” *Id.*

68. *See* Lorenz, *supra* note 67, at 1-C.

69. *See* Lorenz, *supra* note 67, at 1-C. “‘Terry Handke, a cattle, corn and soybean farmer in Atchinson County near Muscotah, said the plastic he uses to build tile terraces has already gone up in price. It is made with petroleum. ‘There’s an awful lot of stuff involved in agriculture that is tied to fuel in one way or another,’ Handke said.” *Id.*

70. *See id.*

In the face of the recent economic downturn experienced by agriculture,⁷¹ Kansas farmers and ranchers will now face the added uncertainty of the application of TMDL regulatory programs to their farming operations.⁷² In Kansas, the traditional land-use practices of farmers and ranchers that impact any body of water, even tributary streams that run intermittently, may have to change if they are brought within TMDL regulation.⁷³ The particular use of any given parcel of land plays a major role in the amount and type of run-off it creates. As a result, “restricting or eliminating certain kinds of activities in some areas may be the most effective way of preserving water quality.”⁷⁴

Significantly, some of the land use practice changes implemented under TMDLs may not cost farmers anything, or may result in actual savings per acre.⁷⁵ For instance, a particular TMDL may require field

We're at a disadvantage in ag because we can't just flat say, "It took \$2.50 to produce this bushel of corn, so we want \$2.75," [Terry] Handke said. Farmers can try to make fewer trips to conserve fuel, but when crops need fertilizer and cattle need minerals, fuel costs just can't be avoided.

Id.

71. See *Clinton Ok's \$15 Billion in Farm Aid*, THE TOPEKA CAPITAL-JOURNAL, June 21, 2000, at 1-C (noting it is increasingly apparent that the 1996 federal "Freedom to Farm" law, designed to increase access to free markets and to decrease federal subsidy programs, has failed dismally to provide sufficient protection for American farmers in a market system of increasing costs and little or no control over prices). The article reports that Former President Clinton signed a bill providing \$15 billion of agricultural aid in the form of cash payments and insurance subsidies on June 20, 2000, "representing the third big bailout of the agricultural economy in as many years." *Id.* Furthermore, Dan Glickman, Former U.S. Agriculture Secretary, said "the bailout 'was a clear admission' that the 1996 farm law 'fails to provide an effective safety net for American farmers.'" *Id.* See also Philip Brasher, *Prices Strain USDA*, THE TOPEKA CAPITAL-JOURNAL, July 13, 2000 at 1-C.

The Agriculture Department said farmers should get an average of \$1.70 per bushel for their corn this year, 15 cents less than its projection last month and 10 cents below the price that growers got for last year's crop. The estimate for wheat also was down 15 cents from the June forecast to \$2.50 a bushel, the same price growers got for their 1999 crop Commodity prices fell sharply in 1998 because of a worldwide glut of grain and have yet to recover.

Id. See also, Jonna Lorenz, *Got Milk? Well, Yes, but Producing Milk Doesn't Guarantee a Profit*, THE TOPEKA CAPITAL-JOURNAL, August 27, 2000 at 1-C (noting that milk prices plunged twenty-five percent from January, 2000, and remained too low for farmers to break even with costs of production).

72. See John Hanna, The Associated Press, *Opponents of EPA Standards Winning Debate*, THE TOPEKA CAPITAL-JOURNAL, September 18, 2000, at 4-C.

For many Kansans, the humble farm pond has become another state symbol. Because it has, opponents appear to be prevailing in a contentious political debate over water quality. The Federal Environmental Protection Agency has drafted new rules for Kansas, ones that state officials strongly oppose. Among other things, the EPA wants to bring lakes and ponds on private land under water quality standards. Opponents have seized on that proposal as an example of why the standards are too draconian.

Id.

73. See *id.* Land owners with farm ponds were formerly exempted from water quality regulation under operation of state law. See *id.* "The EPA would force the Kansas Department of Health and Environment to regulate water quality in privately owned lakes and ponds, including farm ponds. State law now says KDHE has no jurisdiction over a body of water if it is surrounded by privately owned land and inaccessible to the public." *Id.*

74. George A. Gould, *Agriculture, Nonpoint Source Pollution, and Federal Law*, 23 U.C. DAVIS L. REV. 461, 470 (1990).

75. See Mary Fund, *Kansas Waters and the Murky Quagmire of Regulation*, Kansas Rural Center, KRC RURAL PAPERS, No. 171, p. 2 (August/September 2000). Mary Fund, a staff member of the Kansas Rural Center, reminds farmers:

work to be done during a dry time of year, rather than before a rainy period, in order to decrease erosion and stream sedimentation.

Moreover, one recent government program actually provides money to farmers in an effort to curb the amount of pollutants from surface water runoff. For the last five years, the federal government's Conservation Reserve Program makes funds available to the states for distribution to farmers that plant buffer zones around streams and lakes.⁷⁶ Buffer strips of grass or trees between fields and nearby streams act as "natural pollution filters, keeping toxins out of streams,"⁷⁷ tremendously reducing the total amounts of sediment, nutrients, pesticides, and bacteria running off most fields.⁷⁸ In Kansas, the state conservation service's buffer strip initiative is used in conjunction with its TMDL program.⁷⁹

While definite changes in current farming and ranching practices such as the incorporation of buffer strips around streams will be necessary for compliance with runoff limits set by TMDLs, the true measure of economic loss to each individual farmer remains uncertain. For example, if a TMDL in a particular watershed mandates a decrease in herbicide use, the farmer will save the initial cost of the herbicide, but then may lose crop production per acre. Because crop prices are based on supply and demand, the ultimate amount of economic loss becomes difficult to determine, especially considering the global market factors that affect agricultural prices. Thus, farming interests, long exempt from the cost of pollution abatement and worried that any additional expense could force them out of business, oppose the new TMDL regulations.⁸⁰ The uncertainty of the marketplace following the recent economic downturn for agriculture makes members of the agricultural community afraid to adopt farming practices that are directed toward maximizing water quality, rather than toward maximizing profits.

[K]eep in mind a couple of things. 1) The solutions to improving water quality may not be so bad, or cost as much as you fear. At KRC we have long promoted voluntary measures to address on-farm environmental problems. And many farmers we work with are implementing—and liking—the very practices that some farmers fear (i.e. limiting livestock access to streams and ponds, or reducing chemical usage on cropland).

Id.

76. See Chris Grenz, *Rented Land Filters Pollution*, THE TOPEKA CAPITAL-JOURNAL (January 16, 2001) at 7-A. In Kansas, the buffer strip initiative is administered by the Kansas State Conservation Commission. See *id.*

77. *Id.*

78. See *id.* "According to a fact sheet developed under the [Kansas] governor's Water Quality Initiative, buffer strips reduce the sediment in runoff up to 75 percent, remove up to 50 percent of nutrients and pesticides, and remove up to 60 percent of certain bacteria." *Id.*

79. See *id.*

80. See Susan Bruninga, *Battle Lines Drawn as Interest Groups File Motions to Support, Challenge TMDL Rule*, 31 ENV'T REP. 1952, 1952 (2000). "The American Farm Bureau Federation was the first group to file a petition to challenge the EPA rule." *Id.* Other groups, such as the National Corn Growers Association and the National Chicken Council, also challenge EPA's authority over "certain agriculture operations as point sources of pollution under the TMDL rule." *Id.*

However, the agricultural community fears more than adverse economic consequences as it considers EPA's TMDL initiative. Farmers and ranchers also fear arbitrary enforcement of TMDLs against individuals who own land abutting bodies of water, because of the difficulty of pinpointing the exact source and amount of contribution of pollution from diffuse surface water runoff.⁸¹ Traditionally, environmental regulations promulgated by EPA were designed to force those responsible for generating pollution to absorb (or to internalize) external costs resulting from the polluting activity.⁸² The agricultural community believes that the application of a TMDL management system, lacking an exact identification of specific sources of surface water contamination, will necessarily lead to an inequitable result.⁸³

Although the agricultural community's fear of TMDLs is understandable to a certain extent, exempting those most responsible for the degradation of water quality⁸⁴ from any responsibility for clean-up is entirely unreasonable. Before the implementation of the TMDL program, at least one commentator noted that farmers were essentially allowed to create water pollution and get off scot-free.⁸⁵

In order to achieve an equitable reduction in water pollution, the EPA must bring all nonpoint source dischargers, including farmers, within its regulatory reach, as it did with the industrial 'end-of-the pipe' dischargers in the 1970s.

D. Drawing the Battle Lines in Unforeseen Ways

When it comes to TMDLs, special interest groups that traditionally either support or oppose federal environmental regulations are choosing sides in unforeseen ways. In essence, TMDLs broaden the range of targets for the reduction of water pollution by including nonpoint

81. See S. REP. NO. 370, 95th Cong., 1st Sess. (1977), reprinted in 1977 U.S.C.C.A.N. 4326, 4362. Congressional reports note that "nonpoint source pollution from animal wastes, fertilizers, pesticides, and eroded soil is difficult to control because of the diffuse nature of the problem." *Id.*

82. See Kurt Stephenson, et al., *Toward an Effective Watershed-Based Effluent Allowance Trading System: Identifying the Statutory and Regulatory Barriers to Implementation*, 5 ENVTL. LAW 775, 790 (1999).

83. See Zaring, *supra* note 26, at 531, n.100. The author notes that "[w]holesale controls may require too much pollution control in some areas, and too little in others." *Id.*

84. See Zaring, *supra* note 26, at 518. "As the Senate then observed, 'agriculture is now one of the most major contributors to the degradation of the quality of our navigable water.'" *Id.*

85. See Zaring, *supra* note 26, at 528.

Farmers do not bear the total costs of off-farm pollution and erosion. Most costs are borne by other users of the polluted water. Therefore, pollution offers an inexpensive method of waste product disposal for farmers and an opportunity to shift the costs of that waste on to others.

Id.

sources for the first time. If EPA cannot mandate decreases from nonpoint sources, then logically it must tighten restrictions on industrial or municipal point sources exclusively in order to lessen water contamination.⁸⁶ Accordingly, industrial and municipal polluters, long subject to the costs and restrictions of the Clean Water Act permit system, now find themselves siding with EPA as they look for a reprieve from ever-tightening regulations.⁸⁷

Generally, environmental organizations favor the new EPA regulations.⁸⁸ In a strange twist, however, six environmental groups have become strange bedfellows with the farmers and ranchers opposing the new regulations.⁸⁹ While the environmental groups generally favor the imposition of TMDLs, those six groups oppose the proposed TMDL program because it allows states up to fifteen years to effect compliance with water quality standards.⁹⁰ In essence, these groups believe that the new TMDL rule allows the contamination to continue in contradiction of the objectives of the Clean Water Act.

III. FEDERAL WATER POLLUTION CONTROL AND SECTION 303(D)

A. Overview of Federal Involvement

In order to understand the TMDL program, a brief review of the history of water pollution control in this nation is helpful. Federal intervention to clean up navigable rivers, lakes and streams began over one hundred years ago, when Congress enacted the Rivers and Harbors Appropriations Act of 1899⁹¹ (Refuse Act). This act prohibited the discharge into navigable waters of “any refuse matter of any kind or description whatever other than that flowing from streets and sewers

86. See PERCIVAL ET AL., *supra* note 33, at 705-06. “For water quality standards to be effective in preventing pollution, they must be translated into effective discharge limits. Section 301(b)(1)(c) of the Clean Water Act provides that NPDES permits must include limits that will ensure that water quality standards are not violated.” *Id.*

87. See Bruninga, *supra* note 80, at 1952-53. For example, the Association of Metropolitan Sewerage Agencies generally endorses the new TMDL rule. *See id.* That group has argued that “[u]nless nonpoint sources are controlled, the burden and cost will continue to fall on major point sources such as municipal waste water treatment facilities to curb their discharges . . .” *Id.*

88. See Bruninga, *supra* note 80, at 1952-53.

89. See Bruninga, *supra* note 80, at 1952-53. *See also* Jim Barnett, *Federal Push for Clean Water Faces Hitches*, THE PORTLAND OREGONIAN, June 19, 2000, at *1; *Water Pollution: Pressure Mounts on EPA Officials to Withdraw Proposal on Impaired Waters*, BNA STATE ENVIRONMENT DAILY (June 16, 2000). “Six national environmental groups urged EPA in May [2000] to withdraw the [TMDL rulemaking] proposal saying it was flawed and allowed states too much time to complete their TMDLs for impaired waters.” *Id.*

90. *See id.*

91. 33 U.S.C. § 407 (1994).

and passing therefrom in a liquid state.”⁹² It also forbade placement of “material of any kind in any place on the bank of any navigable water . . . where the same shall be liable to be washed into such navigable water”⁹³ The Refuse Act of 1899, for years the sole federal law prohibiting contamination of our nation’s rivers, served as the progenitor for modern federal water pollution laws, and clearly established federal police power over navigable streams.⁹⁴

Yet, even though the federal government had the power to regulate navigable and/or interstate waters, federal involvement in water pollution control developed very slowly in the Twentieth Century.⁹⁵ In the early part of the Twentieth Century, prior to the development of federal environmental statutes, state common law trespass and/or nuisance doctrines provided the only avenues for abatement of pollution.⁹⁶ Courts would at times enjoin individual land-based activities that harmed others, but property laws and nuisance laws did not truly deter wide-scale pollution problems.⁹⁷ As levels of water pollution increased enormously, the states could no longer assure their citizens pollution-free streams, rivers and lakes, either because of lack of sufficient funding, or fear of losing industry to other locations.⁹⁸

92. *Id.*

93. *Id.* The federal prohibition against dumping materials in or near navigable waters has only one exception—when the U.S. Army Corps of Engineers approves a proposed activity and issues a permit allowing it. *See id.* At first, the Refuse Act of 1899 was applied only to obstructions to navigation, but in 1966, the Supreme Court expanded the definition of “refuse” in the Act to extend to virtually any discharge which would adversely impact water quality, expanding federal police power over navigable waterbodies. *See United States v. Standard Oil Co.*, 384 U.S. 224, 225-30 (1966).

94. *See The Rivers and Harbors Act of 1899*, 33 U.S.C. § 407 (1994).

95. *See HENRY N. BUTLER AND JONATHAN R. MACEY, USING FEDERALISM TO IMPROVE ENVIRONMENTAL POLICY* 10 (1996).

For two interrelated reasons, legislation did not begin to displace common-law responses to environmental problems until long after the industrial revolution had brought about pollution on a large scale. First, the scientific connection between pollution and public health was not established until many years after the development of industrial pollution. Second, and as a consequence, there were no well-defined interest groups lobbying for pollution-control measures. As scientific evidence began to make the case for environmental regulation, the states were the first to respond because localized interest groups formed to demand corrective legislation, often in response to litigation.

Id.

96. *See PERCIVAL ET AL.*, *supra* note 33, at 73. “The early common law of nuisance held actors strictly liable when their actions interfered with property rights held by others.” *Id.*

97. *See GEORGE A. GOULD & DOUGLAS L. GRANT, CASES AND MATERIALS ON WATER LAW*, 530-31 (5th ed. 1995). “[T]here has been little interplay between water law and pollution control law, historically. . . . Pollution of surface and groundwaters was a fertile field for litigation, and there were many suits for redress of wrongs and injunctions against permanent damage None of this litigation had much effect upon the overall quality of water” *Id.*

98. *See Philip Weinberg, Does That Line in the Sand Include Wetlands? Congressional Power and Environmental Protection*, 30 ENVTL. L. REP. 10894, 10895 (2000). Federal environmental laws “were enacted in large measure because state controls varied enormously and often prompted a race to the bottom, with some states encouraging sources to move where pollution would be tolerated, if not encouraged.” *Id.* *See also* Robert J. Rauch, Note, *The Federal Water Pollution Control Act Amendments of 1972: Ambiguity As A Control Device*, 10 HARV. J. ON LEGIS. 565, 566 (1973). Federal involvement “increased as the states proved unwilling or unable to assume primary responsibility for the task.” *Id.*

Because water pollution problems were national in character, and because state efforts to curb pollution were ineffective or poorly supervised, Congress began acting with regard to water pollution regulation.⁹⁹ After two relatively regulation-free centuries, the genesis of a national environmental regulatory system was born¹⁰⁰ with the enactment of the Federal Water Pollution Control Act of 1948.¹⁰¹

Under the 1948 Act, federal efforts to control water pollution generally consisted of monetary assistance to the states in aid of local pollution abatement programs.¹⁰² It was not until the late 1960s,¹⁰³ when the nation learned the magnitude of its pollution problems (for example, in 1969 the polluted Cuyahoga River burst into flames¹⁰⁴), that Congress began enacting laws promoting active federal involvement in the environmental regulation.

Congressional action to protect the environment during the 1960s attacked water pollution in two ways. First, Congress acted to broaden and intensify federal support of standing state programs for the control

99. See Weinberg, *supra* note 98, at 10895. "It was this very concern—ruinous economic competition between states to the detriment of their own citizens—that prompted federal legislation to safeguard the environment." *Id.*

100. See E. Donald Elliott, et al., *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 J. L. ECON. & ORG. 313 (1985). The authors note the sudden development of federal environmental law, stating:

This comprehensive structure of environmental regulation by the federal government is a curious feature of American law for at least two reasons. First, it developed fairly suddenly, seemingly out of nowhere. For two centuries, the effects of industrial pollution on the natural environment had been generally free from regulation by government, except for sporadic nuisance actions under the common law and a few municipal ordinances to control smoke. Second, it is curious that the environmental law of the 1970s was made primarily at the national level, rather than by the state or municipal governments which had traditionally held legislative authority over such matters.

Id. at 317-18.

101. Pub. L. No. 845, Ch. 758, 62 Stat. 1155 (1948). The Federal Water Pollution Control Act of 1948 gave broad deference to the states' power to enact and enforce water pollution control measures. See *id.* The legislative history recites that: "In connection with the exercise of jurisdiction over the waterways of the Nation . . . it is hereby declared to be the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in controlling water pollution . . ." *Id.*

The 1948 legislation, for example, assigned powers for enforcement in water pollution control to Governors of the States. The Federal agencies were authorized only to support research in water pollution, projects in new technology, and limited loans to assist the financing of treatment plants. Given these basic provisions, State and Federal efforts in water pollution control went forward with little legislative change for nearly 10 years. . . .

In 1956, the Congress approved the first major legislative changes in the water pollution control program. Federal grants were authorized to assist States in preparing plans for pollution control and to help localities in building treatment plants. The authority for research and technical assistance was increased and broadened. Measures for controlling pollution of interstate waters were tightened.

S. REP. NO. 92-414, reprinted at 1972 U.S.C.C.A.N. 3668, 3669.

102. See PERCIVAL ET AL., *supra* note 33, at 103-04.

103. See BUTLER & MACEY, *supra* note 95, at 10-11. The authors state: "[f]ederal environmental regulation evolved at a relatively slow pace until the late 1960s. By then there was a widespread belief that private litigation, state antipollution programs, and some early federal legislation were inadequate protections for the natural environment." *Id.*

104. See Houck, *supra* note 14, at 10469. Concerning the flaming Cuyahoga River, the author cites to Patricia Howard, *A Happier Cleveland*, HOUS. POST., Oct. 24, 1990, at A2.

of water pollution.¹⁰⁵ Second, Congress began to create a new “federally dominated regulatory structure.”¹⁰⁶ This “command and control” by the federal government was a revolutionary concept.

B. Federal Intervention

After conducting public hearings on the nation’s increasing water pollution problems,¹⁰⁷ the Senate Subcommittee on Air and Water Pollution conducted a two-year study, then recommended legislation adopting an enforcement mechanism very different from the states’ existing water quality standards.¹⁰⁸ Following the subcommittee’s recommendation, Congress adopted the Clean Water Act in 1972. The goal of the Act was to restore and maintain “the chemical, physical, and biological integrity of the Nation’s waters.”¹⁰⁹

To carry out this goal, Congress divided the causes of water pollution into two basic categories: point sources, and nonpoint sources. Because ambient water quality programs, under the control of the states, failed to effectively remediate widespread and severe water pollution, Congress’ primary contrivance for abatement in the 1972 Clean Water Act was a national permit system for industrial polluters.¹¹⁰

C. The Permit System

The National Pollutant Discharge Elimination System (NPDES) permit program of the Clean Water Act (CWA) was designed to remediate point source pollution. Section 301 of the CWA provides that, “except as in compliance” with specific provisions of the CWA, “the discharge of any pollutant by any person shall be unlawful.”¹¹¹ In effect, § 301 outlaws any discharge from a point source without a

105. See generally sections 208 and 302 of the Clean Water Act, 33 U.S.C. §§ 1288, 1312 (1994) (respectively).

106. BUTLER & MACEY, *supra* note 95, at 11. For example, in the Water and Environmental Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91 (1970), Congress forbade the discharge of oil into the navigable waters of the United States, empowered the President to develop and promulgate regulations regarding the removal of hazardous substances from the nation’s waters, and established the Office of Environmental Quality.

107. See S. REP. NO. 92-414, *reprinted at* 1972 U.S.C.C.A.N. 3668, 3669.

“During April, May and June of 1970, the Subcommittee on Air and Water Pollution devoted 14 days of public hearings to 18 Senate bills concerning water pollution abatement and control.” *Id.*

108. See *id.* “Under the 1965 Act, water quality standards were to be set as the control mechanism. States were to decide the uses of water to be protected, the kinds and amounts of pollutants to be permitted, the degree of pollution abatement to be required, the time to be allowed a polluter for abatement.” *Id.*

109. 33 U.S.C. § 1251 (a) (1998).

110. See PERCIVAL ET AL., *supra* note 33, at 699-700.

111. 33 U.S.C. § 1311(a) (1998).

permit.¹¹² The permit system is established by § 402 of the Clean Water Act, which allows discharges into the nation's waters,^{113 114} subject to the

112. See PERCIVAL ET AL., *supra* note 33, at 661. Section 301 prohibits any and all discharges “unless the discharger has a permit that incorporates effluent limitations—restrictions on the quantities of pollutants that may be discharged.” *Id.* Toxic substances, such as heavy metals, pesticides, dioxins, vinyl chloride, and PCBs, that effect human and animal health are regulated separately under Section 307 of the Act. See 33 U.S.C. § 1317 (1994). The liability created by the CWA’s permit program consists of violation for discharging wastes except in compliance with a permit issued by EPA. See 33 U.S.C. § 1311 (1994). A violation is established simply by showing that a discharge took place with no permit, or that it violated permit requirements. See *id.* The “no discharge” prohibition of § 301 was “written without regard to intentionality . . . making the person responsible for the discharge of any pollutant strictly liable.” *United States v. Earth Sciences, Inc.*, 599 F. 2d 368, 374 (10th Cir. 1979). “It has long been understood that the discharger need not be in control of the discharge to navigable waters for a violation of the CWA to occur; indeed, many violations occur because of spills, floods, breaking pipes, and so on.” *Umatilla Waterquality Protective Assoc., Inc. v. Smith Frozen Foods, Inc.*, 962 F. Supp. 1312, 1322 (D. Or. 1997).

113. Congressional authority to regulate an activity generally prevails when that activity exhibits an interstate or “national” characteristic, and courts have gradually interpreted the federal regulatory authority under the Clean Water Act to include more than just traditionally navigable waters, extending federal jurisdiction “to the maximum extent permissible under the Commerce Clause.” *Natural Resources Defense Council v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975). Originally, the judiciary construed federal Commerce Clause powers to extend only to truly navigable waters. See *The Daniel Ball*, 77 U.S. (10 Wall.) 557, 565 (1871) (holding that the transportation of goods on the navigable waters of the United States constitutes commerce among the States, subject to the Commerce Clause power of Congress). The concept of federal authority evolved over time, and in *Natural Resources Defense Council v. Callaway*, the court upheld federal Commerce Clause powers extending beyond waters that were navigable-in-fact. See *Natural Resources Defense Council v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975). The *Callaway* court noted, however, that § 502(7) of the Clean Water Act defined navigable water as “waters of the United States,” and that the conference committee report indicated that this definition should be accorded “the broadest possible constitutional interpretation.” *Id.*

114. See David G. Savage, *Endangered Statutes: U.S. Laws Protecting Crime Victims, Environment Could Fall*, 86 A.B.A. JOURNAL 32, 33 (2000). In the 1960s, it was assumed that the federal legislature had sweeping powers to enact and enforce laws based on Congress’ regulatory power over interstate commerce. See *id.* However, recent U.S. Supreme Court decisions have narrowed federal commerce clause authority, and federal agencies can no longer assume their powers to regulate are unlimited. See, e.g. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, ___ U.S. ___ (January 9, 2001) (limiting the reach of the Clean Water Act over isolated, non-tributary waters), available at <http://www.findlaw.com>; *U.S. v. Lopez*, 514 U.S. 549 (1995) (limiting congressional authority to regulate under its Commerce Clause power). “The Court’s determination to limit federal authority raises questions about an array of laws.” See Savage, *supra*, at 32. The Court recently stated that the “first principles” of constitutional law specify a grant of “limited” and “enumerated powers” to the federal government. . *Lopez*, 514 U.S. at 552, 557. Other indicators point to the Court’s willingness to re-examine the extent of congressional constitutional authority to regulate the environment under the Commerce Clause; in 1995, Justice Thomas dissented from the denial of certiorari from the Ninth Circuit case of *Leslie Salt Co.*, indicating that he did not believe the Commerce Clause granted *carte blanche* authority to a federal agency to regulate property visited by migratory birds. See *Leslie Salt Co. v. U.S.*, 896 F.2d 354 (9th Cir. 1990), *cert. denied sub nom.*, *Cargill, Inc. v. United States*, 516 U.S. 995 (1995). Justice Thomas stated that “[t]he point of *Lopez* was to explain that the activity on the land to be regulated must substantially affect interstate commerce before Congress can regulate it pursuant to its Commerce Clause power.” *Id.* at 959 (Thomas, J., dissenting from denial of cert.). In the *Lopez* analysis of the outer limits of the Commerce Clause, Justice Rehnquist reaffirmed the three traditional classes of activities Congress may regulate. See *Lopez*, 514 U.S. at 558-59 (citing *Perez v. U.S.*, 402 U.S. 146, 150 (1971)). The Court stated:

First, Congress may regulate the use of the channels of interstate commerce . . .

Second, Congress is empowered to regulate and protect the instrumentalities of interstate commerce, or persons or things in interstate commerce, even though the threat may come only from intrastate activities Finally, Congress’ commerce authority includes the power to regulate those activities having a substantial relation to interstate commerce, (citation omitted) i.e., those activities that substantially affect interstate commerce.

Id. On behalf of EPA, the government can argue that, under the three broad categories of things Congress can regulate by virtue of its Commerce Clause power, TMDL regulations are an attempt to

“effluent limitations,” or restrictions of quantity, rate and/or concentration, set by the administrator.¹¹⁵

IV. CWA SECTION 303: BACK-UP FOR THE PERMIT SYSTEM

The NPDES effluent limitation system for point sources was the method preferred by Congress in 1972 for ending the water pollution problems of that day.¹¹⁶ However, Congress did not abandon the idea of using the existing state water quality standards¹¹⁷ to limit the concentrations of pollutants in waterbodies.¹¹⁸ In fact, Congress incorporated both ideas of pollution control within the provisions of the CWA.

A. Water Quality Standards in the CWA

Prior to the Clean Water Act, many state water pollution programs were based on the concept of water quality standards. These standards

“protect the instrumentalities of interstate commerce.” *Lopez*, 514 U.S. at 558. “The term ‘channel of interstate commerce’ refers to, inter alia, ‘navigable rivers, lakes, and canals of the United States; the interstate railroad track system; the interstate highway system” *Gibbs v. Babbitt*, 214 F.3d 483, 490-91 (4th Cir. 2000).

The activities sought to be regulated, i.e., farming and ranching practices which introduce excess chemicals and nutrients into surface water runoff, causing sedimentation, oxygen deprivation, and contamination of the nation’s navigable waters and tributary streams, all exhibit economic characteristics. In *Lopez*, Chief Justice Rehnquist stated “[w]here economic activity substantially affects interstate commerce, legislation regulating that activity will be sustained.” *Lopez*, 514 U.S. at 560. *Lopez* should not bar federal regulation of activities that are commercial. See *PERCIVAL ET AL.*, *supra* n.33, at 130.

In addition to the three categories, the Court will likely apply the “substantial affects” test. See *Lopez*, 514 U.S. at 559-60. Here, the government can argue that nonpoint source pollution arising from intrastate commercial activity substantially affects national commerce, and can point to the economic reports of the loss of commerce in fish and shellfish as a result of nonpoint source pollution. See generally H.R. Res. 602, 105th Cong., Pub. L. No. 105-283 (1998).

115. See §§ 402 and 502(11) of the Clean Water Act, 33 U.S.C. §§ 1342, 1362(11) (1994). States with approved enforcement programs may be authorized to regulate point source dischargers locally under §402; however, the Clean Water Act grants EPA the power to exercise continuing oversight over state regulatory programs, or to set up federal permit programs if a state fails to do so. See *id.* The overriding factor in setting limits for the discharge of pollutants is the protection of human health and the environment, and EPA is not required to give any consideration to technological feasibility or economic factors. See *Hercules, Inc. v. EPA*, 598 F.2d 91 (D.C. Cir. 1978).

116. See S. REP. NO. 92-414, reprinted at 1972 U.S.C.C.A.N. 3668, 3669.

117. “A water quality standard is a legal expression of the amount of pollutants allowed in a defined watercourse; an effluent standard describes the amount of pollutants that can be released legally by a specific source.” WILLIAM H. RODGERS, JR., 2 ENVIRONMENTAL LAW: AIR AND WATER, § 4.1, at 10 (1986).

118. See S. REP. NO. 92-414, reprinted at 1972 U.S.C.C.A.N. 3668, 3676. The Report accompanying the Senate version of the Clean Water bill notes:

The bill requires Governors and local officials, in cooperation with the Administrator, to develop plans for areawide waste treatment management in areas with critical water pollution control problems. The plans are to be completed by July 1, 1974. In addition to municipal and industrial wastes, the areawide plans are to include procedures to control agricultural runoff, surface and underground mine runoff, construction runoff, and disposal of pollutants on land or in excavations.

Id.

effectively set “limits on ambient concentrations of pollutants in particular classes of waters.”¹¹⁹ During the drafting stages of the Act, state governors, including Nelson Rockefeller of New York, asked Congress not to discard the existing state water quality programs.¹²⁰ These state governors were extremely concerned that the imposition of federal effluent limitations would result in arbitrary standards that would not allow the states the kind of latitude securable with water quality standards, which take local and natural conditions into account in setting standards.¹²¹ The House of Representatives ultimately acceded, and incorporated state water quality standards into its new regulatory system.¹²²

Congress perpetuated water quality criteria within the various provisions of the 1972 Clean Water Act and later amendments, particularly in sections 208,¹²³ 301,¹²⁴ 302,¹²⁵ 303,¹²⁶ and 319.¹²⁷ The EPA did not design a regulatory program under § 302, but did develop programs under § 208, § 319, and finally § 303(d). This Note, therefore, will briefly examine the legal requirements for attainment of water quality standards in § 301, and will then look at the nonpoint source pollution programs developed first under § 208, then under § 319, and finally, under § 303(d).

The key provision of the Clean Water Act, § 301, at first glance, simply prohibits unpermitted discharges. A closer reading reveals that, in addition to making unlicensed discharges unlawful, § 301(b)(1)(C) requires dischargers to comply with state water quality standards.¹²⁸ The

119. PERCIVAL ET AL., *supra* note 33, at 700.

120. See HOUCK, *supra* note 4, at 14. The author states that “nearly a dozen state governors and associations, all clearly concerned with retaining their programs and authority,” presented testimony to Congress for its consideration immediately prior to the 1972 Clean Water Act. *Id.*

121. See HOUCK, *supra* note 4, at 14, *citing* Hearings on H.R. 11896, H.R. 11895, 92d Cong. 483 (1971). During those hearings, New York Governor Nelson Rockefeller stated: “I prefer the present system of water quality standards . . . I think the present system is a good one, because we classify waters and set standards rather than determine arbitrary emission standards.” *Id.* Another major concern of the governors was total preemption of water pollution control efforts by the federal government. *See id.*

122. See PERCIVAL ET AL., *supra* note 33, at 700.

123. 33 U.S.C. § 1288 (1994). This provision of the CWA is entitled “Areawide waste treatment management.” *Id.*

124. 33 U.S.C. § 1311 (1994) (beginning Subchapter III, which sets out standards and enforcement under the Clean Water Act).

125. 33 U.S.C. § 1312 (1994) (mandating that when discharges from point sources interfere with the attainment of water quality in a specific portion of navigable waters, lower effluent limitations shall be established for those point sources).

126. 33 U.S.C. § 1313 (1994). This provision is entitled “Water quality standards and implementation plans.” *Id.*

127. See 33 U.S.C. § 1329 (1994). In addition to banning unlicensed point source discharges, section 301 mandates the establishment of limitations to “meet water quality standards . . .” 1311(b)(1)(C) (1994).

128. See 33 U.S.C. § 1311(b)(1)(C) (1994). “In order to carry out the objective of this chapter there shall be achieved—(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards . . . established pursuant to any State law or [State] regulations (under authority preserved by section 1370 of this title . . .)” *Id.* 33 U.S.C. § 1370 (1994)

Supreme Court has noted that §301 imposes the requirement that permitting authorities must take action to assure that their water quality standards are met:

Although §301 does make certain discharges unlawful, *see* 33 U.S.C. §1311(a), it also contains a broad enabling provision which requires states to take certain actions, to wit:

In order to carry out the objective of this chapter [viz. The chemical, physical, and biological integrity of the Nation's water] there shall be achieved . . . any more stringent limitation, including those necessary to meet water quality standards . . . established pursuant to any State law or regulations.

33 U.S.C. §1311(b)(1)(C). This provision of §301 expressly refers to state water quality standards, and is not limited to discharges.

Thus, under § 301, regulated persons must legally achieve (in addition to NPDES effluent limitations) any stricter limitations "necessary to meet state water quality standards."¹³⁰ In contrast to § 301's legal requirements, §§ 208, 319 and 303 describe programs to deal with waters polluted by nonpoint sources.¹³¹

B. Section 208

Section 208 was enacted by Congress in the 1977 amendments to the CWA.¹³² In §208, Congress attempted to fashion a plan to remedy water quality problems following the initial passage of the Clean Water Act. The legislative history of the 1977 amendments manifests Congress' frustration that the goals of the original 1972 Act had not been carried out.¹³³

Section 208(b)(2)(F) required states to develop and implement areawide waste management plans for "all wastes generated within the

states, in pertinent part: "Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State . . . or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution . . ." *Id.*

129. PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, 511 U.S. 700, 713, n.3 (1994).

130. 33 U.S.C. § 1311(b)(1)(C) (1994).

131. *See generally* 33 U.S.C. §§ 1311, 1313, 1329 (1994).

132. *See* Pub. L. No. 95-217, 91 Stat. 1566 (1977). The Subcommittee on Environmental Pollution heard 63 hours of testimony over the course of 15 days of hearings, and the full committee met seven times in markup sessions. On July 22, 1977, the subcommittee voted to report original bill (S. 1952); the Senate considered the bill on August 4, and passed it on December 15, 1977; and the 1977 amendments were signed into law by President Jimmy Carter on December 17, 1977. *See id.*

133. *See id.*

The 1972 Amendments to the Federal Water Pollution Control Act were initiated by the Congress and enacted over the President's veto. Their implementation has been uneven, often contrary to congressional intent, and, frequently more the result of judicial order than administrative initiative. The Congress knew when it wrote the act in 1972, that its far-reaching scope and long-term goals would require periodic review. Sen. Rep. No. 95-370, *reprinted in* 1977 U.S.C.C.A.N. 4326, 4327.

area involved,”¹³⁴ including “a process to (i) identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution . . . and (ii) set forth procedures and methods (*including land use requirements*) to control to the extent feasible such sources.”¹³⁵ The Soil Conservation Service generated a set of unpublished regulations for Section 208(j)’s Rural Clean Water Program, “but the program was never funded and the authorization . . . expired.”¹³⁶

In § 208, Congress attempted to create a state-managed plan for areawide waste treatment to control nonpoint source pollution, but without adequate funding, the program failed. However, Congress did not give up the idea of developing a program to control agricultural pollution. The next congressional provision designed specifically to address nonpoint source pollution was approved in 1987.

C. Section 319

Congress enacted Section 319 in the Water Quality Act of 1987,¹³⁷ once again amending the Clean Water Act.¹³⁸ In 1987, Congress also added to the Act’s list of goals the development of programs for the “control of nonpoint sources of pollution.”¹³⁹ The stated purpose of the 1987 CWA amendments was “to provide for the renewal of the quality of the Nation’s waters, and for other purposes.”¹⁴⁰

The caption of § 319 is “Nonpoint Source Management Programs,”¹⁴¹ indicating Congress’ intent to once again bring nonpoint sources of pollution under some type of regulation. Section 319 requires states to prepare and submit two items to the EPA Administrator for approval. First, the Governor of each state must prepare a report that (1) identifies the “navigable waters within the State” impaired by “nonpoint sources of pollution”; (2) identifies categories of nonpoint sources adding “significant pollution” to those waters; (3) describes a

134. Pub. L. No. 92-500, Sec. 208(b)(1).

135. Pub. L. No. 92-500, Sec. 208(b)(2)(F) (emphasis added).

136. WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW: AIR AND WATER, § 4.9, 140 (1986).

137. Pub. L. No. 100-4, 33 U.S.C. 1329, 101 Stat. 52-61 (1987).

138. See generally The Water Quality Act of 1987, Pub. L. No. 100-4, 1987 U.S.C.A.N. (101 Stat. 90) 5-49. The Congressional Record reveals that the Act was considered and passed by the House on January 8, 1987, by the Senate on January 21, 1987, then vetoed by President Ronald Reagan. See *id.* On February 3, 1987, the House overrode the veto, and on February 4, 1987, the Senate overrode the veto. See *id.*

139. 33 U.S.C. § 1251(a)(7) (amended in Pub. L. 100-4, The Water Quality Act of 1987). Congress added this goal under § 101; the new subsection (a)(7) reads: “it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.” *Id.* At the same time, Congress changed the definition of “pollutant” under § 502 to include “agricultural waste.” *Id.*

140. Pub. L. No. 100-4, 101 Stat. 7 (1987).

141. See Pub. L. No. 100-4, 101 Stat. 52 (1987).

plan “identifying best management practices and measures to control” nonpoint source pollution; and (4) “identifies and describes State and local programs for controlling” nonpoint source pollution of navigable waters.¹⁴² Second, state governors are to “prepare and submit to the Administrator . . . a management program which such State proposes to implement . . . for controlling [nonpoint source] pollution . . . [of] navigable waters within the State . . .”¹⁴³ The state management program is to be developed “on a watershed-by-watershed basis.”¹⁴⁴

Despite the positive language in § 319, however, the provision fails to mandate that the states do anything other than to “identify,” “describe,” or propose plans for future implementation. Moreover, the EPA Administrator is given no legal authority in § 319 to take any action in the face of state inaction, beyond the preparation of a report identifying impaired navigable waters, and making a report to Congress.¹⁴⁵

Because § 319 lacks any bite, EPA soon looked elsewhere in the CWA for the authority to attack nonpoint source pollution successfully. The agency’s attention next turned to § 303(d).

D. Legislative History of Section 303

Section 303 is part of the original Clean Water Act, passed by Congress on October 4, 1972, over the veto of President Nixon.¹⁴⁶ In §

142. 33 U.S.C. § 1329(a)(1) (1994).

143. 33 U.S.C. § 1329(b) (1994).

144. 33 U.S.C. § 1329(b)(4) (1994).

145. See 33 U.S.C. § 1329(d)(3) (1994).

If a Governor of a State does not submit the report required by subsection (a) of this section within the period specified . . . the Administrator shall . . . prepare a report for such State which makes the identifications required . . . Upon completion of the requirement of the preceding sentence and after notice and opportunity for comment, the Administrator shall report to Congress on his actions pursuant to this section.

Id.

146. See SEN. CONF. REP. NO. 92-1236 reprinted at 1972 U.S.C.C.A.N. 3776, 3800. The Senate passed the initial Clean Water bill on November 2, 1971. See *id.* at 3714. The report indicates that the first draft of § 303 concerned the release of “predetermined and controlled quantities of specified pollutants” in conjunction with approved aquaculture projects. *Id.* Next, the bill traveled to the House of Representatives for consideration. The House rewrote the proposed legislation, passing H.S. 11896 in lieu of the Senate’s regulatory paradigm. See *id.* at 3800. The House amendment to the Senate bill varied the Senate’s version of § 303 substantially, mandating “the use of water quality standards contained in the existing law.” *Id.* Later, the Conference Committee again modified the House version of § 303. See *id.* The Conference Report explained that “[existing water quality] standards are adopted for the purposes of this revision both as to interstate and intrastate waters in the case where such standards have not been adopted . . .” *Id.* at 3776, 3800. The Committee Views and Supplemental Views expressed in the Senate Report provide an overview of the scope of congressional concern with nonpoint source pollution. See *id.* Concerning nonpoint source pollution, Former Kansas Senator Bob Dole stated:

A major new thrust of this bill is in the field of agricultural pollution . . . [which] is of great interest to me and my State . . . Most of the problems of agricultural pollution deal with non-point sources . . . It is my belief that the bill establishes an effective framework to provide for the application of the expertise developed by U.S.D.A. and others in a program which will remedy the adverse impact of agricultural activities on water pollution. It will do this by placing primary responsibility in the

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303(d) of the Clean Water Act,¹⁴⁷ Congress set out the Total Maximum Daily Load, or TMDL system. Section 303(d) states:

Subsection (d)(1) requires each State to identify the waters within its boundaries for which effluent limitations required by section 301 are not stringent enough to implement a water quality standard applicable to the waters. The State is to establish a priority ranking for such waters, taking into account the severity of the pollution and uses to be made of the water.¹⁴⁸

Section 303(d) continues with the requirement that:

Each State is to establish for waters identified under paragraph (1)(A) in accordance with the priority ranking the total maximum daily load for those pollutants which the Administrator identifies as suitable for such calculation. This is to be established at a level necessary to implement water quality standards with seasonal variations and a margin of safety.¹⁴⁹

In other words, where the NPDES permit system fails to achieve the desired level of water quality, the states, or the EPA by default, must institute TMDLs.¹⁵⁰

Looking at §§ 208, 319 and 303, one must note that all three provisions concerning nonpoint source pollution use an ambient water quality approach similar to that seen in the Water Quality Act of 1965.¹⁵¹ The legislative history of the 1972 amendments provides evidence that § 303 was designed specifically to continue “the use of water quality standards contained in the existing law.”¹⁵² Section 303(d), however, contains non-discretionary mandates that both the states and EPA must follow. To determine just what action is required, one must first turn to the Clean Water Act itself.

States, while still providing integrated programs to achieve water pollution control from all sources. *Id.* at 3759-63. Senator James L. Buckley wrote that although the Act entrusted the primary responsibility of ambient water quality to the states, it also mandated federal oversight and enforcement of “every last provision imposed upon [the Administrator] and upon the States by this Act . . .” *Id.* at 3763-68.

147. 33 U.S.C. §1313(d) (1994).

148. *Id.* at (d)(1)(A).

149. *Id.* at (d)(1)(C).

150. *See id.*

151. Compare 33 U.S.C. §§ 208, 303, 319 (1994) with The Water Quality Act of 1965, Pub. L. 89 - 234, 79 Stat. 903. Under § 303, EPA requires state identification of ambient water pollution and state pollution control measures. See 33 U.S.C. § 1313 (1994). The legislative history of the Water Quality Act of 1965 describes a system similar to that set out in Section 303(d). See H. CONF. REP. NO. 1022, reprinted in 1965 U.S.C.C.A.N. 3313, 3324-26. The Conference Report indicates that the 1965 water quality standards system mandated federal approval of state water quality criteria, federal intervention to set appropriate water quality standards upon state failure to do so, and for the prevention of the discharge of matter into interstate waters that would “reduce their quality below the applicable standard.” *Id.*

152. See S. REP. NO. 92-414, reprinted at 1972 U.S.C.C.A.N. 3668, 3800.

E. Overview of Section 303

Within the Clean Water Act, perhaps the most central provision is § 301, which triggers the requirements of other provisions, including § 303. In *PUD No. 1 of Jefferson County*,¹⁵³ Justice O'Connor astutely identified the relationship between Clean Water Act statutory provisions that, taken together, require the observance of state water quality standards by regulatory authorities and permittees. Justice O'Connor noted that: "Section 301 in turn incorporates § 303 by reference."¹⁵⁴ The caption of § 303 is "Water Quality Standards and Implementation Plans."¹⁵⁵ Subsection (a) requires any state that has not adopted state laws on water quality standards to adopt and submit such standards to the Administrator.¹⁵⁶ Subsection (b) requires the Administrator to prepare regulations if the state fails to submit any water quality standards.¹⁵⁷ Subsection (c) specifies a system of periodic review for water quality standards,¹⁵⁸ which are to "take into account the unique needs of each waterway, including 'propagation of fish and wildlife' as well as 'agricultural . . . and other purposes.'"¹⁵⁹ As one court stated, Congress meant for its water quality standards to be "comprehensive" under § 303.¹⁶⁰ That court noted:

Significantly, in the process of setting standards, § 303 did not exempt any rivers or waters—all were covered to the full extent of federal authority over navigable waters. Nor was any distinction drawn between point and nonpoint sources. The goal was to set standards for all navigable waterways in America, balanced and tailored to accommodate the various needs of each, including, explicitly, the need for the protection of fish and wildlife. The standards-setting process of Section 303 plainly applied to waters polluted by point sources as well as nonpoint sources, either alone or in combination.¹⁶¹

Whereas subsections (a), (b) and (c) of § 303 require the establishment of ambient water quality standards, § 303(d) is different. Section 303(d) mandates action.

F. Action Mandated in Section 303(d)

153. *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700 (1994).

154. *Id.* at 713 (citing 33 U.S.C. § 1311(b)(1)(C)); see also H.R. Conf. Rep. No. 95-830, 96 (1977) (noting "[s]ection 303 is always included by reference where section 301 is listed.").

155. 33 U.S.C. § 1313 (1994).

156. See 33 U.S.C. § 1313(a)(3)(A) (1994).

157. See 33 U.S.C. § 1313(b)(1)(A) (1994).

158. See 33 U.S.C. § 1313(c) (1994).

159. *Pronsolino v. Marcus*, 91 F. Supp.2d 1337, 1343 (N.D. Cal. 2000).

160. *Id.*

161. *Id.*

Under § 303(d)(1), states must “identify those waters that are below certain quality limits; establish a priority ranking for those waters; and establish TMDLs in accordance with the priority ranking.”¹⁶²

The TMDL program can be divided into two distinct phases – (1) identification of impaired waters, and (2) implementation of measures to restore the health of those waters.¹⁶³ Phase one of the TMDL program requires the states to first determine a beneficial use for every waterbody within its borders, and then to identify those waters where the presence of pollutants makes them unfit for that particular use.¹⁶⁴

As a state develops areawide (generally watershed) water quality plans, it must designate a use for each of the water bodies within its borders, and then adopt legal criteria for the numeric level of pollutants allowable in each watershed, such as dissolved oxygen and toxic pollutants.¹⁶⁵ Those bodies of water that fail to meet the legal criteria must be included within the state’s list of “impaired waters”¹⁶⁶ under § 303(d)(1)(A).¹⁶⁷

Where a waterbody fails to meet its designated beneficial use, or fails to meet the water quality standard for certain pollutants, the state must then proceed to phase two, establishment of a TMDL. A “TMDL” is, in effect, a plan to limit pollutants from any and all contributing sources in order to restore polluted waters to a safe level for the beneficial use designated by the state.¹⁶⁸

When establishing TMDLs, each state must create “a priority

162. Alaska Center for the Env’t v. Reilly, 762 F. Supp. 1422, 1426 (1991).

163. See *Committee on Agriculture Hearings*, *supra* note 5.

164. See 33 U.S.C. § 1313(d)(1)(A) (1994). Section 303(d) requires each state to identify the waters within its boundaries that fail water quality standards despite the imposition of point source effluent limitations. See *id.*

165. See *Rules and Regulations, Environmental Protection Agency*, 40 C.F.R. Pt. 131, 65 FR 31682, 31684 (May 18, 2000). The EPA promulgated two policy memoranda in August, 1997 supplying direction for the states in preparing lists of impaired waters, and “requesting that States work to improve the pace of establishing TMDLs.” *Committee on Agriculture Hearings*, *supra* note 5, at 227.

166. *Proposed Revisions to the Water Quality Planning and Management Regulation*, 40 C.F.R. Part 130, (August 23, 1999) available at <http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-23/w21416.htm>.

EPA interprets section 303(d)(1)(A) to provide authority for EPA to require that states list threatened, as well as impaired waterbodies. Pursuant to that section, each state must identify those waterbodies for which effluent limitations required by section 301(b)(1)(A) and (B) are not stringent enough to implement any water quality standard applicable to such waterbodies. In the case of “threatened waterbodies,” data showing a declining trend in water quality may indicate that, although the waterbody currently attains water quality standards, it is not likely to do so by the time of the next listing cycle . . . Rather than ignore such declining water quality data, the CWA gives EPA the authority to require that threatened waters be listed.

Id.

167. See Nina Bell, *TMDLs: The Key to Unlocking the Clean Water Act*, BIG RIVER NEWS (Fall, 1999) at 1. Looking at the impaired waterbody in question, the state develops its TMDL taking into account “each pollutant that violates the standards.” *Id.* See also *Committee on Agriculture Hearings*, *supra* note 5. “[A TMDL] includes a quantitative assessment of water quality problems and the pollutant sources that contribute to these problems.” *Id.* at 227.

168. See *Committee on Agriculture Hearings*, *supra* note 5 at 226.

ranking for such waters,” considering both the water’s usage and “the severity of the pollution.”¹⁶⁹ Then, in accordance with the priority ranking, each state must determine the total daily maximum of each pollutant that can be safely discharged into the identified waters without violating the state’s water quality standards.¹⁷⁰

After determining the maximum amount of each pollutant that can be released into the watershed area on a daily basis (the Total Maximum Daily Load), the state must allocate that total daily load among those responsible for the discharge of pollutants in the watershed area.¹⁷¹ Generally, point sources (those discharging pollutants from a pipe, conduit or channel) are given a “wasteload allocation,” and nonpoint sources (those discharging pollutants as a result of surface water runoff from farming, ranching or logging operations) are given a “load allocation.”¹⁷² The estimated total maximum daily load calculated by the state must be set at a level to “assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife.”¹⁷³

In compliance with § 303(c)(2)(B), the state must next submit its areawide plans and legal criteria for pollutants to the EPA Regional Administrator for review.¹⁷⁴ Regional Administrators have been delegated the authority to approve or deny new or revised state water quality standards.¹⁷⁵ Despite the effort required to accomplish TMDLs, more than two thousand TMDLs are currently under development in the United States.¹⁷⁶

G. The Result: A One-Two Punch

With the advent of EPA’s TMDL program, the agency will for the first time implement both an effluent limitation system and an overlapping ambient water quality system. Theoretically, it should be plausible for EPA to overlap the two discordant systems of regulation, but this overlapping should have been occurring all along due to the presence of both the NPDES permit system and water quality standards

169. 33 U.S.C. § 1313(d)(1)(A) (1994).

170. See 33 U.S.C. § 1313(d)(1)(C) (1994).

171. See 40 C.F.R. §§ 130.2(g) and (h), 130.7 (July 13, 2000). See also Gary Allen, *TMDLs: Coming to a Town Near You*, 42-OCT Advocate (Idaho) 21, n.7 (1999) (describing the allocation of the total load among the dischargers); Nina Bell, *supra* note 167, at 1 (describing the TMDL process).

172. Allen, *supra* note 171, at 21.

173. 33 U.S.C. § 1313(d)(3) (1994).

174. See 40 C.F.R. 131.21 (July 13, 2000).

175. See *Rules and Regulations, Environmental Protection Agency*, 40 C.F.R. Part 131, 65 FR 31,682, 31,684 (May 18, 2000).

176. See *Committee on Agriculture Hearings, supra* note 5 at 227. “Since October 1999, States have established, and EPA has approved, over 600 TMDLs for a variety of pollutants, including sediments and nutrients which are predominately caused by polluted runoff.” *Id.*

in the Act.

This type of comprehensive, watershed-based system offers the states and EPA the one-two punch combination needed to reduce water pollution.¹⁷⁷ The infeasibility of implementing an ambient water quality program at the outset of the Clean Water Act caused many to ignore §303(d). But over time, the available technology to trace and tackle non-point source pollution has slowly evolved.

The initial emphasis on the control of point sources, issuance of permits, and development of industry-wide technological standards, left §303(d) in dormancy at EPA, despite the considerable record evidencing Congress' awareness of the significance of nonpoint source pollution, and the congressional desire to regulate it.¹⁷⁸ Many assumed that Congress left nonpoint source pollution unregulated, because EPA's initial emphasis focused on putting the permit system in place.¹⁷⁹

The assumption that nonpoint source pollution would remain unregulated was incorrect for several reasons. First, Congress preserved the state water quality systems already in place under § 303(a)(1).¹⁸⁰ Second, Congress mandated ambient water quality systems under § 208, § 319, and § 303(d) as a "safety net" for the § 301 permit system.¹⁸¹ Third, the judiciary and individual actors refused to let EPA ignore its statutory duties.¹⁸² Private organizations like the Sierra Club and the Natural Resources Defense Council have repeatedly filed suit under the citizen suit provision of the Clean Water Act, prodding EPA to fulfill its statutory duties.¹⁸³ Yet, even though EPA is developing a program designed to comply with the directives of Congress, it has come under political fire from farmers and ranchers.

177. See *Alaska Center for the Environment v. Reilly*, 762 F. Supp. 1422, 1424 (1991) (citing U.S. Government Accounting Office, *Water Pollution—More EPA Action Needed to Improve the Quality of Heavily Polluted Waters*, January 1989 (GAO/RCED-89-38) at 34-35). The U.S. Government Accounting Office reported that TMDL's offer:

[A] comprehensive approach to identifying and resolving water pollution problems regardless of the sources of pollution. If implemented, the TMDL process can provide EPA and the states with a complete listing of key water pollutants, the source of the pollutants, information on the amount of pollutants that need to be reduced, options between point and/or nonpoint approaches, costs to clean up, and situations where it may not be feasible to meet water quality standards.

Id.

178. See S. REP. NO. 92-414, reprinted at 1972 U.S.C.C.A.N. 3668, 3759-68.

179. See *infra* note 199.

180. See 33 U.S.C. § 1313(a)(1) (1994).

181. PERCIVAL ET AL., *supra* note 33, at 700.

182. See *supra* note 16 and accompanying text. See generally *NRDC v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977); *Pronsolino v. Marcus*, 91 F. Supp.2d 1337 (N. D. Cal. 2000).

183. See *supra* note 16.

V. OPPOSITION TO TMDLS

The agricultural community's reaction to EPA's new TMDL program has been one of strong opposition.¹⁸⁴ The opponents of the new TMDL program successfully brought the issue to the attention of Congress, and individually, have sought redress in court.

A. Opposition in Congress

Ultimately, the greatest threat to EPA's TMDL program comes from members of Congress who are eager to protect the large voting blocs of farming constituents, and who readily respond to the demands of agricultural lobbyists.¹⁸⁵ Prior to EPA's formal adoption of the proposed TMDL rules, the Agricultural Committee of the U.S. House of Representatives urged EPA to withdraw the proposed rules and to "go back to the drawing board."¹⁸⁶

Last year Representative Larry Combest (R-Texas), the Chairman and Ranking member of the House Committee on Agriculture, formally introduced House Bill 4502, entitled "The Water Pollution Program Improvement Act of 2000," which is designed to restrict the federal TMDL program.¹⁸⁷ His bill is designed to ensure that "[s]tates continue

184. See Hanna, *supra* note 72, at 4-C.

185. See Mark T. Pifher, *TMDLs: A New Rule?*, 32 Trends 1 (2001). "For example, Congress adopted legislative language barring the EPA from spending any money to implement the new rule in the upcoming fiscal year, i.e., until Oct. 1, 2001. See H.R. 4425. Thus, though final, the rule is officially in limbo, awaiting further congressional intervention or expiration of the legislative stranglehold." *Id.* at 1. See also Barnett, *supra* note 89 at *3 (noting opposition from agricultural interest groups); *The EPA is About to Put into Effect New Rules on Total Maximum Daily Loads (TMDL's)*, DOANE'S AGRICULTURAL REPORT, June 30, 2000, at 4 (quoting Representative Stenholm in response to the EPA's new rule). Representative Charles Stenholm (D-Texas) stated that if the EPA implemented the program without "solid scientific justification," it could anticipate "strenuous opposition from Congress and elsewhere." *Id.* See also PERCIVAL ET AL., *supra* note 33, at 731. "Agricultural interests, joined by the U.S. Forest Service, are vocal opponents of including nonpoint sources in load allocations within TMDLs." *Id.*

186. *The EPA is About to Put into Effect New Rules on Total Maximum Daily Loads (TMDL's)*, *supra* note 185, at 4.

187. 146 CONG. REC. E 872 (May 25, 2000). Representative Combest stated:

Congress has clearly identified the responsibilities of the federal government and the states for maintaining the quality of our nations waters. When Congress enacted the Clean Water Act in 1972, the primary emphasis of that legislation was to address point source pollution discharges. Congress at that time established a clear role for the Federal Government in the regulation of point source pollution through the National Pollutant Discharge Elimination (NPDES) program. . . . In 1987 Congress amended the Clean Water Act to establish a framework within which states could carry out their responsibility to manage nonpoint sources of pollution. . . . Upon review of the draft rules proposed by the EPA, it is our view that the agency's proposal exceeds the authority provided by the 1972 Act and the 1987 amendments both in terms of the new regulatory role assumed by the EPA and

to have exclusive authority to regulate nonpoint sources of pollution.”¹⁸⁸ By June 28, 2000, the bill had garnered the support of ninety-six cosponsors.¹⁸⁹

Hearings were conducted by the House Committee on Agriculture on June 28, 2000, in connection with House Bill 4502,¹⁹⁰ but Congress has taken no further action on the matter. Members of Congress opposing TMDLs may believe that the newly-elected Republican President will issue directives to change EPA policy from within the agency itself.

B. Opposition in the Courts

In addition to mounting opposition to TMDLs in Congress, opponents have challenged EPA’s authority over nonpoint sources in court.¹⁹¹ Generally, opponents use a two-prong attack against § 303(d). First, they argue that the regulatory structure of the 1972 CWA instituted a permit system for point source dischargers, and therefore, the safety net of § 303 applies only to point source polluters.¹⁹²

the designation of silvicultural activities as point sources of pollution.
Id. House Bill 4502, if enacted, would first require the EPA Administrator to arrange for a National Academy of Sciences (NAS) study on the scientific bases, costs, and availability of alternatives to TMDL program. *See* H.R. 4502, 106th Cong. (2000). Second, the Bill would require the EPA Administrator to review and incorporate the NAS recommendations into the proposed TMDL program, and to open up public comment on the NAS recommendations it chooses not to incorporate. *See id.* These two requirements will lead to inevitable delay in the implementation of the TMDL program; a conservative estimate for an NAS study time would be 18 months. *See also* Congressional Testimony by Federal Document Clearing House, *EPA and Water Pollution*, John Barrett, 2000 WL 23830805, Wednesday, June 28, 2000, at *2 (estimating an eighteen month delay). *See also* H. Josef Hebert, The Associated Press, *Panel of Scientists Supports Regulations*, THE TOPEKA CAPITAL-JOURNAL, July 12, 2000 at 6-D (reporting a two-year delay in EPA implementation of its stricter mercury emission regulations because of congressional action barring the rules until a National Academy of Sciences study could be completed).

188. *See* Water Pollution Prevention Program Improvement Act of 2000, H.R. 4502, 106th Congress, 2d session (May 25, 2000), 146 CONG. REC. E 872 (May 25, 2000). House Bill 4502 prohibits the Administrator from changing “any definition of, or distinction made between, point and nonpoint sources of pollution . . . in effect on June 1, 2000,” and would require the Administrator to approve “any measures set forth by a State to control nonpoint sources of pollution.” *Id.*

189. *See* CIS Congressional Universe, 2000 Bill Tracking H.R. 4502, available at <http://web.lexis-nexis.com>.

190. *See* 146 CONG REC D 684 (June 28, 2000). *See also* Barrett, *supra* note 187, at *2. John Barrett, a fifth-generation cotton farmer from Edroy, Texas, recently testified in support of the Bill, and stated that “[t]he current EPA TMDL rule proposal could undermine ongoing state nonpoint source programs and impose large costs on states and landowners.” *Id.*

191. *See* *Pronsolino v. Marcus*, 91 F. Supp.2d 1337 (2000).

192. *See* PERCIVAL ET AL., *supra* note 33, at 731.

Agricultural interests, joined by the U.S. Forest Service, have been vocal opponents of including nonpoint sources in load allocations within TMDLs. They argue that section 319 . . . should be the exclusive remedy for nonpoint source pollution because Congress addressed nonpoint sources specifically in section 319 but remained silent about them in section 303(d). EPA has long argued that section 303(d) covers nonpoint sources because its text does not exclude from its requirements waters impaired by nonpoint sources. If nonpoint sources are not covered by section 303(d), then EPA will lose a potentially important tool for addressing the most significant uncontrolled sources of pollution that

Opponents of TMDLs argue that within § 303(d), Congress' use of the words "'effluent limitations' and 'daily load' evinces a clear intent to exclude nonpoint sources from Section 303(d)."¹⁹³ They are able to cite case law for support that the focus of the CWA is on point source discharges, and that agricultural activities are generally classified as nonpoint sources.¹⁹⁴ The second prong of the attack focuses on the assertion that when Congress amended the Clean Water Act in 1987, adding § 319,¹⁹⁵ that it designed that specific provision to be the exclusive mechanism for the regulation of nonpoint sources. Opponents argue that Congress intended the states and EPA to control nonpoint source pollution under § 319, and to "assume that nonpoint sources could also be controlled under Section 303(d) would be redundant."¹⁹⁶

As to the first argument, it is true that the language of § 303 does not specify that it is to be applied to either point or nonpoint sources. Instead, § 303 mandates: "[e]ach state shall identify those waters within its boundaries for which the effluent limitations . . . are not stringent enough to implement any water quality standards applicable to such waters."¹⁹⁷ No distinction is drawn between point and nonpoint sources.

Legal scholars have not always drawn clear conclusions when considering whether Congress meant to regulate nonpoint sources under § 303.¹⁹⁸ Because § 301, the backbone of the CWA, concerns itself

remain.

Id.

193. Susan Bruninga, *Nonpoint Sources Should Not Be Excluded From TMDL Program, Government Argues*, 31 ENV'T REP. 547, 547 (2000) (citing plaintiffs' briefs from *Pronsolino v. Marcus*, N.D. Cal., No. C99-1828).

194. See, e.g., *Concerned Area Residents for Env't v. Southview Farm* 34 F.3d 114, 121 (2d Cir. 1994).

195. June 30, 1948, ch. 758, title III, § 319, as added February 4, 1987, Pub. L. 100-4, title III, § 316(a), 101 Stat. 52.

196. Bruninga, *supra* note 193, at 547-48.

197. 33 U.S.C. § 1313(d) (1994).

198. See RODGERS, *supra* note 116, at 270-71. According to William H. Rodgers, Jr., federal power over nonpoint sources under § 303 consists of "EPA review, approval, and occasional revision of state water quality standards for both interstate and intrastate waters." *Id.* Jackson Battle, a Professor of Law at the University of Wyoming, indicates that the CWA amendments leave control over nonpoint sources and ambient water quality to the states, with federal involvement limited to oversight. See JACKSON B. BATTLE, 2 ENVIRONMENTAL LAW: WATER POLLUTION AND HAZARDOUS WASTES 11, (1986). Professor Battle stated that:

Prior to 1972 most states had adopted ambient water quality standards to limit the effects of discharges upon receiving waters. In amending the Act, Congress decided to *preserve the right of states* to enforce such standards, so long as they provided as much or more protection than the new federal source-specific effluent limitations. Section 303 authorizes states to enforce pre-existing standards and to develop new ones consistent with the Act. In addition, it requires EPA to promulgate water quality standards for states that fail to do so.

Id. (emphasis added). Oliver Houck, on the other hand, stated that "a long-dormant provision of the Clean Water Act, [§]303(d), [is] now taking the field and forcing a showdown on the last water quality frontier, nonpoint source pollution," indicating that federal oversight over nonpoint source water pollution exists within the Act. Houck, *supra* note 14, at 10471. Professor Houck further noted that:

[T]he states and industry were successful, however, in retaining a water quality-based strategy for upgrading waters that remained polluted after the application of technology

primarily with a permit system for industrial and municipal polluters, many seemed unsure whether the safety net of § 303 was designed to apply only to “point source” polluters. Professor William H. Rodgers, recognized for his scholarship in the area of environmental law, seems ambivalent about the application of the Clean Water Act to nonpoint sources. He notes that it would be easy to assume that the no-discharge policy of the CWA is directed only toward point sources, because there is no express language forbidding nonpoint source pollution in the Act;¹⁹⁹ however, Rodgers ultimately concludes that the goal of the CWA presupposes control of both point and nonpoint sources.²⁰⁰

Similarly, Oliver Houck, a Professor of Law at Tulane Law School, clearly believes that § 303(d) gives EPA authority to apply water quality standards to both point and nonpoint sources. “Non-point source pollution . . . remained largely outside the reach of the Act for most of its history, languishing unabated, indeed growing steadily as a problem . . . until the resurrection in the 1990’s of water quality standards and Section 1313, Total Maximum Daily Loads (TMDLs).”²⁰¹

The central purpose of § 303(d) is to restore polluted waters when regulation of point source discharges alone is not enough.²⁰² As one EPA official noted, “[s]ince the majority of polluted waters are polluted in whole or in part by runoff from diffuse sources, a management framework that does not address them cannot succeed in meeting our clean water goals.”²⁰³ In other words, unless the § 303(d) safety net is construed to apply to both point and nonpoint sources, there is a giant

standards — [§]303(d). . . . [A]lthough the states were to retain “primary responsibilities” for water pollution control under the Act [FWPCA § 303(d)(2)], EPA was going to have to play a major role in keeping it honest.

Houck, *supra* note 17, at 10391-92.

199. See RODGERS, *supra* note 117, at 127-28. Professor Rodgers writes:

The Amendments define “discharge of a pollutant” and “discharge of pollutants” to include “any addition of any pollutant to navigable waters from any point source.” Add to this the fact that Section 402 permits clearly anticipate “effluent limitations” that apply only to point sources, and one is led to the conclusion that the no-discharge policy and its implementing mechanism, the permit program, are directed only at point sources. Nonpoint sources, if covered at all, would be reached by the Rivers and Harbors Act of 1899, and other federal and state laws.

There is a textual, albeit exceedingly literal, argument that identifiable nonpoint sources must apply for permits under section 402. Putting that improbable result to one side, the Clean Water Act certainly cannot be read as encouraging nonpoint source pollution even if it does not expressly forbid it under Section 301. The goal of “swimmable/fishable” water by 1983 presupposes control of both point and nonpoint sources. Section 101(a)(5) is quite clear that all sources be held accountable albeit under the planning provisions: “It is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each state.”

Id.

200. See *id.*

201. Oliver A. Houck, *Clean Water Act Developments, 1999-2000*, ALI-ABA Course of Study, SE55 ALI-ABA 107, 109 (February 9, 2000).

202. See *Committee on Agriculture Hearings, supra* note 5, at 109.

203. *Id.*

loophole in the Clean Water Act. Farmers (and others) can simply dispose of their wastes by spraying or spreading them over land and waiting for the rain to wash them away. In fact, judicial opinions have fashioned results in such a way as to preclude this loophole.²⁰⁴ Furthermore, farmers as a group should not be exempt from the constraints of the Clean Water Act because everyone lives downstream from someone else. If there is no way to regulate damage done to waterbodies from over application of chemical fertilizers, pesticides, or poor farming practices that result in excess sedimentation, then farmers enjoy absolute immunity from using their land in a way that directly harms others.

Did Congress intend for the provisions of the Clean Water Act to apply only to point sources with the exception of § 319? To challenge this idea, one need only remember that the goal of the CWA is to achieve clean water. To turn a blind eye to a well-known, significant source of water pollution would defeat the entire purpose of the Act. In order to believe that a mercurial Congress forgot about chemical runoff from fields from the inception of the Act in 1972 until § 319 was enacted in 1987, one would have to ignore (1) the legislative history of the Act; (2) § 301's requirement for the attainment of water quality standards;²⁰⁵ and (3) the previous congressional attempt to control nonpoint source pollution through areawide management plans under § 208.²⁰⁶

As to the second prong of the attack, did Congress design § 319 to be the exclusive mechanism in the CWA for the regulation of nonpoint sources? The argument that § 319 alone applies to nonpoint sources to the exclusion of other sections of the CWA is not borne out in the legislative history of the Clean Water Act. By adding § 319 to the CWA without modifying either § 208 or § 303(d), I suggest that Congress was

204. See generally *Concerned Area Residents for Envn't v. Southview Farm*, 34 F.3d 114 (2d Cir. 1994).

205. See 33 U.S.C. §§ 1288 and 1311 (1994). Congress did not modify § 208's area-wide water quality provisions in the 1987 CWA amendments. See Pub. L. No. 100-4, 101 Stat. 28-29 & 101 Stat. 33-34 (1987). Nor did it vary or replace § 303. See *id.*

206. A further argument can be made that a comparison of the language used in § 302 with that used in § 303(d) points to the conclusion that Congress contemplated all sources of water pollution when it wrote § 303. See 33 U.S.C. §§ 1311 and 1312 (1994). Congress clearly stated in § 302 that this provision applies exclusively to effluent limitations from point sources. See 33 U.S.C. § 1312(a) (1994). The provision states, in pertinent part:

Whenever . . . discharges of pollutants from a *point source or group of point sources*, with the application of effluent limitations required under section 1311(b) of this title, would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters . . . effluent limitations . . . shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.

Id. (emphasis added). The specific use of this language in § 302, when compared to other sections of the Act indicates that Congress knows how to limit the application of certain provisions of the CWA to point sources alone when it wants to do so. See *id.* Thus, because there is no language limiting the scope of § 303 to a particular source, and because Congress expressly limited other provisions of the Act to point sources alone, an inference is raised that Congress did not limit § 303(d) to point sources alone, and it would be disingenuous to argue otherwise. See *id.*

merely trying to augment the existing arsenal of statutes calculated to clean up the nation's waters.

After EPA put its TMDL program into motion, members of the agricultural community brought suit, alleging that § 303(d) did not apply to nonpoint sources.²⁰⁷ Opponents of TMDLs continue to argue that § 319 provides exclusive coverage of nonpoint sources, while § 303(d) applies exclusively to point sources.²⁰⁸ Recently, one district court reviewed this challenge to EPA's authority to impose TMDL's, and held that § 303 applies to both point and nonpoint sources of pollution.

C. Pronsolino v. Marcus

A recent United States District Court decision from the Northern District of California, *Pronsolino v. Marcus*,²⁰⁹ upheld EPA's authority under § 303(d) of the Clean Water Act to set TMDLs for waterbodies polluted by nonpoint source pollution.

The *Pronsolino* case exemplifies the conflict between the forestry industry and state and federal efforts to preserve cold-water fish habitat in northern California. The Garcia River of northern California flows through Mendocino County, California, until it reaches the Pacific Ocean.²¹⁰ Like other area rivers, it once was a flourishing spawning ground for coho salmon and steelhead trout.²¹¹ However, over the years, logging operations in the region resulted in excess sedimentation in the river that damaged the spawning grounds, despite California water quality standards requiring protection of fish and their habitat.²¹²

Here, as in many other cases, EPA did not turn its attention to the Garcia River until after fishermen and environmentalists sued EPA, "alleging that the then-recent addition of the Garcia River and sixteen other water segments to California's list of substandard waters meant that California and/or the EPA had to prepare TMDLs for the rivers."²¹³ The suit resulted in entry of a 1997 consent decree mandating TMDLs for all the substandard rivers.²¹⁴ When California failed to establish a TMDL for the Garcia River by the 1998 deadline in the consent decree, EPA immediately released its own TMDL calling for a "sixty percent

207. See Houck, *supra* note 201, at 11. "Agriculture and related interests have sued to invalidate the application of TMDLs to nonpoint sources and to waters polluted by nonpoint sources." *Id.*

208. See *Pronsolino v. Marcus*, 91 F. Supp.2d 1337, 1346 (N.D. Cal. 2000).

209. 91 F. Supp.2d 1337 (N.D. Cal. 2000).

210. See *Pronsolino*, 91 F. Supp.2d at 1338.

211. See *id.* at 1338-39.

212. See *id.* at 1339.

213. *Id.*

214. See *id.* (citing Consent Decree, Pac. Fed'n of Fishermen's Ass'n v. Marcus, et al., No 95-4474 MHP (Mar. 6, 1997)).

reduction of sediment.”²¹⁵ To achieve this percentage reduction, portions of the total maximum sediment load were allocated between “various categories of nonpoint sources in the Garcia River watershed.”²¹⁶

The plaintiffs, Guido and Betty Pronsolino, owners of forested land located on the banks of the Garcia River, filed suit after they applied for a timber harvesting permit, then received a permit containing restrictions designed to prevent soil erosion.²¹⁷ The Pronsolinos asserted that the restrictions as specified were onerous and costly.²¹⁸ “Seeking to strike at the root of their problem, the Pronsolinos brought this action . . . to challenge EPA’s authority to impose TMDLs on rivers polluted only by . . . nonpoint sources . . .”²¹⁹

The *Pronsolino* court rejected plaintiffs’ argument that § 319 alone applies exclusively to nonpoint sources, while § 303(d) applies solely to point sources.²²⁰ The court listed four reasons for rejecting plaintiffs’ argument.²²¹

First, the court found that “[t]he expressly contemplated use of TMDLs was their ‘incorporation’ into the ‘continuing planning process’ by the states under Section 303(e).”²²² The *Pronsolino* court further stated “that TMDLs were intended, in part, to be used to help states evaluate and develop land-management practices to mitigate nonpoint-source pollution.”²²³ The court believed it would be impossible to set pollutant discharge levels that would achieve a desired water quality without bringing nonpoint sources into the equation.²²⁴ If, as plaintiffs argued, TMDLs were intended solely to limit point source discharges, then the “comprehensive approach” of the 1972 CWA amendments would be frustrated.²²⁵

Second, the court relied on the language of § 303(d), requiring states to “identify those waters within its boundaries . . .”²²⁶ The court found that, “[s]ince all rivers and waters regardless of pollution source were included in the universe for which water-quality standards were required, all of them—again regardless of source of pollution—were included in the universe for which listing and TMDLs were

215. *Pronsolino*, 91 F. Supp.2d at 1339-40.

216. *Id.* at 1340.

217. *See id.* at 1338.

218. *See id.*

219. *Id.*

220. *See id.* at 1352.

221. *See id.* at 1346-47.

222. *Id.* at 1346.

223. *Id.* at 1347.

224. *See id.* at 1346-47.

225. *Id.* at 1347 (citing *Natural Res. Def. Counsel, Inc. v. Fox*, 909 F. Supp. 153, 156 (S.D.N.Y. 1995)).

226. *Pronsolino*, 91 F. Supp.2d at 1347.

2001]

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517

required”²²⁷

Third, the court noted that the comprehensive scheme of the CWA included both a program for limiting point source effluent discharges, and “a list of the unfinished business expected to remain even after application of the new cleanup strategy”²²⁸ under § 303(d). To exclude from consideration those waters polluted solely by nonpoint sources “would have crippled the continuing planning process by which the states were expressly required to confront nonpoint-source pollution and to incorporate TMDL data into their continuing planning process.”²²⁹ Without consideration of nonpoint sources, state agencies would have no way to fairly allocate the responsibility for cleanup.²³⁰

Fourth, the *Pronsolino* court noted that the Ninth Circuit previously had recognized the inclusion of nonpoint sources in the TMDL process.²³¹ The *Pronsolino* court continued with a review of the legislative history of § 303(d) and the definitional language under the statute, and concluded that nothing in § 303(d) expressly limited TMDL load allocations or water-quality standards to the adjustment of point source effluent limitations alone.²³²

As to plaintiffs’ argument that § 319 provides exclusive coverage of nonpoint source pollution, the court noted:

First, while Section 319 addressed nonpoint pollution, it did not conflict with or duplicate the Listing/TMDL provisions at issue. The Section 303(d) list called for all unfinished business after application of technology-driven effluent limitations. Section 319, however, sought instead to list those rivers and waters which could not achieve standards “without additional action to control nonpoint sources of pollution.” These two lists would partially overlap, to be sure, but were not the same. . . . Moreover, Section 319 was silent as to TMDLs whereas Section 303(d) required them. . . .

Second, while the 1987 enactment adopted newer and stronger measures to address the problem of nonpoint pollution, the 1972 enactment plainly spelled out—expressly so—medicine of its own. . . . It is inaccurate to argue, as to plaintiffs,²³³ that nonpoint-source pollution escaped attention under the 1972 Act.

Thus, the *Pronsolino* court agreed with EPA that § 303(d) applies

227. *Id.*

228. *Id.*

229. *Id.*

230. *See id.* The court wrote that state agencies “would . . . [be left] guessing at how to allocate the burden of cleanup” *Id.*

231. *See id.* at 1347-49. The *Pronsolino* court noted that in *Alaska Center for the Env’t v. Browner*, 20 F.3d 981, 985 (9th Cir. 1994), the Ninth Circuit stated TMDLs were an “effective tool for achieving water quality standards in waters impacted by non-point source pollution.” *See Pronsolino*, 91 F. Supp. 2d at 1349. Additionally, in *Dioxin/Organochlorine Center v. Clarke*, 57 F.3d 1517, 1520 (9th Cir. 1995), the Ninth Circuit found that “[a] TMDL defines the specified maximum amount of a pollutant which can be discharged or ‘loaded’ into the waters at issue from all combined sources.” *See Pronsolino*, 91 F. Supp.2d at 1349.

232. *See Pronsolino*, 91 F. Supp.2d at 1350.

233. *Id.* at 1352-53.

to both point and nonpoint sources. This conclusion is in harmony with the goals and legislative history of the Clean Water Act, which indicate Congress intended to “establish a comprehensive long-range policy for the elimination of water pollution.”²³⁴ The *Pronsolino* opinion, however, does not go so far as to say EPA holds plenary power to regulate nonpoint sources.

Instead, the district court “cut the [TMDL] baby in half.”²³⁵ It did so by distinguishing between the federal power to create a system limiting nonpoint pollution, and the states’ power to institute the land-use practices needed to meet those limitations.²³⁶ In other words, the *Pronsolino* court affirmed that the Clean Water Act leaves with state governments the decision of whether to effectuate land-use practices reducing nonpoint runoff.²³⁷ Thus, although § 303(d) provides a federal regulatory structure for the control of nonpoint source water pollution, the states retain control over the actual land-management needed to carry out the TMDL program.

VI. STATE IMPLEMENTATION OF TMDLS

The *Pronsolino* court agreed with plaintiffs that “Congress did not . . . authorize EPA to [manage] state land-use practices.”²³⁸ The court stated that although a state must “‘incorporate’ the TMDL in its planning,” the “1972 Act was clear that states should finally decide whether, and to what extent, land-management practices should be adopted to mitigate runoff.”²³⁹

Control over land use traditionally has been a matter of local regulation. However, in the Twentieth Century, a number of exceptions expanded the reach of federal regulation to reach individual activity within state borders.²⁴⁰ Authority for zoning and land-management restrictions generally remains in the hands of state, county, and municipal governmental bodies.

In the face of state inaction, theoretically, EPA can formulate and administer TMDLs itself.²⁴¹ The *Pronsolino* court noted that a state

234. SEN. REP. NO. 92-414, 1972 U.S.C.C.A.N. (86 Stat. 816) 3668, 3758.

235. Interview with Tom Stiles, Chief of Planning & Prevention, Kansas Department of Health and Environment (October 24, 2000).

236. See *Pronsolino*, 91 F. Supp.2d at 1355.

237. See *id.*

238. *Id.*

239. *Id.* This choice is narrowed by the requirement that the state must select “whatever, if any, land-management practices it feels will achieve the load reductions called for by the TMDL.” *Id.*

240. One example is the Endangered Species Act of 1973, 16 U.S.C. §§ 1531 *et seq.* (1994).

241. Various provisions of the Clean Water Act interact to produce this result. Section 303(d)(2) states:

If the Administrator disapproves such identification and load, he shall not later than thirty

could refuse to enforce TMDLs to protect other state interests, but would run the risk of losing substantial federal environmental grant dollars.²⁴²

Apparently, however, the EPA will not attempt to assert federal control over local land-use practices necessary to carry out TMDL nonpoint source load reductions.²⁴³ The agency's new TMDL rules do not create "any new or additional implementation authorities."²⁴⁴ As a pragmatic matter, EPA does not have enough manpower or local knowledge to establish and implement TMDLs across the nation without the assistance of the states.²⁴⁵

A. State Choices

Some states, especially those facing strong opposition from agricultural or forestry interests, may not sense an immediate need for federal grant money, and may choose to ignore their statutory duty to develop and require the land-use restrictions for implementation of TMDLs. In the end, however, this stance is tenuous and unrealistic, and ignores the public's desire for water that is safe for recreation and other uses.

Those states that proactively seize these opportunities must decide

days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment *the State shall incorporate them into its current plan under subsection (e) of this section.*

33 U.S.C. § 1313(d)(2) (1994)(emphasis added).

Section 303(e) requires each state to have an EPA approved "proposed continuing planning process." 33 U.S.C. § 1313(e)(1) and (2) (1994). The EPA Administrator "shall not approve any State permit program under subchapter IV . . . which does not have an approved continuing planning process under this section." 33 U.S.C. § 1313(e)(2) (1994). Subchapter IV of the Clean Water Act allows EPA to withhold federal funds, to suspend issuance of permits, and to withdraw approval of a state-administered program. See 33 U.S.C. § 1341 and § 1342(c) (1994). Upon withdrawal of approval, the permitting program may be returned to the control of the EPA Administrator, who may take enforcement action against violators. See 33 U.S.C. § 1342(c) and (i) (1994). Subsection (i) states in pertinent part: "Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 1319 of this title." 33 U.S.C. § 1342(i) (1994). Section 1319(a)(2) (also known as § 309(a)(2)) sets forth a non-discretionary duty on the part of the EPA Administrator to "enforce any permit condition or *limitation*" during the period of "federally assumed enforcement." 33 U.S.C. § 1319(a)(2)(1994). Enforcement options include compliance orders, civil penalties, and criminal actions. See generally, 33 U.S.C. § 1319 (1994).

242. See *Pronsolino*, 91 F. Supp.2d at 1355.

243. See *PERCIVAL ET AL.*, *supra* note 33, at 731. "While EPA can supervise how TMDLs are implemented in NPDES permits, the absence of federal controls over nonpoint source pollution leaves the agency without a clear vehicle for supervising their application to nonpoint sources." *Id.*

244. *Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation*, Environmental Protection Agency, 40 CFR Parts 9, 122, 123, 124, and 130, FRL-6733-2, 43,586, at 43,588, available at <http://www.epa.gov/fedrgstr/EPA-WATER/2000/July/Day-13/w17831.htm>.

245. See Telephone Interview with Scott Carlson, Assistant Director, Kansas Conservation Commission (October 4, 2000).

how they will implement new programs for nonpoint sources.²⁴⁶ Each state must set into motion new initiatives to ensure needed “environmental stewardship”²⁴⁷ of land that will result in cleaner waters within their borders. But just how will the states go about designing their individual TMDL programs?

Government initiatives to encourage individuals to abandon their current practices in favor of new methods of behavior vary greatly in design. Incentives vary greatly in form, ranging from mandatory laws with severe penalties for disobedience, to financial benefits for voluntary compliance.²⁴⁸ Generally, a state will look at a range of possible alternatives, then assess the feasibility of each before deciding which approach makes the most sense under the circumstances. When deciding which option is the most sensible for TMDL load reduction, a state is faced with many choices.

Specific alternatives for implementing a state-structured initiative to reduce nonpoint source pollution include: (1) financial incentives; (2) a public education campaign; (3) voluntary compliance initiatives; (4) economic market incentives such as pollution trading programs; (5) mandatory compliance measures; or (6) a combination of some or all of these.

The states that recognize the need to clean up their rivers, streams, and lakes will formulate local programs designed to carry out EPA’s TMDL restrictions, yet tailored to meet the needs of citizens. Kansas is one such state.

B. Implementation of TMDLs in Kansas

In 1995, the State of Kansas intervened in a lawsuit filed by the Sierra Club and the Kansas Natural Resource Council, seeking to compel EPA “to enforce Section 303(d) of the Clean Water Act by establishing TMDLs” in Kansas.²⁴⁹ Eventually, the parties reached

246. See *Pronsolino*, 91 F. Supp.2d at 1356. “As to nonpoint sources of pollution, the TMDLs were to be incorporated into the continuing planning processes of the states. This conferred a large degree of discretion on the states in how and to what extent to implement the TMDLs for nonpoint sources.” *Id.*

247. Judson W. Starr and Nancy Voisin, *Toward an Environmental Voluntary Disclosure Program*, 16 COLUM. J. OF ENVTL L. 333, 334, n.12 (1991), quoting Former President George Bush, *A New Era of Environmental Stewardship*, 16 EPA J. (Sept.-Oct. 1990) at 2.

Environmental programs that focus on the end of the pipe or the top of the stack, on cleaning up after the damage is done, are no longer adequate. We need new policies, technologies, and processes that prevent or minimize pollution—that stop it from being created in the first place.

Id.

248. For example, the Internal Revenue Service assesses fines and even criminal penalties against those who fail to comply with the Internal Revenue Code; by contrast, the CRP program pays farmers to take highly erodible farmland out of crop production, leaving it fallow for wildlife instead.

249. *The Basics of TMDLs*, Kansas Department of Health and Environment, available at

settlement, and a consent decree approving the settlement was entered on April 13, 1998.²⁵⁰ The 1998 consent decree specifies that the State of Kansas will submit TMDLs for EPA approval in conformity with an agreed schedule.²⁵¹

The Kansas Department of Health and Environment (KDHE) is the agency responsible for establishing TMDLs in Kansas.²⁵² According to the consent decree, KDHE has an eight-year period, from 1998 to 2006, to prepare TMDLs for the impaired waters of the twelve major river basins in the state.²⁵³

Although the State of Kansas has eight years to prepare TMDLs, it wants to establish all high priority TMDLs within five years of the consent decree.²⁵⁴ Of the twelve major river basins in Kansas, two were chosen for priority TMDL development. The KDHE first turned its attention to the Republican River in northeastern Kansas, and the Arkansas River near Wichita, Kansas.²⁵⁵ Currently, KDHE's focus is on the Marais des Cygnes watershed.²⁵⁶

The KDHE anticipates that actual incorporation of measures assuring point and nonpoint source compliance will take ten years following the development and approval of a TMDL.²⁵⁷ For point sources within a TMDL watershed, KDHE will reduce load allocations at the time of NPDES permit renewals.²⁵⁸ For nonpoint sources, KDHE adopted a totally voluntary approach for the first five years of TMDL development.²⁵⁹ Farmers and other landowners adjacent to streams will be encouraged to use best management practices through educational

<http://www.kdhe.state.ks.us/tmdl/basic.htm>.

250. *See id.*

251. *See id.*

252. *See* Interview with Tom Stiles, *supra* note 235.

253. *See The Basics of TMDLs, supra* note 249. KDHE must prepare TMDLs "for water quality limited stream segments and lakes in each of the 12 major river basins in Kansas over an eight year period." *Id.*

254. *See id.*

255. *See* Chris Anton Paus, *Standards Being Set for Pollutant Levels in Water*, THE MIAMI COUNTY REPUBLIC, 1A (October 18, 2000) at 10A. KDHE first "focused on the Lower Republican River in northern Kansas and the Arkansas River near Wichita. Now it is turning its attention to the Hillsdale watershed and the Marais des Cygnes." *Id.*

256. *See id.*

257. *See The TMDL Process*, Kansas Department of Health and Environment, *available at* <http://www.kdhe.state.ks.us/tmdl/process.htm>.

258. *See id.* "Permits will reflect TMDL objectives by placing water quality-based limitations on effluent discharges." *Id.*

259. For nonpoint source pollution reduction within a watershed, KDHE states that:

[T]he focus will be placed on technical assistance, educational outreach, and directing financial resources toward placing best management practices in critical contributing areas of watersheds. The key strategy will be to reduce pollutant loadings from these areas to the maximum practicable extent. Most of [KDHE's] efforts will rely on voluntary, incentive-based approaches that are consistent with current practice of the *Kansas Water Plan* and federal programs.

The TMDL Process, supra note 257. *See also* Paus, *supra* note 255, at 10A. "For the first five years, actions in the affected watersheds will be voluntary." *Id.* (quoting Bonnie Liscek of the Kansas Department of Health and Environment).

programs and monetary incentives.²⁶⁰

As to the actual implementation of the land-use practices necessary for nonpoint source pollution abatement on farmland, a multi-agency effort is underway.²⁶¹ The KDHE will use the existing infrastructure of the Soil and Conservation Service to promote water quality restoration for impaired waters, but will shift the program's focus from walk-in to outreach using personnel from other agencies.²⁶² The Kansas Conservation Commission and Kansas State University are in the process of training six county extension agents for the job of "Watershed Specialist"; the watershed specialists will promote best management practices by visiting door-to-door within the TMDL watershed area.²⁶³ Watershed Specialists will attempt to solicit voluntary compliance with Best Management land-use practices from persons using land within one mile of an impaired watershed.²⁶⁴

The KDHE is attempting to coordinate local programs to meet TMDL restrictions that are made to fit the needs of Kansas farmers. As is the case with nearly every new initiative, several aspects of KDHE's TMDL program could be improved.

C. Critique of the Kansas Initiative

Many aspects of the Kansas TMDL initiative are appropriate for this highly agricultural state. Kansas agencies involved in TMDL development have taken a proactive approach to the new EPA regulations.²⁶⁵ Instead of ignoring TMDLs, these agencies envision the opportunity to institute new habits, and to seek and receive new federal revenues.²⁶⁶ As with any new state program, however, these approaches will require fine-tuning in the future to assure success.

The voluntary approach used by KDHE reduces farmers' fears of economic disaster, and will help stave off an adverse political reaction to TMDLs. Nevertheless, the voluntary approach can lead to highly variable and slow results, and KDHE has committed itself to the use of voluntary compliance only for the next five years. "The state doesn't really have a plan for a worst-case scenario, if a local population doesn't comply voluntarily with pollution reduction plans. . . . If no one takes

260. See Paus, *supra* note 255, at 10A. "Programs, money and incentives will be available for landowners to implement conservation practices." *Id.* (quoting Tom Stiles, Chief of Planning & Prevention at KDHE).

261. See Telephone interview with Scott Carlson, *supra* note 245.

262. See *id.*

263. *Id.*

264. See *id.*

265. See *id.*

266. See *id.*

advantage of programs, then there may have to be mandates, but that won't be known for at least 10 years."²⁶⁷

The voluntary compliance approach adopted by KDHE allows farmers a window of opportunity for gradual change, but also indulges five more years of water pollution. This Note identifies other aspects of the Kansas TMDL program and discusses possibilities for improved performance.

i. Limited Educational Initiative

The KDHE has incorporated an educational initiative into its TMDL program. The Chief of Planning and Prevention, as well as other KDHE personnel, will address any interested group on Kansas TMDLs.²⁶⁸ Additionally, KDHE has requested the development of a communication package on TMDLs for interested parties, such as the Kansas Farm Bureau Association, the Kansas Livestock Association, and pesticide groups.²⁶⁹ The goal of the communication package is to raise awareness that the KDHE is developing TMDLs, and to discuss methods of TMDL implementation in Kansas.²⁷⁰ Still, given that the goal of the voluntary compliance initiative is to achieve 100 percent conformity, this limited educational initiative, although a good start, seems inadequate.

Individuals and businesses ordinarily do not choose to voluntarily comply with new regulations without powerful incentives.²⁷¹ Consequently, many environmental regulations contain both civil and criminal penalties for non-compliance.²⁷² Without punishment for non-compliance on the part of nonpoint sources, the success of the initiative will depend solely on education to convince those subject to the new regulation to comply.²⁷³ Teaching farmers and ranchers the environmental dangers associated with "farming as usual," as well as the ease with which they can convert to available alternative methods, will

267. Paus, *supra* note 255, at 10A (quoting Tom Stiles, Chief of Planning & Prevention, KDHE).

268. Interview with Tom Stiles, *supra* note 235.

269. *See id.* (noting that Bill Hargrove, the head of K-CARE at Kansas State University is in charge of developing the communication package).

270. *See id.*

271. *See* Walter E. Mugdan, *Federal Environmental Enforcement in EPA Region 2*, ALB. L. ENVTL. OUTLOOK (2000) at 9.

272. *See also* Starr & Voisin, *supra* note 247, at 333, 334. "Punishment and deterrence are laudable goals because they help educate companies and individuals on what not to do. Experience suggests, however, that punishment and deterrence by themselves do not promote voluntary compliance with the law. Additional measures are needed to encourage companies to develop and institute comprehensive programs to identify and correct potential environmental problems before they arise." *Id.*

273. *See* Mugdan, *supra* note 271, at 10.

encourage commitment to good stewardship and behavioral change.

In addition to mailing informational packages to affected landowners, educational outreach should include on-site demonstration seminars, follow-up visits, certificates or awards for compliance, and enlistment of the media.²⁷⁴ In short, to successfully convince landowners to voluntarily comply with TMDLs, the State of Kansas should increase funding to KDHE for its educational initiative.

Moreover, the State should begin to think about what happens if KDHE's five-year voluntary compliance program and educational initiative fail to decrease pollution within TMDL watershed districts. The KDHE has indicated that, after five years or so, if voluntary compliance efforts are not successful, it will begin mandatory enforcement of TMDL compliance. Institution of mandatory measures will be difficult to implement, however, if the legal structure to support KDHE is not in place.

ii. Statutory Authority for the Institution of Buffer Zones

For point source permittees, KDHE's enforcement authority is tried and tested, but for nonpoint sources, statutory authority available to KDHE for enforcement remains uncertain. Kansas Statutes Annotated 65-170 and 65-171²⁷⁵ are the main provisions KDHE turns to when assessing penalties for water pollution.²⁷⁶ Kansas Statute Annotated 65-171f assesses fines "of not less than twenty-five dollars (\$25) and not more than ten thousand dollars (\$10,000)" for each day of either willful or negligent failure to comply with the "rules, regulations and orders" of KDHE.²⁷⁷

Although KDHE is empowered to make rules and regulations barring nonpoint source pollution,²⁷⁸ Kansas statutes do not clearly grant KDHE the authority to require the institution of land-use practices, such as the use of buffer zones, even in cases of egregious run-off pollution in either rural or urban areas of the state.²⁷⁹ Thus, in some

274. *See id.*

275. KAN. STAT. ANN. 65-170, 65-171d(Supp. 1999) and 65-171f(1992).

276. *See* Interview with Tom Stiles, *supra* note 235.

277. *See* KAN. STAT. ANN. 65-171f(1992). In addition, I believe Kansas statutes grant KDHE authority to order a clean-up of groundwater. AMERICAN BAR ASSOCIATION, RESTORATION OF OIL FIELD SITES, REMEDIATION REQUIREMENTS FOR MAJOR OIL AND GAS PRODUCING JURISDICTIONS, 84, 89 (Berry St. John & Craig Wyman, eds., 1999).

278. *See* KAN. STAT. ANN. 65-171a (1992). Under K.S.A. 65-171a, the secretary of health and environment is given the authority in matters where "stream pollution [is] found to be detrimental to public health or detrimental to the animal or aquatic life of the state." *Id.*

279. *See, e.g.*, KAN. STAT. ANN. §§ 65-159, 65-170d, 65-179e, 65-171b, 65-171v, and the Water

instances, it may be more economically feasible for a large corporate farm to continue to pollute than to set aside land for buffer zones. To avoid such a result, the Kansas legislature should revisit this area of law. Under the new EPA rules, state TMDLs must provide “reasonable assurance” of implementation for point source permittees and for nonpoint sources as well.²⁸⁰ Granting KDHE the statutory authority to impose land-use restrictions where necessary would provide reasonable assurance that nonpoint source pollution will end.²⁸¹

iii. Few Market Incentives

Another possible weakness of the Kansas TMDL initiative is that it does not open up economic marketplace incentives to participants through the option of pollution trading within watershed management areas. By neglecting this alternative, KDHE has ruled out a potential financial opportunity for farmers, who could otherwise sell or trade pollution permits with municipal and industrial dischargers located in the same TMDL watershed area.

In our free market system, no one would dispute that certain activities are more profitable than others. Some authorities argue that a system of “pollution trading” should be fostered by EPA under the Clean Water Act to encourage compliance with pollution prevention initiatives.²⁸² The idea behind pollution trading is to set up a Keynesian system of market mechanisms, allowing polluters to buy and sell governmental permits for the discharge of pollutants, similar to that used for sulfur dioxide emissions under the Clean Air Act.²⁸³

Pollution trading within a TMDL watershed area would mean that one polluter could increase its discharges if it paid another polluter to cease or limit its discharges. Theoretically, this would occur when it

Supply and Sewage Act of 1907, KAN. STAT. ANN. §§ 65-161 *et seq.* Reclassifying a problem discharger as a violator under a parallel program for water pollution control may perhaps offer a circuitous enforcement alternative. See Interview with Tom Stiles, *supra* note 235. Three possible mechanisms within state authority for addressing nonpoint source pollution are: (1) Critical Water Quality Management Areas; (2) Pesticide Management Areas; and (3) Source Water Protection Planning, under the federal Safe Drinking Water Act. See *The TMDL Process*, *supra* note 257.

280. Final TMDL Rule, *supra* note 20, at 43,585, 43,591.

281. There is some case law precedent to support the implementation of agricultural land-use controls. See *Woodbury County Soil Conservation Dist. v. Ortner*, 279 N.W.2d 276 (Iowa 1979) (holding that a soil conservation district order compelling a farmer to adopt erosion-prevention practices is not a taking). Cf. *Hudson v. City of Shawnee*, 790 P.2d 933 (Kan. 1990) (concerning city regulations imposed on landowners to protect the public). “Police power is an inherent power of the sovereign and it is essential to protect members of the community from injury. It rests upon the fundamental principle that all property is owned subject to the limitation that its use may be regulated for the safety, health, morals, and general welfare of the community in which it is located.” *Id.* at 941.

282. See Stephenson et al., *supra* note 82, at 775.

283. See *id.* at 781.

becomes cheaper for one party to compensate another than to incur the cost of an equivalent level of pollution control.²⁸⁴ Buying the ability to discharge contaminants would therefore become a resource in and of itself. Some commentators suggest that “a trading system creates a continuing financial incentive for parties to seek out and adopt new and improved forms of pollution prevention to reduce their discharges, thus generating allowances that can be sold . . . or [be] use[d] at a later time.”²⁸⁵

Conversely, critics of pollution trading take the position that such a system, in essence, compromises the public’s ownership of rivers and streams by selling private individuals the right to pollute the water. Further, critics point to the fact that there are very few successful pollutant trading systems in existence.²⁸⁶ Additionally, they point out that the pollution trading system under the Clean Air Act has failed to achieve any overall improvement in air quality.²⁸⁷

Kansas environmental specialists view pollution trading in TMDLs as a non-viable alternative. At present, that conclusion may make sense. The lack of data and the potential pitfalls of existing trading systems may make it advisable for states considering pollution trading to approach it cautiously. Down the road, however, a comparison of Kansas TMDL successes and failures with those of other states will reveal whether this was a missed opportunity.

iv. Kansas TMDLs Fail to Include Groundwater Sources

Yet another criticism of Kansas choices for TMDL implementation is that underground tributaries of surface streams will not be considered in the development of TMDLs. When KDHE began to develop TMDLs for “waters within state boundaries,”²⁸⁸ it requested clarification of the scope of coverage from the Attorney General, and as a result of that opinion, decided to limit TMDLs to surface sources

284. *See id.*

To illustrate how an effluent allowance trading system works, assume that Party A and Party B are both dischargers. Party A has a responsibility to limit its discharge. However, Party A is allowed to discharge above its limit if Party B agrees to reduce discharges at its site below its own requirements. The additional effluent control achieved by Party B, relative to its required control, is credited to Party A. Party A is willing to pay Party B for assuming additional effluent control responsibility because that compensation is less than the cost Party A would incur to accomplish an equivalent level of control.

Id.

285. *Id.* at 785.

286. *See generally* Kurt Stephenson et al., *supra* note 82. Authors Stephenson, Shabman and Geyera point to only one “successful” pollution trading system; the Tar-Pemlico River Basin program in South Carolina. *Id.* at 804.

287. Telephone interview with Scott Carlson, *supra* note 245.

288. 33 U.S.C. § 303(d)(1)(A) (1994).

2001]

Note

527

alone.²⁸⁹

Relying on the Attorney General's opinion²⁹⁰ that TMDLs apply to surface waters only, the KDHE adopted a policy that underground water sources feeding surface streams will not be included within Kansas TMDLs.²⁹¹ Accordingly, except where surface water recharges groundwater reserves, KDHE ignores groundwater in its development of TMDLs.²⁹²

I suggest that the opinion of the Attorney General was misplaced and short-sighted for several reasons. First, while § 303(d) does not expressly require the inclusion of groundwater in TMDLs, the language of the TMDL statute does not explicitly exclude the incorporation of groundwater in TMDLs.²⁹³ Second and most importantly, the Clean Water Act generally leaves sole authority for groundwater regulation in the states.²⁹⁴ Thus, where groundwater sources directly contribute to navigable surface water pollution, it is appropriate, indeed, I believe advisable for a state to regulate those sources under a TMDL. Third, once a decision not to include groundwater into TMDLs is incorporated into state policy, it is difficult, if not impossible, for an agency to shift course and later bring groundwater within TMDLs.

For decades, hydrologists have recognized the connection between surface streams and groundwater. "Ground water is often naturally interrelated with surface water: ground water feeds springs and surface streams, and surface water charges ground water reservoirs."²⁹⁵ Agreeing with hydrologists, the Supreme Court has recognized the interrelation between surface and groundwater. For example, in *Kansas v. Colorado*, the Court found that excessive well pumping in Colorado had depleted the surface waters of the Arkansas River in violation of

289. See 98 Op. Att'y Gen. 1 (Kan. 1998)

290. See *id.* at 2.

291. Interview with Tom Stiles, *supra* note 235.

292. See *id.* The KDHE, however, has incorporated into at least one TMDL measures to prevent impaired surface waters from contaminating an underground aquifer. See *id.* That aquifer, located between Hutchinson and Wichita, Kansas, is known as the Equus Beds, a major source of drinking water for Wichita, the largest city in Kansas. See *id.* Surface water streams in the Hutchinson vicinity flow southeasterly toward the Equus Beds, recharging the aquifer. See *id.* Because there are natural salt formations, salt mining facilities, and underground wells used for brine disposal in the salt and oil production industry near the Hutchinson area, those surface waters contain excessive amounts of chloride. See *id.* Therefore, KDHE has included limits in the TMDL for the surface waters of that watershed in an attempt to keep the Equus Beds free from excessive chloride. See *id.*

293. See 33 U.S.C. §1313(d)(1)(A) (1994). In pertinent part, it describes the waters for consideration for TMDLs as: "those waters within [each state's] boundaries." *Id.*

294. The issue of underground water pollution under federal environmental law is largely unresolved. See RODGERS, *supra* note 117, at 124. Professor William A. Rodgers noted that the "peripheral regulation of groundwater quality under the Clean Water Act is due partially to the uncertain status of nonpoint sources that are major contributors to groundwater pollution." *Id.*

295. National Water Commission, *Water Policies for the Future*, 233 (1973), (reprinted in GOULD & GRANT, *supra* note 97, at 362).

the Arkansas River Compact.²⁹⁶ Likewise, in *United States v. Riverside Bayview Homes, Inc.*, the Court upheld the Army Corps of Engineers regulation of wetlands in the proximity of navigable waters as reasonable, recognizing that “water moves in hydrological cycles,” and that the Clean Water Act was designed to protect “aquatic ecosystems.”²⁹⁷

Notwithstanding this knowledge, many state laws treat groundwater as totally independent from surface water, and apply separate laws and management systems to each, ignoring the hydrological connection between the two.²⁹⁸ Kansas, which treats ground and surface waters as integrated for water rights purposes, is not among them.²⁹⁹ I urge that the State of Kansas build on this existing hydrological integrated structure to incorporate groundwater within an appropriately-designed TMDL program.³⁰⁰ Such a scheme would be consistent with the Clean Water Act.

The Clean Water Act indicates that, despite a general inapplicability of the NPDES permit system to groundwater, states are to control subsurface waste disposal to protect both surface and groundwater quality.³⁰¹ By virtue of the broad language found in various provisions of the Clean Water Act concerned with agricultural pollution, one can also discern a clear congressional intent to prevent all types of water pollution under one comprehensive system of state and federal cooperative efforts. Thus, it would be counter-intuitive to assert that a state could not include hydrologically-connected groundwater in a TMDL.

Groundwater regulation is especially important in certain

296. See *State of Kansas v. State of Colorado*, 514 U.S. 673, 694 (1995).

297. *United States v. Riverside Bayview Homes, Inc.*, 106 S.Ct. 455, 462-63 (1985).

298. See National Water Commission, *supra* note 295, at 233 (1973).

[T]here persists in the laws of many States myths (long ago abandoned by hydrologists) that ground water is separate from and unrelated to surface water. . . . As a consequence of the faulty perception of hydrology that ground water is separate from and unrelated to surface water, different legal regimes were applied to surface water and ground water, and only recently and in only a few water-short Western States has an effort been made to coordinate the administration of the integrated surface water-ground water supply.

Id.

299. See KAN. STAT. ANN. §82a-702 (1997); KAN. STAT. ANN. §82a-707 (a) (1997). See also Myrl L. Duncan, *High Noon on the Ogallala Aquifer*, 27 WASHBURN L. J. 16, 45-46 (1987) (noting that The Water Appropriation Act of 1945 sets forth a unified scheme for the regulation of ground and surface water quantity in Kansas).

300. This would involve consolidating the regulatory authority in regard to water quality, which is currently split between KDHE and the Kansas Corporation Commission. See Robert L. Glickman and George Cameron Coggins, 35 KAN. L. R. 75, 141, 156 (1986). See also AMERICAN BAR ASSOCIATION, *supra* NOTE 277, AT 84-85.

301. See Gould, *supra* note 74, at 475, citing §§ 208(b)(2)(K) and 319 of the Clean Water Act. States were to include in their § 208 plans “a process to control the disposal of pollutants on land or in subsurface excavations . . . to protect ground and surface water quality.” *Id.* In addition, § 304(a)(2) requires the EPA Administrator to develop and publish information “(A) on the factors necessary to restore and maintain the chemical, physical, and biological integrity of all navigable waters, ground waters, waters of the contiguous zone, and the oceans.” 33 U.S.C. § 1314(a)(2)(1994).

circumstances. Underground water pollution can result from leaks from underground storage or disposal wells, or from percolation downward from nonpoint or point source surface contamination. The contaminated water travels underground to other loci where it is drawn from wells or seeps into streams, rivers and lakes. Under current law, where a hydrological link can be established between the contaminants and the source, the affected parties often must seek a state common law remedy in the face of ineffective state or federal pollution laws.³⁰² Including groundwater sources of stream pollution within TMDLs would offer a non-litigation remedy for impaired waters.

302. A striking example of a state regulatory authority's inability to remedy groundwater pollution is described in the Dickensian *Miller v. Cudahy Company* litigation. *Miller v. Cudahy Co.*, 858 F.2d 1449 (1988); *Miller v. Cudahy Co.*, 567 F. Supp. 892 (D. Kan. 1983); *Miller v. Cudahy Co.*, 592 F. Supp. 976 (D. Kan. 1984); and *Miller v. Cudahy Co.*, 656 F. Supp. 316 (D. Kan. 1987). "The original complaint . . . was filed on May 31, 1977." *Miller*, 592 F. Supp. at 984. There, defendants owned an underground salt mine near Lyons, Kansas, which had been in operation since 1908. *Miller*, 858 F.2d at 1452. Salt contamination from defendant's property leaked from brine lines, from unplugged brine wells, and from surface deposits of salt that were dissolved by rain and then percolated into Cow Creek Valley Aquifer. *See id.* The fresh waters confined within that aquifer move slowly underground in a southeasterly direction, and are tributary to the Arkansas River. *See id.* The salt pollution created a plume of brine in the aquifer, containing over 30,000 parts per million of salt. *See id.* The court noted that "[c]oncentrations of 250 parts per million are sufficient to render water unfit for domestic or irrigation use." *Id.* The owners and tenants of the farmland living over the brine plume could no longer use groundwater to irrigate their crops without ruining their land. "Even though salt is beneficial to man and, in fact, is necessary for his survival, it becomes a deleterious substance when it invades the fresh water supplies of the people. Fresh water contaminated with salt becomes a poison to man, beast, and plant alike." *Miller v. Cudahy Co.*, 592 F. Supp. 976, 994 (1984).

After unsatisfactory meetings with the Kansas Department of Health and Environment and with Otto Rueschhoff, then President of American Salt, plaintiffs sought damages and abatement of the underground saltwater plume emanating from defendant's plant under common law nuisance and trespass theories. *See id.* at 996. The court noted:

Rueschhoff's attitude towards the adjacent landowners who were bearing the brunt of the salt pollution was shocking. He viewed the farmers' continual complaints about American Salt's pollution as a potential threat to production and as a nuisance. When public outrage reached a critical level in early 1977, the KDHE held a public hearing concerning the National Pollution Discharge Elimination System permit soon to be issued to American Salt. American Salt plant manager Bill Shirley appeared at the hearing and read a prepared statement that was extremely conciliatory and made sweeping statements that pollution from the plant had been abated and would not occur in the future. The citizens at the meeting were angry and hostile, and Shirley attempted to answer their questions and to make statements that would defuse their hostility. When Rueschhoff learned of these statements, he was dissatisfied with them because he felt the farmers should have been told off, rather than accommodated. When Shirley replied that the landowners would get a court order shutting down the plant if pollution continued, Rueschhoff declared that he would get an injunction and be open again the next day, and he would "run the creeks white with brine" if necessary to maintain production and fulfill the company's obligations to its paying customers. . . . In Rueschhoff's opinion, . . . taking the maximum fine that the KDHE could impose for any one event—\$10,000—was a much better deal than . . . losing two days production. . . . When he was personally confronted by angry landowners, Rueschhoff preferred to employ a strategy of intimidation. . . . Thus, for example, when Cecil Miller finally threatened legal action against American Salt, Rueschhoff dared Miller to file suit and boasted that the money and lawyers available to American Salt would enable it to drag any litigation out for years, bankrupt Miller in the process, and take his land from him.

Miller, 592 F. Supp. at 995-96. After a decade of litigation, the court ultimately awarded both actual and punitive damages to plaintiffs. *See Miller*, 592 F. Supp. 976, 1005-07 (1984). Punitive damages were set at \$10 million, and the court ordered pipelines removed, and the installation of monitor wells in an effort to force defendant to solve its pollution problems. *See id.* at 1007.

Kansas has missed an important opportunity to control a potential source of water pollution by failing to include within the reach of the new TMDL program all groundwater with a hydrological connection to surface water. To exclude groundwater flowing into streams or lakes from regulation defeats the purpose of the TMDL program.³⁰³

Obviously, each state must design its approach to TMDLs in concert with the interests of its residents, while also keeping in mind the predominant sources of water pollution within its boundaries. The approach of an agricultural state to nonpoint source pollution may vary tremendously from that of a state with a high urban density, or where mining is the predominant industry. In Kansas, state officials should view the TMDLs as an opportunity to finally obtain clean, safe streams and lakes through a program of state and federal cooperation.

VII. CONCLUSION

A recent survey revealed that when Americans consider where to live, among the most important factors are the availability of clean water and clean air.³⁰⁴ The TMDL program gives the states the opportunity to protect natural resources, to attract commerce and tourism, and to ensure the future health and welfare of their citizens.

The addition of nonpoint source pollutants to our nation's streams, rivers, and oceans results in egregious harm. Excess nutrients, microorganisms, and chemicals from agricultural runoff introduce carcinogens into our drinking water,³⁰⁵ and throw river ecosystems off-balance, resulting in the extinction of fish and other wildlife. If state governments allow the agricultural community to conduct business as usual, the needs and desires of the citizenry as a whole are frustrated. Further, to grant one sector of society *carte blanche* exemption from regulation while imposing increasing restrictions on all others is inequitable. While municipalities and industry are made to shoulder the responsibility for their pollution-producing activities, nonpoint source dischargers succeed in shirking their responsibilities. Principles of good stewardship demand more of the agricultural community, especially when simple changes in land-use practices can benefit so many.

This nation readily accepts land-use restrictions, such as zoning in urban areas, and it is time to recognize similar restrictions for rural land abutting rivers and streams. The time has arrived in the evolution of

303. See *supra* note 162 and accompanying text.

304. See *Committee of Agriculture Hearing*, *supra* note 5.

305. See Zaring, *supra* note 26, at 520. Carcinogens (such as nitrates) and excess nutrients (such as nitrogen and phosphorous) are introduced into the nation's waters by agricultural runoff. See *id.*

this country when people generally realize they cannot do whatever they want with shared natural resources.³⁰⁶ This is particularly true of our nation's waters. Water is a life-sustaining resource.³⁰⁷ In order to assure the health and welfare of all citizens, and to protect our natural resources for future generations, all states should insist on abatement of nonpoint source pollution.

The EPA's new TMDL regulations endeavor to achieve what the states historically have not been able to achieve—clean, usable water in all water bodies across the nation. Implementing practical land-use restrictions is the right thing for states to do, despite the protests of special interest groups. These restrictions do not have to be draconian to be effective; however, delay in their implementation will not benefit anyone. In the end, state implementation of TMDLs offers the best hope for our nation's children, waiting to enjoy a cool river on a hot summer day.

306. See GOULD & GRANT, *supra* note 97, at 3, citing Frank J. Trelease, *Federal-State Relations in Water Law*, National Water Commission, Legal Study No. 5 at 2-8 (1971).

Most of man's uses of water require that its physical occurrence be altered. . . . Man has slowly come to realize that there is not enough water anywhere on the globe to permit every user to do with it as he pleases. Not even the vast oceans can be mistreated without repercussions. . . . Water law has arisen, as other laws arise, to order the activities of man in relation to water so as to allow and encourage desirable activities and to prevent or restrict undesirable conduct. Like other laws governing scarce things, the institutional framework of American water law is a combination of interacting property rights, economic forces and public regulation.

Id.

307. See James B. Wadley, *Recreational Use of Nonnavigable Waterways*, 56 J. KAN. B. A. 27 (1987).

Considerable evidence indicates that our current water ownership notions actually go back to Roman law and are derived from the idea that certain things such as air, running water, etc., were not susceptible to private ownership. The rationale for this position seems to be these things were so vital for individual survival that it was inappropriate they be the object of private control and dominion.

Id.