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THE DILUTION OF THE CLEAN WATER ACT

Mark C. Van Putten* and Bradley D. Jackson**

The bold objective of the federal Clean Water Act¹ is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”² To achieve this objective, Congress, in 1972, mandated steady progress toward restricting and ultimately banning altogether pollutant discharges into the nation’s waters.

First and foremost, Congress declared as “the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985.”³ To achieve this “zero discharge” goal,⁴ the United States Environmental Protection Agency (EPA) had to implement successively stricter technology-based, end-of-the-

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1. 33 U.S.C. §§ 1251-1376 (1982). Until 1977, the federal water pollution statute was called the “Federal Water Pollution Control Act” (FWPCA). The 1977 amendments to the Act provided an alternative title. Clean Water Act of 1977, Pub. L. No. 95-217, § 2, 91 Stat. 1566 (The statute “may be cited as the ‘Federal Water Pollution Control Act’ (commonly referred to as the Clean Water Act).”) [hereinafter cited as the 1977 Amendments]. In this Article we refer to the statute as the “Clean Water Act” or the “Act” unless it is necessary to distinguish between the 1972 and 1977 versions of the Act.

For a history of federal water pollution control legislation, see *infra* notes 17-42 and accompanying text. See also EPA v. California *ex rel.* State Water Resources Control Bd., 426 U.S. 200, 202-09 (1976) (dictum); Montgomery Env’tl. Coalition v. Costle, 646 F.2d 568, 573-74 (D.C. Cir. 1980); F. GRAD, ENVIRONMENTAL LAW § 2.03[2] (3d ed. 1985); R. STEWART & J. KRIER, ENVIRONMENTAL LAW & POLICY 501-36 (1978 & Supp. 1982); D. ZWICK & M. BENSTOCK, WATER WASTELAND (1971); Zener, *The Federal Law of Water Pollution Control*, in FEDERAL ENVIRONMENTAL LAW 682 (1974).

2. Clean Water Act § 101(a), 33 U.S.C. § 1251(a) (1982).

3. *Id.* § 101(a)(1), 33 U.S.C. § 1251(a)(1).

4. See ENVIRONMENTAL POLICY DIV., CONGRESSIONAL RESEARCH SERV., LIBRARY OF CONGRESS, 93D CONG., 1ST SESS., A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, at 189 (Comm. Print 1973) (Senate consideration of the conference committee report) (statement of Sen. Cooper that this is a “goal of no pollution”) [hereinafter cited as 1972 LEGISLATIVE HISTORY].

pipe effluent limitations.⁵ Feasibility and costs of control rather than the environmental effects of pollutant discharges were the only relevant considerations in setting these limitations.⁶

In addition, Congress adopted an interim goal of "fishable-swimmable" waters by 1983 to serve as a benchmark for measuring progress toward the 1985 zero discharge goal.⁷ Achievement of the interim goal was to prevent water quality from falling below minimally acceptable levels while EPA implemented the successively stricter technology-based effluent limitations.⁸ The interim goal was to be implemented through the development of ambient water quality standards based on the health and environmental effects of particular water pollutants.⁹

Despite the Clean Water Act's ambitious goals, implementation has lagged behind the statutory deadlines. The regulatory experience under the Act has taught that eliminating pollutant discharges into national waters will be far more difficult than the Ninety-Second Congress thought. As attainment of the zero discharge goal becomes more elusive, the continuing integrity of the Act's underlying premise is increasingly open to criticism.¹⁰

5. See Clean Water Act § 301(b), 33 U.S.C. § 1311(b) (1982).

6. *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 202 (1976) (dictum); *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1, 7 (1976); *Natural Resources Defense Council, Inc. v. Costle*, 568 F.2d 1369, 1377 (D.C. Cir. 1977). See Clean Water Act § 301(b), 33 U.S.C. § 1311(b) (1982) (requiring implementation by most dischargers of federal effluent standards reflecting "best practical control technology currently available" (BPT) by July 1, 1977 and, under the 1972 Act, "best available technology economically achievable" (BAT) by July 1, 1983).

The 1977 Amendments postponed implementation of BAT standards for most pollutants to July 1, 1984 and added a new standard of "best conventional pollutant control technology" (BCT) for a new category of "conventional pollutants." *Id.* § 301(b)(2)(A), (E), (F), 33 U.S.C. § 1311(b)(2)(A), (E), (F).

7. Clean Water Act § 101(a)(2), 33 U.S.C. § 1251(a)(2) (1982); see S. REP. NO. 414, 92d Cong., 1st Sess. 9 (1971) [hereinafter cited as 1972 SENATE REPORT], reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1415, 1427.

8. Clean Water Act § 302, 33 U.S.C. § 1312 (1982). More stringent pollution controls derived from health-based ambient water quality standards are required where EPA finds that technology-based effluent limits "would interfere with attaining the [1983] interim goal." S. CONF. REP. NO. 1236, 92d Cong., 2d Sess. 121 (1972) [hereinafter cited as 1972 CONFERENCE REPORT], reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 281, 304; see also *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205 n.12 (1976) (dictum); *American Frozen Food Inst. v. Train*, 539 F.2d 107 (D.C. Cir. 1976); H.R. REP. NO. 911, 92d Cong., 2d Sess. 105 (1972) ("Water quality standards will be utilized for the purpose of setting effluent limitations in those cases where effluent limitations for point sources would not be consistent with such standards.") [hereinafter cited as 1972 HOUSE REPORT], reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 753, 792; 1972 SENATE REPORT, *supra* note 7, at 46, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1464; F. GRAD, *supra* note 1, at 80-81.

9. Clean Water Act § 303, 33 U.S.C. § 1313 (1982).

10. See, e.g., Note, *Cost-Benefit Analysis and the Federal Water Pollution Control Act Amendments of 1972: A Proposal for Congressional Action*, 67 IOWA L. REV. 1057 (1982).

Many policymakers of the pragmatic 1980's have only amused disdain for the naivete of their counterparts of the early 1970's.¹¹ The contemporary debate over whether some of the nation's waters are now *too clean* illustrates the extent to which some would effectively read the zero discharge goal out of the Act.

This Article argues that the zero discharge goal of the Clean Water Act is more than naive rhetoric. To the contrary, it is the Act's *raison d'être*, and it is woven into the fabric of the Act's operative provisions. So understood, the zero discharge goal can and should provide continuing guidance for EPA's implementation of the Act.

To illustrate the continuing importance of the zero discharge goal, the Article examines the evolution of two EPA policies. The first is the "antibacksliding" rule,¹² which prohibits—except in certain specific circumstances—relaxation of effluent limitations contained in discharge permits issued to polluters under the National Pollutant Discharge Elimination System (NPDES).¹³ The second is the "antidegradation" rule, which is

11.

As to whether [the zero discharge] goal should be a binding one, I think the answer is no, because what you have is the problem of us being able to measure more and more carefully every year to find out that things are present in such trace quantities that if you take zero in some kind of an absolute and scientific sense we will never get to zero on any kind of discharge. If we said we won't have any kinds of discharges into water bodies at all and we will dispose of all this material, you end up with the paradox of having to dispose on the land or into the air. There is no way to do this in our life. We are stuck with all the wastes we generate. Some of them we can use. However, many of them are not reusable or recyclable and they end up becoming part of our discharges that go into our air, into our streams and oceans.

To limit those is certainly a goal. To control these discharges so that we have fishable/swimmable streams is a goal that we would support. *But zero discharge is not scientifically attainable in an absolute sense.*

....

I think what we have said is that if you take the no discharge goal in that kind of general way of what was America trying to accomplish, and that is to remove those pollutants that have an impact on stream life, we are going to do that. *If you take it in a more literal sense, then in that narrowest definition of removing all materials out of water, it is an indefensible argument and one we can't support.*

Clean Water Act Amendments of 1982: Hearings on S. 777 and S. 2652 Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works, 97th Cong., 2d Sess. 9-10 (1982) (testimony of John Hernandez, Deputy Administrator, U.S. Environmental Protection Agency) (emphasis added) [hereinafter cited as 1982 Senate Hearings].

12. 40 C.F.R. §§ 122.44, 122.62 (1986); see 49 Fed. Reg. 38,018-22 (1983).

13. Clean Water Act § 402, 33 U.S.C. § 1342 (1982); see *infra* notes 45-80 and accompanying text.

intended to protect "high quality" waters from becoming degraded by new or increased pollutant discharges.¹⁴

The efficacy of these policies depends upon the continued vitality of the zero discharge goal. The hesitancy with which EPA has implemented these policies reflects the Agency's equivocation on the integrity of the zero discharge goal.¹⁵ As a result, implementation of the antibacksliding and antidegradation policies, and of the Act itself, is mired in the same morass from which Congress sought in 1972 to rescue federal water pollution control efforts—an arcane, unending debate over how much water pollution is too much.

Part I of this Article explains what Congress did, or intended to do, to solve the complex problem of water pollution in enacting the Federal Water Pollution Control Act (FWPCA) Amendments of 1972.¹⁶ In short, Congress intended to prohibit eventually *all* discharges of pollutants regardless of the environmental benefits associated with each successively stricter increment of control. The Clean Water Act allows pollutant discharges only to the extent immediate prohibition is not economically and technologically feasible.

Part II describes the implications of the zero discharge goal for two continuing controversies over the Act's implementation: first, whether (and if so, under what conditions) effluent limitations contained in NPDES permits may be relaxed, or allowed to "backslide"; and second, whether (and if so, under what conditions) the Act allows the degradation of existing ambient water quality by new or increased pollutant discharges. Specific factual situations drawn from the experience of one of the authors provide a context for examining these issues, which are increasingly raised by dischargers seeking relaxation of their NPDES permit limitations.

I. WHAT CONGRESS DID (OR INTENDED TO DO)

The 1972 FWPCA Amendments were one in a series of media-specific federal statutes that established primary federal authority over environmental protection.¹⁷ In the early 1970's, Con-

14. 40 C.F.R. § 131.12 (1986).

15. See *supra* note 11.

16. Pub. L. No. 92-500, 86 Stat. 816. For an explanation of how the Clean Water Act is referred to in this Article, see *supra* note 1.

17. For a general overview of the 1972 Amendments, see Smith, *Highlights of the Federal Water Pollution Control Act of 1972*, 77 DICK. L. REV. 459 (1973); Note, *The*

gress inaugurated an environmental policy defining more precisely the "rights to, and responsibility for, use of the air, water, and land resources."¹⁸ More specifically, the 1972 FWPCA Amendments grew out of Congress's frustration with over twenty-five years of ineffective federal and state water pollution control efforts. The Senate Public Works Committee succinctly concluded that, as of 1972, "the national effort to abate and control water pollution has been inadequate in every vital aspect."¹⁹

With the 1972 Amendments, Congress departed radically from past federal approaches to water pollution control. Congress abandoned the underlying premise of all previous federal water pollution control policies—that water pollution control should be based on calculating "acceptable" pollution levels for a particular water body and then allocating this "assimilative capacity" between pollutant sources. Adoption of the zero discharge goal thus "marked an entire change in regulatory philosophy."²⁰ The premise of the Clean Water Act is that any discharge of pollutants into national waters is unacceptable and should cease as soon as control is technologically and economically feasible. This Part sets out Congress's reasons for adopting the zero discharge goal and describes the regulatory scheme Congress adopted to reach that goal by 1985.

A. *The Zero Discharge Goal*

Before 1972, the federal approach to water pollution control accepted some level of water pollution as a necessary evil of modern life. Diluting wastes by discharging them into the nation's waters was viewed as an acceptable method of disposal, at least up to some point of unacceptable water quality degradation.

The Water Quality Act of 1965 (WQA)²¹ marked the first assertion of primary federal authority in national water pollution control efforts.²² The WQA required each state to develop and

Federal Water Pollution Control Act Amendments of 1972, 1973 WIS. L. REV. 893.

18. 1972 SENATE REPORT, *supra* note 7, at 3, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1421.

19. *Id.* at 7, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1425; see also 1972 LEGISLATIVE HISTORY, *supra* note 4, at 494 (House debate on H.R. 11896) (statement of Rep. Vanik that the existing water pollution scheme was "administratively unworkable and philosophically faulty").

20. F. GRAD, *supra* note 1, at 72.

21. Pub. L. No. 89-234, 79 Stat. 903.

22. In establishing a "national policy" for water pollution control, the WQA repre-

enforce ambient water quality standards for interstate waters.²³ These standards were to specify for particular pollutants ambient concentrations that would not adversely affect "the use and value" of interstate waters "for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other legitimate uses."²⁴ Thus, pollutant discharges were allowed so long as they did not cause a violation of ambient standards.

The WQA preserved the enforcement procedures of the Water Pollution Control Act of 1948.²⁵ Upon violation of an ambient standard, EPA commenced an extended informal enforcement "conference" in which state and federal water pollution control agencies negotiated for discharge reductions with the dischargers causing the violation.²⁶

In 1972, Congress abandoned water quality standards as the primary means of controlling water pollution. Dilution in the nation's waters was rejected as an acceptable means of waste disposal. In declaring that "[t]he use of any river, lake, stream or ocean as a waste treatment system is unacceptable,"²⁷ Congress made a basic legislative finding that *any* pollutant discharge into national waters was simply *too much*. The 1972 Amendments

sent the first time that the federal government took the lead from the states in any antipollution effort. F. GRAD, *supra* note 1, at 70. Before 1965, federal legislation was limited to establishing cooperative federal-state efforts, with the states given the lead and the federal government's role limited to assisting the states in developing and attaining water quality standards. 1972 SENATE REPORT, *supra* note 7, at 1, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1419; *see* Water Pollution Control Act, Pub. L. No. 80-845, § 1, 62 Stat. 1155, 1155 (1948):

[T]he policy of Congress [is] to recognize, preserve, and protect the primary responsibilities and rights of the States in controlling water pollution, to support and aid technical research to devise and perfect methods of treatment of industrial wastes which are not susceptible to known effective methods of treatment, and to provide Federal technical services to State and interstate agencies and to industries, and financial aid to State and interstate agencies and to municipalities, in the formulation and execution of their stream pollution abatement programs.

Although amended often between 1948 and 1965, the Act's fundamental policy objectives remained the same until passage of the WQA. For a breakdown of the major provisions of the pre-1965 Acts, *see* 1972 HOUSE REPORT, *supra* note 8, at 66-68, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 753-55.

23. Water Quality Act § 10(c), 33 U.S.C. § 466g(c) (Supp. I 1965).

24. *Id.* § 10(c)(3), 33 U.S.C. § 466g(c)(3).

25. Pub. L. No. 80-845, 62 Stat. 1155; *see supra* note 22; 1972 SENATE REPORT, *supra* note 7, at 2, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1420.

26. Water Quality Act § 10(d)-(f), 33 U.S.C. § 466g(d)-(f) (Supp. I 1965); 1972 SENATE REPORT, *supra* note 7, at 2, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1420.

27. 1972 SENATE REPORT, *supra* note 7, at 7, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1425.

expressly negate any claim of right to pollute the nation's waters. To the extent that discharge reductions are technologically and economically feasible, pollutant discharges are unlawful.²⁸ Congress therefore declared the goal of "zero discharge" by 1985 and directed EPA to develop nationally uniform, end-of-the-pipe effluent limitations based upon the costs and feasibility of control.

Congress gave several reasons for abandoning the water quality-based approach to controlling water pollution. These included the scientific uncertainties involved in the development of ambient water quality standards, the administrative burdens and delay caused by such uncertainties, the disparity of water quality standards among the states, and the difficulties in the enforcement of ambient standards.

1. *Scientific uncertainties*— Adoption of the zero discharge goal avoided the substantial scientific uncertainties encountered in the development of water quality standards. These standards require two kinds of often elusive data. First, the regulator must ascertain the effects of particular pollutants on aquatic biota and on the uses of a particular water body. Water pollution causes a range of adverse environmental conditions, both acute and chronic, that often are difficult to observe in the short-term. To further complicate matters, the standard-setter must consider hydrological conditions specific to the water body that ameliorate or exacerbate a pollutant's impact.²⁹ Second, in order to translate data on pollution effects into effluent limitations, the regulator must determine the impacts on water quality attributable to particular dischargers.³⁰ These data are expensive to obtain and often difficult to interpret. Moreover, even where

28. The Act "clearly establishes that the discharge of pollutants is unlawful. Unlike its predecessor program which permitted the discharge of certain amounts of pollutants . . . , this legislation [clearly establishes] that *no one has the right to pollute*—that pollution continues because of technological limits, not because of any inherent right to use the nation's waterways for the purpose of disposing of wastes." 1972 SENATE REPORT, *supra* note 7, at 42, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1460 (emphasis added); see Clean Water Act § 301(a), 33 U.S.C. § 1311(a) (1982).

29. See generally OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, WATER QUALITY STANDARDS HANDBOOK 1-2 to 1-9 (1983).

30. See, e.g., OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, GUIDANCE FOR STATE WATER MONITORING AND WASTELOAD ALLOCATION PROGRAMS 7, 9 (1985); OFFICE OF WATER ENFORCEMENT AND PERMITS & OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, TECHNICAL SUPPORT DOCUMENT FOR WATER QUALITY-BASED TOXICS CONTROL (1985); OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, TECHNICAL GUIDANCE MANUAL FOR PERFORMING WASTE LOAD ALLOCATIONS (1984) (Book II Streams and Rivers, Chapter 3 Toxic Substances).

adequate data as to the effects of a particular pollutant exist, the water quality-based approach requires difficult judgments as to which effects justify discharge limitations.³¹

Congress recognized these inherent deficiencies of the water quality-based approach and substituted a system of water pollution controls that did not rely for their validity upon demonstrable environmental harm.³² Above all, Congress intended to establish means by which EPA and the states could develop readily enforceable pollutant discharge limitations.³³

2. *Administrative burdens and delay*— The inherent scientific uncertainties of the water quality standard-setting process delayed the development of necessary pollutant discharge con-

31. Senator Cooper best summarized the complexity of the water quality standard-setting process:

Until now and under the 1965 act . . . [t]he States have been called upon to classify their streams and waters for agriculture use, industrial use, municipal water supply, fish and wildlife, and recreation uses. Then, usually with the consideration of the "assimilative capacity of the receiving waters" and with the determination of an appropriate "mixing zone," an attempt was to be made to assign the remaining pollution or diluted pollution to sources which were considered to be responsible for that pollution. This was and is an inherently difficult procedure, and under the 1965 act has been a discouragingly slow process.

1972 LEGISLATIVE HISTORY, *supra* note 4, at 1304 (Senate debate on S. 2770).

32.

We have seen a great deal of evidence indicating that this water quality standards system of regulation assumes more knowledge about our complex ecosystem than we actually have. The numerical criteria themselves are often largely arbitrary and serve mainly to fool the public into thinking everything is "safe." Also, the history of our water pollution control program suggests that State and Federal governments will continue to founder on the staggering complexity of this control system, which requires working mathematically back from the permitted pollution levels in a waterway to the effluent limitations at the point source needed to achieve them.

1972 HOUSE REPORT, *supra* note 8, at 396, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 865 (additional views of Reps. Abzug and Rangel).

33. Congress abandoned the water quality-based approach in favor of technology-based effluent limitations

because of the great difficulty associated with establishing reliable and enforceable precise effluent limitations on the basis of a given stream quality. Water quality standards, in addition to their deficiencies in relying on the assimilative capacity of receiving waters, often cannot be translated into effluent limitations—defendable in court tests, because of the imprecision of models for water quality and the effects of effluents in most waters.

Under this Act the basis of pollution prevention and elimination will be the application of effluent limitations. Water quality will be a measure of program effectiveness and performance, not a means of elimination and enforcement.

The Committee recommends the change to effluent limits as the best available mechanism to control water pollution. With effluent limits, the Administrator can require the best control technology; he need not search for a precise link between pollution and water quality.

1972 SENATE REPORT, *supra* note 7, at 8, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1426.

trols. The burden of these uncertainties fell upon the pollution control agencies. They were forced to commit substantial resources to establish the requisite and complex relationship between water pollution and water quality before imposing controls upon dischargers. Conversely, dischargers used such uncertainties to challenge and delay the imposition of proposed water quality-based effluent limitations. Not surprisingly, the states were unable to develop in a timely manner the water quality standards for interstate waters required by the 1948 and 1965 Acts.³⁴ Therefore, Congress saw abandoning primary reliance on the water quality-based approach and adoption of the zero discharge goal as "essential, for it allows the Administrator [of EPA] to require the best control technology without having to provide a direct relationship between water pollution and water quality."³⁵

3. *Disparity among the states*— Because the water quality standards required under the 1965 Act were site-specific and largely within state authority, the water quality-based approach provided incentives for states to use less restrictive pollution control criteria to attract economic development by "pollution shopping" industries. The prospect of industries playing states off one another for the least restrictive limitations on pollutant discharges was a significant threat to implementation of the federal program.³⁶ Furthermore, the inherent scientific uncertain-

34.

The task of setting water quality standards, assigned to the States by the 1966 legislation, is lagging. More than 4 years after the deadline for submission of standards, only a little more than half of the States have fully approved standards. Of the 54 jurisdictions covered by the water pollution control program . . . only 27 have fully approved standards.

1972 LEGISLATIVE HISTORY, *supra* note 4, at 1256 (Senate debate on S. 2770) (statement of Sen. Muskie); *see also* 1972 SENATE REPORT, *supra* note 7, at 8, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1426.

35. 1972 LEGISLATIVE HISTORY, *supra* note 4, at 209 (Senate consideration of conference report) (statement of Sen. Tunney); *see also* 1972 SENATE REPORT, *supra* note 7, at 8, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1426.

36.

One of the most critical problems inherent in legislating water pollution controls is that the standards will be so haphazard that workers will be pushed out of jobs by industries moving from State to State in search of less strict pollution standards. . . . We must establish national effluent limitations to prevent industrial "shopping" and we must establish an equitable system of assistance to those workers and communities affected by plant closures due to environmental regulations.

1972 LEGISLATIVE HISTORY, *supra* note 4, at 517 (House debate on H.R. 11896) (statement of Rep. Harrington).

This sentiment was extended to the concept of nationally uniform standards as well. National standards, according to some critics, constituted "environmental blackmail" for

ties of the water quality standard-setting process provided state regulators with the means to accommodate industry, as plausible scientific justifications could be developed for virtually any standards.³⁷

Even if pollutant dischargers and states did not deliberately take advantage of the economic implications of variable pollutant control standards, disparity among states caused competitive disadvantages. Congress therefore sought to avoid the inequities of competitive disadvantages between dischargers in different states operating under diverse water pollution control requirements.³⁸

4. *Enforceability*— The pre-1972 federal water pollution control scheme proved to be unenforceable. The enforcement record under the 1948 and 1965 Acts spoke for itself. In over two decades only one case reached the courts, and in that case over four years elapsed between the initial enforcement conference and the dispositive consent decree.³⁹

The scientific uncertainties that delayed the water quality standard-setting process also rendered enforcement of existing standards difficult if not impossible. Because water quality standards are expressed in ambient concentrations, establishing that a particular discharger caused a violation was nearly impossible. Even where the scientific data needed to make such a showing existed, the enforcement conference process was cumbersome and ineffective.⁴⁰

Furthermore, enforcement was the primary responsibility of the states except in a narrow category of situations.⁴¹ Thus, the same pressures and incentives that operated against timely development of uniform state water quality standards also mili-

which the "ransom was too high," and would cause industries to move to other countries with lesser water pollution controls. *Id.* at 470 (statement of Rep. Dingell (quoting Minnesota Governor Wendell R. Anderson)). See *infra* note 130.

37. "[D]ue to the pressures of powerful economic interests, the States do not establish meaningful quality levels and create water 'zones'—some good, but mostly bad." *Id.* at 494 (House debate on H.R. 11896) (statement of Rep. Vanik).

38. See 1972 SENATE REPORT, *supra* note 7, at 44, reprinted in 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1462.

39. 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1257 (Senate debate on S. 2770) (statement of Sen. Muskie).

40. *Id.*

41. The 1965 Act permitted federal abatement actions only when (1) the water quality of interstate waters was reduced below established standards, (2) pollutant discharges in one state endangered the health or welfare of the residents of another state, or (3) the Governor of the state in which the discharges originated consented to the abatement action. Water Quality Act § 10(c)(5), (d)(1), (g), 33 U.S.C. § 466g(c)(5), (d)(1), (g) (Supp. I 1965); see also 1972 LEGISLATIVE HISTORY, *supra* note 4, at 1256-57 (Senate debate on S. 2770) (statement of Sen. Muskie).

tated against stringent and uniform state enforcement of those requirements.

For these reasons, Congress abandoned ambient water quality standards as the primary mechanism for federal water pollution control. Instead, Congress adopted the zero discharge goal and mandated a comprehensive scheme of technology-based effluent limitations imposed through the issuance of NPDES permits to implement the goal.⁴²

42. Congress confirmed the continued vitality of the zero discharge goal in 1977 in making several "mid-course corrections" of the Clean Water Act. *See generally* Hall, *The Clean Water Act of 1977*, 11 NAT. RESOURCES LAW. 343 (1978); Note, *The Clean Water Act of 1977: Midcourse Corrections in the Section 404 Program*, 57 NEB. L. REV. 1092 (1978). In 1972, Congress recognized that its radical reforms in federal water pollution control efforts could have unpredictable consequences. Therefore, it adopted § 315 of the Act, 33 U.S.C. § 1325 (1982), which established a national study commission directed to "make a full and complete investigation and study of all of the technological aspects of achieving, and all aspects of the total economic, social, and environmental effects of achieving or not achieving, the effluent limitations and goals" of the Act. *See* 1972 CONFERENCE REPORT, *supra* note 8, at 136, *reprinted in* 1972 LEGISLATIVE HISTORY, *supra* note 4, at 319. This study would allow for informed "mid-course corrections" at some later date. *See, e.g.*, 1972 LEGISLATIVE HISTORY, *supra* note 4, at 175 (Senate consideration of conference report) (statement of Sen. Muskie); *id.* at 1270 (Senate debate on S. 2770) (statement of Sen. Randolph).

The National Commission on Water Quality transmitted its report and recommendations to Congress in March 1976. Although making several recommendations for legislative adjustments in the Act, the Commission "emphasize[d] that the recommendations are not shifts in basic policy, nor an effort to reverse the thrust of the legislation. Rather, they are in the nature of the changes to improve the means of reaching its important and ambitious objectives." REPORT TO THE CONGRESS BY THE NATIONAL COMMISSION ON WATER QUALITY 4 (1976).

The Commission did, however, recommend a redefinition of the zero discharge goal in light of clear evidence that technology capable of meeting the goal by 1985 would not be "a practical option." *Id.* at 30. The Commission recommended that the zero discharge goal be redefined to "stress conservation and reuse of resources," and that "accelerated research" be undertaken toward the achievement of that goal. *Id.* at 29.

Congress implicitly rejected the Commission's recommendation by not amending the zero discharge goal in 1977. Instead, the 1977 Amendments dealt primarily with stricter regulation of toxic pollutants, Clean Water Act § 307, 33 U.S.C. § 1317 (1982); some extensions of the 1983 deadlines, *id.* § 301(b), 33 U.S.C. § 1311(b); federal funding, *id.* §§ 104(u), 106(a), 112(c), 208(f), 314(c), 517, 33 U.S.C. §§ 1254(u), 1256(a), 1262(c), 1288(f), 1324(c), 1376; state implementation, *id.* § 101(g), 33 U.S.C. § 1251(g); and the availability of information, *id.* § 304(a), 33 U.S.C. § 1314(a). These changes, while numerous, constituted relatively modest corrections. The 1977 Amendments therefore represented an implicit declaration "that the overall thrust and objectives of the program should not be abandoned." S. REP. NO. 370, 95th Cong., 1st Sess. 2 (1977), *reprinted in* ENVIRONMENTAL POLICY DIV., CONGRESSIONAL RESEARCH SERV., LIBRARY OF CONGRESS, 95TH CONG., 2D SESS., A LEGISLATIVE HISTORY OF THE CLEAN WATER ACT OF 1977, A CONTINUATION OF THE LEGISLATIVE HISTORY OF THE FEDERAL WATER POLLUTION CONTROL ACT 633, 636 (Comm. Print 1978).

*B. Incremental Progress Toward the Zero Discharge Goal:
Exceptions to the Pollutant Discharge Prohibition*

The fundamental premise of the 1972 Act's complex regulatory provisions is the declaration that "the discharge of any pollutant by any person shall be unlawful."⁴³ Dischargers in violation of this prohibition are subject to civil penalties of up to \$10,000 per day. EPA⁴⁴ or any citizen⁴⁵ may bring an enforcement action in federal court.

The prohibition has two important aspects. First, it prohibits the discharge of *pollutants*—the addition of materials in any quantity to the nation's waters—and not *pollution*—a demonstrable effect on an aquatic environment. Second, it establishes the presumption under the Clean Water Act that *all* pollutant discharges are unlawful. In other words, under the Act, no one has any legal right to use the nation's waters for waste disposal purposes.

There are, of course, exceptions to the Act's basic prohibition, and most of the Act's regulatory provisions deal with these exceptions. Most importantly, a pollutant discharge in compliance with a permit issued under section 402(a) of the Act⁴⁶ is deemed to be in compliance with the section 301(a) prohibition for purposes of EPA or citizen enforcement actions.⁴⁷

Section 402 governs the NPDES permit process. The Act authorizes EPA to issue NPDES permits that exempt dischargers from the blanket prohibition of section 301(a), provided the discharge meets several other requirements of the Act.⁴⁸ In particu-

43. Clean Water Act § 301(a), 33 U.S.C. § 1311(a) (1982).

44. *Id.* § 309(b), 33 U.S.C. § 1319(b).

45. *Id.* § 505(a)(1), 33 U.S.C. § 1365(a)(1).

46. 33 U.S.C. § 1342(a) (1982).

47. Clean Water Act § 402(k), 33 U.S.C. § 1342(k) (1982); *see id.* § 301(a), 33 U.S.C. § 1311(a).

48. Section 402(a), 33 U.S.C. § 1342(a) (1982), provides, *inter alia*, that "the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section [301(a)], upon condition that such discharge will meet . . . all applicable requirements under sections [301, 302, 306, 307, 308, and 403]."

In *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977), the Supreme Court held that applicable § 301(b) technology-based effluent limitations promulgated by EPA must be included by permit writers in individual NPDES permits. Once these limitations are written into a permit, they become legal obligations of the discharger.

The D.C. Circuit has construed the permissive phrasing of § 402(a) ("the Administrator may . . .") as giving EPA the discretion to use NPDES permits to exempt dischargers from the Act's presumptive prohibition. *Natural Resources Defense Council v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977). It is, however, the only means by which EPA can do so. There is growing authority that an NPDES permit authorizes only those discharges spe-

lar, NPDES permits must contain effluent limitations on the amounts of specific pollutants—especially priority toxic pollutants—discharged.⁴⁹

Either EPA or states with EPA-approved NPDES permit programs issue NPDES permits.⁵⁰ States wishing to administer the NPDES program must satisfy the requirements of section 402(b) and the guidelines that EPA is required to promulgate under section 304(i).⁵¹ To date, thirty-six states and the Virgin Islands administer EPA-approved NPDES permit programs.⁵²

As to state-administered NPDES programs, EPA retains authority to review proposed permits and to object to their issuance if they are not consistent with the “guidelines and requirements” of the Act.⁵³ If EPA objects to the issuance of a permit,

cifically provided for in the permit and not, as some dischargers have argued, all discharges except those limited in the permit. *Legal Envtl. Assistance Found. v. Hodel*, 586 F. Supp. 1163, 1168-69 (E.D. Tenn. 1984); *United States v. Amoco Oil Co.*, 580 F. Supp. 1042, 1051-52 (W.D. Mo. 1984); *see also* *City of Milwaukee v. Illinois*, 451 U.S. 304, 318 (1981) (“Every point source discharge is prohibited unless covered by a permit, which directly subjects the discharger to the administrative apparatus established by Congress to achieve its goals.”).

49. The major “mid-course correction” worked by the 1977 Amendments was strengthening the controls on toxic pollutants. Clean Water Act § 307(a)(1), 33 U.S.C. § 1317(a)(1) (1982). Under the 1972 Act, the process for designating pollutants as “toxic” and regulating them through § 307(a) was unwieldy and little used by EPA. By 1973, EPA had classified only nine substances as toxic pollutants and had not set standards for any of them. Frustrated with this lack of progress, the Natural Resources Defense Council and Citizens for a Better Environment sued EPA under the citizen suit provisions of the Act to force issuance of toxic pollutant standards.

To settle this lawsuit, EPA agreed to list 65 toxic pollutants that it would regulate by setting technology-based effluent limits for the 21 industries that discharged them. *Natural Resources Defense Council v. Train*, 6 ENVTL. L. REP. (ENVTL. L. INST.) 20,588 (D.D.C. 1976) (final order and decree by Judge Flannery); *see also* Hall, *The Control of Toxic Pollutants Under the Federal Water Pollution Control Act Amendments of 1972*, 63 IOWA L. REV. 609 (1978). In other words, EPA agreed to regulate these pollutants under § 301(b) of the Act, 33 U.S.C. § 1311(b) (1982), instead of under § 307(a).

In the 1977 Amendments, Congress incorporated this list into § 307(a)(1) and required EPA to establish technology-based effluent limits for dischargers of these substances. Congress also set a compliance deadline of July 1, 1984 for meeting these limits. Despite this shift in the means of regulating toxic pollutants, Congress retained § 307(a), but eased the procedural prerequisites to its use. Nevertheless, EPA has not made much use of this section to regulate toxic pollutants. *See generally* Gaba, *Regulation of Toxic Pollutants Under the Clean Water Act: NPDES Toxics Control Strategies*, 50 J. AIR L. & COM. 761 (1985); Wyche, *The Regulation of Toxic Pollutants Under the Clean Water Act: EPA's Ten Year Rulemaking Nears Completion*, 15 NAT. RESOURCES LAW. 511 (1983).

50. EPA has promulgated detailed regulations governing the issuance of NPDES permits, whether by EPA or by an authorized state. 40 C.F.R. pts. 122, 123 (1986).

51. 33 U.S.C. §§ 1342(b), 1314(i) (1982); *see* 40 C.F.R. pt. 123 (1986); *id.* § 403.8.

52. *See* 50 Fed. Reg. 42,527 (1985).

53. Clean Water Act § 402(d)(2)(B), 33 U.S.C. § 1342(d)(2)(B) (1982); 40 C.F.R. § 123.23 (1986); *see* *Ford Motor Co. v. EPA*, 567 F.2d 661 (6th Cir. 1977) (finding EPA veto of state-issued NPDES permit invalid if not expressly based upon statutory provision or published regulation or guideline).

it may not be issued,⁵⁴ and EPA can instead issue a federal permit with federally-approved limits to the discharger.⁵⁵ If a state fails to administer its program in accordance with the requirements of the Act and the applicable regulations, EPA may revoke the state's authority to issue NPDES permits.⁵⁶

The 1972 Act directed EPA to promulgate technology-based effluent limitation guidelines based on the availability and affordability of treatment technologies.⁵⁷ EPA must continually review the state of pollution control technology, determine the costs of various levels of control, and, based on these considerations, set nationally-uniform effluent limitations applicable to various categories of industrial dischargers.⁵⁸ Congress recognized that this task would be very time consuming, so the Act

54. Clean Water Act § 402(d)(2), 33 U.S.C. § 1342(d)(2) (1982).

55. *Id.* § 402(d)(4), 33 U.S.C. § 1342(d)(4). EPA may issue a federal permit to assure that the minimum Clean Water Act requirements are met when a state is unwilling or unable to impose these requirements on a particular discharger.

56. *Id.* § 402(c)(2)-(3), 33 U.S.C. § 1342(c)(2)-(3). One court has suggested that EPA may not revoke a state NPDES program based solely upon the handling of a single permit, but that revocation requires a pattern of noncompliance with federal requirements. *Save the Bay, Inc. v. EPA*, 556 F.2d 1282 (5th Cir. 1977).

Only recently has EPA taken seriously its obligation to oversee state NPDES programs. See Office of Water Enforcement and Permits, U.S. Env'tl. Protection Agency, NPDES State Program Guidance for Development and Review of State Program Submission and Evaluation of State Legal Authorities (Feb. 20, 1985) (draft); Memorandum from Jack E. Ravan, Assistant Administrator for Water, EPA, to EPA Regional Administrators (July 6, 1984) ("Guidance for Oversight of NPDES Programs"); Memorandum from William D. Ruckelshaus, Administrator, EPA, to EPA Staff (Apr. 4, 1984) ("Agency Policies on Delegation and Oversight: Making the State-EPA Partnership Work").

Wisconsin's NPDES permit program has come under increasing scrutiny by EPA for inconsistencies with § 301(b)(1)(C) of the Act, which requires dischargers to achieve effluent limitations necessary to meet water quality standards irrespective of individual cost-benefit considerations. Under Wisconsin law, the State is unable to incorporate such effluent limitations until it has shown that there is a "reasonable relationship between the economic and social costs and the benefits to be obtained." WIS. STAT. § 147.05(3) (1983-1984). *Contra* 40 C.F.R. § 123.25 (1986) (requiring that states administering NPDES program have authority to impose water quality permit limitations consistent with § 301 of the Act and 40 C.F.R. § 122.44). EPA has notified Wisconsin that approval of the State's NPDES permit program is "in jeopardy" due to "this major deficiency in the State's program." Letter from Valdas V. Adamkus, Regional Administrator, EPA Region 5, to C.D. Besadny, Secretary, Wisconsin Department of Natural Resources (June 30, 1986).

57. Congress carefully prescribed the factors to be considered by EPA in setting these guidelines in § 304(b) of the Act, 33 U.S.C. § 1314(b) (1982).

58. *Id.* EPA's effluent limitation guidelines must be revised every five years to reevaluate the ability to control further or eliminate pollutant discharges. *Id.* § 301(d), 33 U.S.C. § 1311(d). States must submit biennial reports to EPA on progress towards eliminating pollutant discharges and "additional actions" necessary to achieve this objective. *Id.* § 304(b)(1), 33 U.S.C. § 1314(b)(1). Nothing in the Act suggests that these site-specific "additional actions" cannot include additional site-specific technology-based controls.

also authorizes EPA to develop site-specific, technology-based permit limits in the interim.⁵⁹

In promulgating these guidelines, EPA has divided American industry into thirty-four categories.⁶⁰ EPA analyzes the waste streams of dischargers within these categories to identify the frequency and concentration of pollutants present.⁶¹ Then, for each

59. *Id.* § 402(a), 33 U.S.C. § 1342(a), provides:

[T]he Administrator may . . . issue a permit for the discharge of any pollutant, or combination of pollutants, . . . upon condition that such discharge will meet either all applicable requirements [of several sections of the Act, including the effluent limitation guidelines provision] or prior to the taking of necessary implementing actions relating to all such requirements, *such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.*

(emphasis added).

These site-specific, technology-based limits are commonly referred to as "best professional judgment" or "BPJ" limits. EPA has interpreted its BPJ authority in the following manner: "Effluent limitations may be established on a case-by-case basis under section 402(a)(1) of the Clean Water Act in the absence of applicable effluent limitations guidelines, or in addition to effluent limitations guidelines if these guidelines do not control pollutants of concern or particular wastestreams at a facility." 49 Fed. Reg. 38,025 (1984).

60. See 40 C.F.R. pt. 122 app. D, Table 1 (1986); see also Clean Water Act § 306(b), 33 U.S.C. § 1316(b) (1982). EPA originally categorized industry as part of the 1976 Flannery decree. See *supra* note 49.

There are two additional distinctions made by EPA in setting effluent limitation guidelines for pollutant dischargers. First, EPA distinguishes between existing sources and new sources. Compare Clean Water Act § 301(b), 33 U.S.C. § 1311(b) (1982) (timetable for achievement of limitations on existing sources) with *id.* § 306, 33 U.S.C. § 1316 (new source standards of performance). The limitations applicable to new sources are more stringent, on the presumption that the costs of building pollution control technology into a new facility are cheaper than retrofitting existing plants.

Second, the effluent limitations developed for existing point sources are imposed in two phases—"best practicable control technology" (BPT) and "best available control technology" (BAT)—with the latter phase presumably more restrictive.

61. See, e.g., INDUSTRIAL TECHNOLOGY DIV., OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, DEVELOPMENT DOCUMENT FOR EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE PESTICIDE POINT SOURCE CATEGORY (1985); EFFLUENT GUIDELINES DIV., OFFICE OF WATER, U.S. ENVTL. PROTECTION AGENCY, DEVELOPMENT DOCUMENT FOR EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE PULP, PAPER, AND PAPERBOARD AND THE BUILDERS' PAPER AND BOARD MILLS POINT SOURCE CATEGORIES (1982); EFFLUENT GUIDELINES DIV., OFFICE OF WATER AND WASTE MANAGEMENT, U.S. ENVTL. PROTECTION AGENCY, DEVELOPMENT DOCUMENT FOR EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE TIMBER PRODUCTS POINT SOURCE CATEGORY (1981).

Under paragraph eight of the Flannery decree, see *supra* note 49, EPA may exclude specific toxic pollutants from effluent limitations and guidelines on one of three grounds: (1) equal or more stringent protection is already provided by existing controls; (2) except for pretreatment standards, the pollutant is present in an effluent discharge solely as a result of its presence in intake taken from the same body of water into which it is discharged; or (3) the pollutant is present only in trace amounts and is not likely to cause toxic effects. *Natural Resources Defense Council v. Train*, 6 ENVTL. L. REP. (ENVTL. L. INST.) 20,588, 20,591 (D.D.C. 1976). Because EPA uses this process to exclude from the effluent limitation guideline process pollutants that do not occur frequently enough on a national basis, the omission of guidelines for a given pollutant in the wastestreams of

industrial category, EPA reviews the various control technologies and the costs of implementing them. Based on this inquiry, EPA establishes the effluent limitation guidelines specifying pollutant discharge limits that must be included in the NPDES permits issued to dischargers within each category.

In setting these guidelines, EPA does not consider the environmental effects of various levels of pollutant discharges. These guidelines are based on the *feasibility* of control and not the environmental benefits of control. Where zero discharge of a pollutant is technologically and economically feasible, the Act directs EPA to require zero discharge.⁶²

The technology-based effluent limitations prescribed by EPA's guidelines are not enforceable until they are incorporated into an NPDES permit,⁶³ which is limited to a maximum term of five years.⁶⁴ Once incorporated, these limits are enforceable against the permit holder even if no demonstrable environmental effects result from permit violations.

The statute retains water quality standards and water quality-based permits as additional control mechanisms to protect the environment from adverse effects. These controls operate where EPA determines that zero discharge is not immediately attainable or technology-based controls are inadequate.⁶⁵ Water quality standards also serve as benchmarks to assess the progress of the NPDES process in eliminating pollutant discharges into the nation's waters.⁶⁶

Permit writers base NPDES permit effluent limitations on

firms within a given industrial category does not preclude the development of site-specific, technology-based permit limits pursuant to Clean Water Act § 402(a), 33 U.S.C. § 1342(a) (1982).

62. See Clean Water Act § 301(b)(2)(A), 33 U.S.C. § 1311(b)(2)(A) (1982) (requiring compliance with effluent limitation guidelines that "shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him . . . , that such elimination is technologically and economically achievable for a category or class of point sources"); *id.* § 304(b)(3), 33 U.S.C. § 1314(b)(3) (In developing effluent limitation guidelines, EPA must "identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants.").

63. See *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 130-32 (1977).

64. Clean Water Act § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B) (1982). This requirement is applicable to permits issued by both state and federal authorities. *Id.* § 402(a)(3), 33 U.S.C. § 1342(a)(3).

65. See *id.* § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C) (establishing more stringent compliance requirement for water quality-based effluent limitations than technology-based limits when necessary to meet water quality standards); *supra* notes 7-8 and accompanying text.

66. See *supra* notes 7-8 and accompanying text.

three different inquiries: (1) the technological and economic feasibility of controlling the discharge of particular pollutants;⁶⁷ (2) the predicted effects of a particular pollutant on the aquatic environment, including humans consuming contaminated fish;⁶⁸ and (3) the toxicity of particular pollutants as determined through laboratory studies.⁶⁹ NPDES permits may contain a myriad of special conditions including requirements that dischargers monitor their effluents, study the environmental effects of their discharges, and construct pollution control facilities.

The Act requires that NPDES permits include any effluent limitations necessary to protect water quality even if more restrictive than those required by the EPA technology-based effluent limitation guidelines.⁷⁰ As a first step in determining the appropriate water quality-based limitation, states must set water quality standards for all of their lakes and streams.⁷¹ The states develop water quality standards in two stages. First, the state designates for each of its water bodies the current beneficial uses, such as recreation, fishing, and municipal water supply. But, consistent with the Act's basic prohibition of pollutant discharges, such uses may not include the disposal of wastes.⁷² Second, the state specifies the acceptable ambient concentrations of various pollutants—"acceptable" in the sense that the level of pollution will not interfere with the designated uses of the particular lake or stream.⁷³

To assist the states in promulgating water quality standards, EPA must develop "water quality criteria documents" that summarize the relevant scientific literature on the effects of water pollution on human health and the environment, and the concentration and dispersal, or fate, of pollutants in aquatic environments.⁷⁴ EPA has published water quality criteria documents for conventional pollutants and for all toxic pollutants given priority status under a 1976 consent decree.⁷⁵ In addition to these

67. See Clean Water Act § 301(b)(2), 33 U.S.C. § 1311(b)(2).

68. See *id.* §§ 301(b)(1)(C), 304(a)(1), 33 U.S.C. §§ 1311(b)(1)(C), 1314(a)(1).

69. See *id.* § 307(a), 33 U.S.C. § 1317(a); see also *Hercules, Inc. v. EPA*, 598 F.2d 91 (D.C. Cir. 1978).

70. Clean Water Act § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C) (1982).

71. *Id.* § 303, 33 U.S.C. § 1313.

72. 40 C.F.R. § 131.10(a) (1986).

73. *Id.* § 131.6(a), (c); see also *id.* § 131.3(b).

74. Clean Water Act § 304(a), 33 U.S.C. § 1314(a) (1982).

75. See *supra* note 49. The criteria for 64 of the 65 priority toxic pollutants were published in 1980. 45 Fed. Reg. 79,318 (1980). The criteria for the 65th—2,3,7,8-Tetrachlorodibenzo-p-dioxin—were published in February 1984. 49 Fed. Reg. 5831 (1984). The criteria for ammonia, arsenic, cadmium, chlorine, chromium, copper, cyanide, lead, and mercury have been revised. 50 Fed. Reg. 30,784 (1985).

documents, EPA has promulgated regulations establishing the minimum requirements for state water quality standards.⁷⁶

Each state must submit its water quality standards to EPA for review. If a state refuses to do so or if the standards do not satisfy EPA's regulations, the Act authorizes EPA to disapprove them and to promulgate federal water quality standards for the state.⁷⁷

In developing NPDES permit effluent limitations, the permit writer calculates the permissible loadings of each pollutant from each discharger on the particular water body segment.⁷⁸ If the resulting effluent limit is more restrictive than the applicable EPA effluent limit guideline, the water quality-based limit must be included in the permit.

In this fashion, water quality standards remain benchmarks for measuring progress towards the ultimate "zero discharge" goal of the Act. In addition, they serve as the basis for requiring permit limits more stringent than those required by EPA effluent limitation guidelines. When appraisals of water quality as regulated by technology-based effluent limitations change, water quality-based limits become especially significant. As explained in Part II, only a vital zero discharge goal will preserve high quality waters under the complementary technology-based and water quality-based schemes for pollutant discharge control under the Clean Water Act.

76. 40 C.F.R. pt. 131 (1986). Of particular importance are the requirements that (1) states review their standards every three years and make needed improvements, *id.* § 131.20; (2) states submit revisions of standards to EPA for its review and concurrence, *id.* § 131.21; (3) states develop numerical criteria for toxic pollutants, *id.* § 131.11; and (4) states develop an "antidegradation policy" to protect water quality that is higher than that required by water quality standards, *id.* § 131.12.

77. Clean Water Act § 303(c), 33 U.S.C. § 1313(c) (1982). The Seventh Circuit has held that EPA must deem a state's failure over a long period of time to submit any standards (in this case, for total maximum daily loads under *id.* § 303(d), 33 U.S.C. § 1313(d)) to be a decision by the state that none are needed. EPA must review this constructive finding according to the criteria set forth in the Act and the applicable regulations. *Scott v. City of Hammond, Ind.*, 741 F.2d 992 (7th Cir. 1984).

78. Permissible loadings are normally expressed in terms of "total maximum daily loads" or "TMDLs." Clean Water Act § 303(d), 33 U.S.C. § 1313(d) (1982). TMDLs must be calculated for a lake or stream segment where technology-based effluent limitations are not stringent enough to "implement" any applicable water quality standard. *Id.* § 303(d)(1)(A), 33 U.S.C. § 1313(d)(1)(A). Where there is more than one source of a pollutant, the permit writer must allocate the TMDL among them. This process is known as "wasteload allocation."

II. PRESERVING "HIGH QUALITY" WATERS: EPA'S "ANTIBACKSLIDING" AND "ANTIDegradation" REGULATIONS

As a welcome result of the Clean Water Act's enactment and implementation, more of the nation's lakes and rivers now meet the 1983 interim goal of "fishable-swimmable" waters.⁷⁹ As water quality continues to improve and even exceed this goal at many locations, EPA and state water pollution control agencies face increased pressure from dischargers to relax water pollution control requirements. Dischargers and their supporters argue, in effect, that water quality above present ambient standards is *too clean*, and requiring treatment beyond that necessary to reach and maintain these standards is "treatment for treatment's sake."⁸⁰ This argument has found support within EPA,⁸¹ and the Agency has experimented with more "efficient" permit issuance techniques.⁸²

The pressures to relax pollution controls are most evident in the development and implementation of two EPA regulations: the "antibacksliding" and "antidegradation" rules. To date, EPA's implementation of these rules has been equivocal and, at times, inconsistent with the zero discharge goal. Properly understood, the zero discharge goal provides EPA with the rationalizing principle for full implementation of these rules and the maintenance of high quality waters.

79. See OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, NATIONAL WATER QUALITY INVENTORY: 1984 REPORT TO CONGRESS 1 (1985).

80. See, e.g., *Clean Water Act Amendments of 1982: Hearings on S. 777 and S. 2652 Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works*, 97th Cong., 2d Sess. 13 (1982) (statement of Frederic Eidsness, Assistant Administrator for Water, EPA) (describing pollution controls beyond those necessary to meet ambient water quality standards as "treatment for treatment's sake"). See generally Utility Water Act Group, *The Clean Water Act: A Regulatory Agenda* (July 13, 1981) (unpublished report submitted to EPA) (copy on file with U. MICH. J.L. REF.).

81. See *supra* note 80.

82. EPA's Office of Policy, Planning & Evaluation has promoted for several years its "Water Innovations Project." The purpose of this project is to promote "innovative permitting techniques" that would allow increased discharges of pollutants to make "efficient" use of the assimilative capacity of receiving waters. See, e.g., Downing & Sessions, *Innovative Water Quality-Based Permitting: A Policy Perspective*, 57 J. WATER POLLUTION CONTROL FED'N 358 (1985); J. Lamb & D. Hull, *Current Status in Use of Flexible Effluent Standards*, reprinted in *Possible Amendments to the Federal Water Pollution Control Act: Hearings Before the Subcomm. on Water Resources of the House Comm. on Public Works and Transportation*, 99th Cong., 1st Sess. 248 (1985) [hereinafter cited as *FWPCA Amendments Hearings*]; Urban Sys. Research & Eng'g, Inc., *State Experience with Water Innovations and Potential for Increased Use* (1985) (draft report), reprinted in *FWPCA Amendments Hearings, supra*, at 212.

A. EPA's "Antibacksliding" Regulation

The concept embodied in the zero discharge goal—continued progress towards eliminating pollutant discharges into national waters—dictates a dynamic wastewater discharge permit system. As pollution control technology improves, effluent limitations become increasingly stringent.

EPA may issue technology-based wastewater discharge permits for terms of no more than five years.⁸³ As dischargers seek reissuance of permits, and wish to minimize pollution control costs, they continue to raise the question of when, if ever, a reissued permit can contain less stringent controls than the previous one. Dischargers have argued that changes in facility conditions, advancements in knowledge about pollution effects, and regulatory revisions may warrant relaxing permit limits.⁸⁴ In response to these arguments, EPA has tried over several years to develop a regulation specifying the conditions under which NPDES permit limits may be relaxed.

1. *The history of EPA's "antibacksliding" rule*— EPA's initial package of regulations for implementing the wastewater discharge permit system made no mention of "backsliding" from existing permit limits.⁸⁵ The omission was not so much an oversight on EPA's part as it was an indication of the prematurity of an antibacksliding rule. The focus in the early 1970's was on issuing the first round of discharge permits to bring thousands of dischargers into the Clean Water Act's regulatory ambit.

The seeds of the contemporary antibacksliding debate were sown when EPA and state water pollution control agencies began to issue permits under section 402(a)(1) of the Act. The agencies determined effluent limitations on an *ad hoc* assessment, according to the permit writer's "best professional judgment" (BPJ), of the treatment capability of individual dischargers.⁸⁶ When EPA subsequently issued technology-based effluent limitation guidelines for industrial categories that often required

83. Clean Water Act §§ 402(a)(3), 402(b)(1)(B), 33 U.S.C. §§ 1342(a)(3), 1342(b)(1)(B) (1982).

84. See, e.g., Utility Water Act Group, *supra* note 80.

85. 40 C.F.R. pt. 125 (1973) (superseded).

86. Congress recognized that EPA would issue permits to individual dischargers before it issued the effluent limitation guidelines required by § 304 of the Act, 33 U.S.C. § 1314(b) (1982). Accordingly, the Act provides that "prior to the taking of necessary implementing actions relating to all such requirements [including the requirement in § 301(b) that permits require compliance with effluent limitation guidelines, permits shall require compliance with] such conditions as the Administrator determines are necessary to carry out the provisions of this chapter." *Id.* § 402(a)(1), 33 U.S.C.

less stringent controls than the site-specific limits contained in initial BPJ permits, dischargers holding such permits began pressing EPA for relief.

By that time, however, EPA had made an initial attempt to develop an "antibacksliding" policy. In 1978, as part of a larger revision of the wastewater discharge permit regulations to reflect the 1977 FWPCA Amendments, EPA proposed a new rule that was "necessary to guard against unwarranted 'backsliding' in pollution control."⁸⁷ In particular, EPA proposed a general prohibition against relaxing permit limits by requiring that reissued permits contain effluent limitations at least as stringent as those contained in the previous permit unless the discharger could satisfy one of three exceptions.⁸⁸ First, the Agency would relax permit limits if the discharger demonstrated a material and substantial change in circumstances sufficient to constitute cause for permit modification under the Act.⁸⁹ This provision tied application of the antibacksliding rule to the permit modification regulations. These regulations include an exception for relaxing permit limits where the discharger provides EPA with "new information" not available when the permit was issued and such that it "would have justified the application of different permit conditions at the time of issuance."⁹⁰

§ 1342(a)(1). Thus, in the absence of national effluent limitation guidelines, EPA has the authority to establish permit limitations on a case-by-case or BPJ basis.

The publication of EPA's effluent limitation guidelines did not preempt the permit writer's authority to issue site-specific, technology-based permit limits. To the contrary, EPA's General Counsel has ruled that the Agency's decision not to prepare effluent limitation guidelines for particular industries does not deprive permit writers of authority to issue site-specific permits to individual dischargers within those industries. *In re Armco Steel Corp.*, Decision of the EPA General Counsel No. 54 (Dec. 22, 1976). Similarly, EPA's determination of the appropriate limits applicable to a given industry on a national level through effluent limitation guidelines does not preclude a site-specific determination by a permit writer that a specific discharger in that industry can and should exceed national limits.

87. 43 Fed. Reg. 37,078, 37,080 (1978). In support of a prohibition against backsliding, EPA cited *United States Steel Corp. v. Train*, 556 F.2d 822 (7th Cir. 1977). 43 Fed. Reg. 37,080 (1978). In *United States Steel*, the Seventh Circuit rejected a discharger's argument that its permit limits should be relaxed to reflect subsequently-issued, less stringent § 304(b) effluent limitation guidelines, reasoning that "to authorize an increase in the pollutants discharged by the plant [would be] a result Congress certainly did not intend." 556 F.2d at 842; see also Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water*, 62 IOWA L. REV. 643 (1977).

88. See 43 Fed. Reg. 37,078, 37,080 (1978).

89. *Id.*; see 40 C.F.R. § 125.31 (1986) (criteria for modification of NPDES permits). This exception was made more explicit when EPA revised the antibacksliding rule in 1980. *Id.* § 122.44(l)(2)(iv); see also *infra* notes 94-95 and accompanying text; 45 Fed. Reg. 33,290, 33,341 (1980).

90. 40 C.F.R. § 122.62(a)(2) (1986).

The other two exceptions applied to the cases in which BPJ permits issued with *ad hoc* limits turned out to be more stringent than EPA's effluent limitation guidelines required. In these instances, EPA would impose less stringent limits if (1) treatment facilities had been installed and properly operated and maintained, but the discharger had been unable to meet the more stringent limits,⁹¹ or (2) the law of a state with an approved NPDES permit program prohibited permit conditions more stringent than those required by the applicable effluent limitation guidelines.⁹²

EPA promulgated this regulation in final form in June 1979, adding two more exceptions to the general prohibition against backsliding.⁹³ In 1980, EPA revised the rule in response to criticism that it was "unduly restrictive." Dischargers argued that the rule locked them "into maintaining a fixed treatment efficiency even when maintenance of that efficiency level was not necessary to comply with applicable effluent guidelines."⁹⁴ To avoid such "inefficiencies," EPA added yet another exception to the antibacksliding provision. This exception allowed relaxation of permit limits "to correspond to subsequently-promulgated guideline limitations when increased production significantly reduces treatment efficiency."⁹⁵

Then, in 1982, EPA proposed to eliminate the antibacksliding rule altogether where BPJ permit limits proved to be more stringent than subsequently-issued effluent limitation guidelines.⁹⁶ EPA gave two reasons for abandoning the antibacksliding mea-

91. 43 Fed. Reg. 37,078, 37,080 (1978). Under this exception to the antibacksliding rule, new, less stringent permit limits had to reflect the level of pollutant control actually achieved or that level required by the § 304(b) guidelines, whichever was more stringent.

92. *Id.*

93. See 44 Fed. Reg. 32,854 (1979); 33 C.F.R. § 122.15(i) (1986). EPA responded to the "concerns of some commenters about the effect of [the antibacksliding rule] where permits are based on interim final effluent guidelines" by allowing the relaxation of such limits to reflect subsequently issued, less stringent final guidelines upon a timely request. 44 Fed. Reg. 32,864 (1979).

EPA also decided to allow backsliding where § 402(a)(1) *ad hoc* permit limits for conventional pollutants were more stringent than those required by a new requirement for such pollutants set out in the 1977 Amendments. This requirement—"best conventional technology" (BCT)—sets best practicable technology (BPT) as a floor and best available technology (BAT) as a ceiling for pollution control, and mandates a cost-benefit analysis for deciding the BCT for a particular discharger. Clean Water Act §§ 301(b)(2)(E), 304(b)(4), 33 U.S.C. §§ 1311(b)(2)(E), 1314(b)(4) (1982). Because Congress articulated an entirely new test for conventional pollutants, EPA reasoned, backsliding from more stringent *ad hoc* permit limits to BCT should be allowed to fulfill legislative intent. 44 Fed. Reg. 32,864 (1979).

94. 45 Fed. Reg. 33,341 (1980).

95. *Id.*; see 40 C.F.R. § 122.62(l)(2)(v) (1981) (superseded).

96. 47 Fed. Reg. 52,072, 52,084 (1982).

sure as to BPJ permits. First, EPA argued, dischargers should be given "equal treatment" under the nationally uniform effluent limitation guidelines, "so that companies who have made good faith efforts to comply with previously imposed permit limitations will not be penalized nor placed at a disadvantage with respect to companies operating under subsequently issued, less stringent limitations."⁹⁷

EPA's second reason for eliminating the antibacksliding rule for BPJ permits focused on the efficient use of administrative resources. The Agency claimed that if dischargers were not allowed to backslide from case-by-case permits when effluent limitation guidelines were later promulgated, they would oppose any and all site-specific permit limits. The proposed changes would discourage widespread challenges to permit reissuances, avoiding the diversion of Agency resources to a variety of legal contests.⁹⁸ EPA thus proposed to gain the acquiescence of dischargers in site-specific permit limits with a carrot instead of a stick, by allowing the relaxation of those limits in the future if they turned out to be more stringent than subsequently-issued limits for the industry as a whole.

Comments on the 1982 proposed changes were extensive and pivotal in the development of EPA's antibacksliding policy.⁹⁹ In its 1984 overhaul of the NPDES permit regulations, EPA reasserted its authority to prohibit backsliding and refuse to relax permit limits, even when subsequently-issued effluent limitation guidelines were less stringent, as "a logical outgrowth of the [Clean Water Act's] requirements and goals."¹⁰⁰ Most importantly, EPA abandoned its proposed exception to the antibacksliding rule for BPJ permits.¹⁰¹ In doing so, EPA explicitly rejected the argument it had advanced two years before—that the antibacksliding rule created an incentive for dischargers to delay the BPJ permitting process by challenging their permits in hopes of benefitting from future, less stringent national effluent limitation guidelines.¹⁰²

97. *Id.*

98. *Id.*

99. See 49 Fed. Reg. 37,998, 37,019-22 (1984).

100. *Id.* at 38,019. By EPA's understanding, the Act's "scheme of imposing increasingly stringent pollution control requirements illustrates the Act's national goal of encouraging reasonable further progress towards eliminating the discharge of all pollutants." *Id.*; see *United States Steel Corp. v. Train*, 556 F.2d 822 (7th Cir. 1977); *supra* note 87.

101. See 49 Fed. Reg. 37,999, 38,021 (1984).

102.

It would be inconsistent with the goals of the Act for the Agency to [allow backsliding] solely because a permittee may try to delay a permit process in hopes of

Having justified the antibacksliding rule in terms of the goals of the Clean Water Act, EPA created two new exceptions for those instances in which "the previous case-by-case limitations prove to be an incorrect assessment of the discharger's capabilities."¹⁰³ The first exception applies if a discharger installed, maintained, and properly operated treatment facilities necessary to meet BPJ permit limits, but nonetheless cannot meet the limits. The renewal permit may then contain relaxed limits reflecting either the level of treatment actually attained or the level required by the national guidelines, whichever is more stringent.¹⁰⁴ In effect, this exception allows for the correction of an initially inaccurate assessment of a discharger's treatment capabilities.¹⁰⁵ A second exception from the antibacksliding rule is allowed where the costs of maintaining and operating existing treatment facilities are "wholly disproportionate to those considered in a subsequently promulgated effluent guideline."¹⁰⁶

These modifications clarified the application of the antibacksliding rule to prevent the relaxation of BPJ permits. In the same rulemaking, however, EPA added to the confusion surrounding the more difficult issue of applying the rule to permit limits that are based on ambient water quality standards rather than technological capabilities. Applying the rule to water quality-based effluent limits did not become an important issue until 1981, when several sources attacked the Clean Water Act's call for continued progress toward eliminating pollutant discharges.¹⁰⁷ EPA first addressed the issue in the context of pro-

achieving a more favorable result. In addition, the Agency received no specific data from commenters in support of the allegation that the anti-backsliding policy created a competitive disadvantage.

Id. at 38,020.

Moreover, EPA recognized that site-specific BPJ limits generally reflected a more accurate assessment of the treatment capabilities of a particular discharger than did the national guidelines for the discharger's industrial category. Because BPJ limits are calculated on a case-by-case basis, EPA reasoned, "a BPJ determination can be tailored to the relevant circumstances and capabilities of the permittee and thereby inherently incorporates any necessary allowance for variations in individual plants. It would be inconsistent with that process to replace such limitations with less precisely calculated limitations." *Id.* at 38,019.

103. *Id.* at 38,020.

104. 40 C.F.R. §§ 122.44(l)(2)(i), 122.62(a)(17) (1986).

105. This exception to the antibacksliding rule is similar to the "fundamentally different factors" (FDF) variances allowed from the national effluent limitation guidelines. *See id.* §§ 125.30-.32.

106. 49 Fed. Reg. 38,021 (1984).

107. For example, the Reagan Administration considered a proposal to allow variances from the nationally uniform, technology-based effluent limitation guidelines where the discharger demonstrated that increased discharges would not adversely affect water

moting "innovative" permit issuance techniques to relax the burdens imposed on the regulated community by the NPDES program.¹⁰⁸ Several proposals considered in this review involved relaxing water quality-based effluent limits and had to be reconciled with the zero discharge goal.¹⁰⁹

EPA issued major revisions of the NPDES program regulations in 1984.¹¹⁰ Almost all of EPA's discussion of the antibacksliding rule dealt with its application to technology-based effluent limits where subsequently-issued effluent limitation guidelines are less stringent than site-specific, technology-based limits incorporated into a BPJ permit. While reaffirming antibacksliding as fundamental to the attainment of the Clean Water Act's basic goals, EPA rendered the concept virtually inapplicable to water quality-based permit limits.

In addressing water quality-based limits, EPA reinterpreted and expanded the "new information" exception¹¹¹ to the an-

quality. Responding to a question about EPA's continued commitment to the zero discharge goal at a 1982 Senate hearing, then-Deputy EPA Administrator John Hernandez explained:

I think what we have said is that if you take the no discharge goal in that kind of general way of what was America trying to accomplish, and that is to remove those pollutants that have an impact on stream life, we are going to do that. If you take it in a more literal sense, then in that narrowest definition of removing all materials out of water, it is an indefensible argument and one we can't support.

1982 Senate Hearings, *supra* note 11, at 10.

108. See *supra* note 82.

109. For example, using flow-variable, time-variable, or seasonal permit limits would result in less stringent effluent limits during certain periods. EPA also considered schemes based on the emissions trading program used in implementing the Clean Air Act, 42 U.S.C. §§ 7401-7642 (1982), under which dischargers could acquire "rights" to discharge. See *supra* note 82; 47 Fed. Reg. 15,076 (1982).

At the same time, Congress began to consider reauthorization of the Clean Water Act. Senator David Durenberger (R.-Minn.), a member of the Subcommittee on Environmental Pollution of the Senate Committee on Environment and Public Works, proposed an antibacksliding amendment that applied to both water quality-based and technology-based permit limits. S. 431, 98th Cong., 1st Sess. § 14 (1983); see S. REP. NO. 233, 98th Cong., 1st Sess. 6-7, 26 (1983).

This provoked a flurry of activity within EPA to evaluate and respond to the Durenberger amendment. The Agency's primary concern was apparently that any antibacksliding language enacted by Congress not preclude the use of "innovative" permit techniques. Memorandum from Stu Sessions, Director of the Regulatory Policy Division, Office of Policy Analysis, EPA, to Karen Wardzinski, Office of General Counsel, EPA (July 20, 1983) (copy on file with U. MICH. J.L. REF.); Memorandum from Jack M. Campbell, Jr., Acting Associate Administrator for Policy and Resource Management, EPA, to Rebecca Hanmer, Acting Assistant Administrator for Water, EPA (undated) ("Senate Committee Anti-Backsliding Amendment") (copy on file with U. MICH. J.L. REF.). As a result of EPA lobbying, Senator Durenberger agreed to drop his antibacksliding amendment from the reauthorization bill, which itself was never enacted.

110. 49 Fed. Reg. 37,998 (1984).

111. See *supra* note 90 and accompanying text.

tibacksliding rule. Under this interpretation, the development of any new method of calculating permit limits based on water quality may constitute "new information" and therefore qualify as an exception to the antibacksliding rule.¹¹² This new information could include the fact that actual water quality in a particular stream exceeds that required by ambient water quality standards as a result of dischargers installing pollution control facilities. Then, EPA can relax permit limits to allow the discharger to use the newly-available assimilative capacity of the water body.

So understood, the "new information" exception swallows the antibacksliding rule as applied to water quality-based effluent limits.¹¹³ In practice, water quality that exceeds the interim goal of "fishable-swimmable" waters will not be maintained even though it is technologically and economically possible to do so and the required pollution control equipment or practices are in place. This interpretation of the antibacksliding rule is thus inconsistent with the zero discharge goal, EPA's rationale for its antibacksliding policy, and Congress's intention to eliminate dilution in national waters as an acceptable pollution control solution.

2. *Zero discharge and EPA's antibacksliding rule*— Developing water quality-based permit limits is necessarily uncertain and subjective. It requires reliance upon models of the assimilation of pollutants into rivers and lakes, and upon incomplete data about actual ambient water conditions and the effects of pollutants on aquatic life and the environment.¹¹⁴ Thus, "alter-

112. See 40 C.F.R. §§ 122.44(l)(2)(iv), 122.62(a)(2) (1986).

EPA explained its new interpretation of this exception in the preamble to the 1984 rulemaking:

EPA would like to clarify one final point on the new information exception to the anti-backsliding policy in the existing regulations. For purposes of implementing the anti-backsliding provision . . . for a reissued permit, where limitations in the expiring permit were based on water quality standards, "information" under § 122.62(a)(2) may include alternative grounds (including necessary methodology; mathematical parameters, and other assumptions) for translating water quality standards into water quality-based limitations.

49 Fed. Reg. 38,022 (1984).

113. Moreover, the "new information" exception gives the discharger the incentive of applying for a reissued permit with less restrictive effluent limits rather than designing and installing new and improved treatment facilities. The exception encourages the development of new models of how pollutants behave in rivers and streams, new methods for calculating wasteload allocations, and new proposals for permits based on seasonal considerations, in efforts to get permit limits relaxed. Consequently, resources are diverted to such efforts and away from the development of new and improved treatment facilities.

114. The difficulties of developing and enforcing water quality-based effluent limits

native grounds . . . for translating water quality standards into water quality-based limitations"¹¹⁵ will always exist. As interpreted by EPA, the "new information" exception threatens the technology-forcing intent of the Clean Water Act and plunges permit writing into the same morass from which Congress sought to rescue it in 1972, an endless debate over how much pollution is "too much."

a. Technology forcing and antibacksliding— The underlying premise of the Clean Water Act is continued progress towards eliminating pollutant discharges. Congress mandated in 1972 a shift in pollution control strategy from the question of how much pollution is acceptable to the question of how much pollution control can dischargers afford given the available technology.

Where water quality-based effluent limits are imposed and a discharger develops the capability of complying with them, such limits reflect installed technology capable of continuing and even improving that level of control.¹¹⁶ Thus, water quality-based limits become, under these circumstances, the practical equivalent of site-specific, technology-based controls imposed through BPJ permits.¹¹⁷ To the extent they exceed the controls that site-specific technology assessments would have required when the per-

were the primary reason for the adoption in 1972 of the zero discharge goal and a technology-based strategy to achieve the goal. See *supra* notes 29-42 and accompanying text.

115. 49 Fed. Reg. 38,022 (1984).

116. This, of course, assumes the discharger's compliance with the permit limits. Compliance in turn requires a credible enforcement presence by EPA and state water pollution control authorities. Whether such a presence exists has been the subject of much recent debate. See, e.g., *Implementation of the Federal Clean Water Act (EPA Enforcement of the National Pollution Discharge Elimination System Permit Program): Hearings Before the Subcomm. on Investigations and Oversight of the House Comm. on Public Works and Transportation*, 98th Cong., 2d Sess. (1984); Comment, *Federal Water Pollution Control Laws: A Critical Lack of Enforcement by the Environmental Protection Agency*, 20 SAN DIEGO L. REV. 945 (1983).

117. *But see* 40 C.F.R. § 122.44(d)(1) (1986) (requiring that NPDES permits include limits necessary to achieve water quality standards). Dischargers have construed this regulation to allow water quality-based limits *only* as necessary to meet water quality standards. Thus, according to this argument, when knowledge about what is "necessary" to meet standards changes, the permit writer's *authority* to impose such limits changes. See, e.g., Letter from U.G. Stoeffler, Manager, Process Development, Allied Paper, Inc., and R. Richard Eaton, Manager, Utilities, Maintenance and Engineering, Allied Paper, Inc., to Lyell Thomas, Michigan Department of Natural Resources (May 31, 1984) [hereinafter cited as Stoeffler Letter], *reprinted in FWPCA Amendments Hearings, supra* note 82, at 278.

The requirement that permits include limits necessary to achieve ambient water quality standards may have been the original source of authority for developing water quality-based effluent limits. This Article argues, however, that this requirement alone should not govern whether subsequent permits may contain less stringent effluent limits. Instead, the antibacksliding rule should apply to ensure continued progress towards

mit was written, water quality-based limits are technology forcing.¹¹⁸

Relaxing these limits without requiring a demonstration by the discharger of technological or economic infeasibility¹¹⁹ would contravene the Act and inhibit reasonable further progress towards eliminating pollutant discharges. Allowing permit limits to "backslide" would also transform water quality standards from their intended role as benchmarks of progress into the desideratum of pollution control efforts.

The discharger's countervailing argument is that "reasonable" progress of a particular discharger towards eliminating pollutant discharges means progress in concert with its competitors through uniform application of national effluent limitation guidelines to all dischargers in a particular industrial category. Ironically, in a related context, dischargers originally challenged EPA's uniform application of the effluent limitation guidelines on the ground that permit writers *must* consider site-specific characteristics in translating the guidelines into permit limits. In upholding EPA's approach, the Supreme Court stated that there must be some mechanism for considering the capabilities of individual dischargers to meet the requirements of the guidelines.¹²⁰ EPA has implemented this directive by allowing variances from the national guidelines where "factors relating to the discharger's facilities, equipment, processes or other factors relating to the discharger are fundamentally different from the factors considered by EPA in development of the national limits."¹²¹ Thus, where site-specific, fundamentally different factors are shown, a discharger may obtain a variance from the technology-forcing national effluent limitation guidelines.

In the backsliding context, this reasoning suggests requiring that the individual discharger continue existing pollution control measures. Here, the discharger through experience has demonstrated its technological and economic capabilities to control

eliminating pollutant discharges regardless of any lack of demonstrable environmental benefits attributable to maintaining the existing level of control.

118. See generally J. BONINE, *THE EVOLUTION OF 'TECHNOLOGY FORCING' IN THE CLEAN AIR ACT* (ENV'T REP. (BNA) Monograph No. 21, 1975); R. STEWART & J. KRIER, *supra* note 1, at 371-73 (technology forcing under the Clean Air Act), 515-16 (technology forcing under the Clean Water Act); La Pierre, *Technology-Forcing and Federal Environmental Statutes*, 62 IOWA L. REV. 771 (1977).

119. Because the grounds for permit modifications are tied to the antibacksliding exceptions, 40 C.F.R. § 122.44(l)(2)(iv) (1986), exceptions to the antibacksliding rule include technological or economical infeasibility. *Id.* § 122.62(a)(15)-(16); see 49 Fed. Reg. 38,051 (1984).

120. *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 127-28 (1977).

121. 40 C.F.R. § 125.30 (1986).

pollutant discharges better than the national guidelines would require. The technology-forcing intent of the Act at the site-specific level therefore requires that the discharger not be allowed to backslide from feasible levels of control unless it can demonstrate technological or economic infeasibility.

b. Refighting old battles— The administrative feasibility of EPA's approach to applying the antibacksliding rule to water quality-based effluent limits is as important as the philosophical integrity of the endeavor. The "new information" loophole undermines the efficient implementation of the Clean Water Act. Two examples of this approach in action suffice to show the unwieldiness of a process that revisits the issue of how much pollution is acceptable in the reissuance of permits with water quality-based effluent limits.

In 1984, Allied Paper, Inc. objected to the effluent limits proposed by the Michigan Department of Natural Resources¹²² for inclusion in the renewal NPDES permit for Allied's paper mill in Kalamazoo, Michigan. Allied argued that recent studies demonstrated that due to pollution control facilities installed by the City of Kalamazoo's treatment works and other dischargers, water quality in the Kalamazoo River exceeded minimum water quality standards. Allied also argued that models of the river's current assimilative capacity demonstrated that water quality standards would not be exceeded if Allied's effluent limits were relaxed. Allied therefore argued that "new information" existed to exempt its renewal permit limits from the antibacksliding rule.¹²³

Under EPA's 1984 interpretation of the "new information" exception to the antibacksliding rule, Allied was correct. The state permit writers would have to rejustify the existing permit limits as necessary to ensure the attainment of water quality standards in light of the improvements to water quality resulting from the installation of pollution controls by other Kalamazoo River dischargers. Thus, scarce administrative resources would be spent on updating water quality studies, evaluating Allied's data, and considering the impact of other discharges, all in order to defend

122. Michigan gained approval under Clean Water Act § 402(b), 33 U.S.C. § 1342(b) (1982), to implement a state NPDES permit program in 1973. See 50 Fed. Reg. 42,526 (1985).

123. Stoeffler Letter, *supra* note 117, at 4-5, reprinted in *FWPCA Amendments Hearings*, *supra* note 82, at 281-82. In the alternative, Allied argued that the Michigan Department of Natural Resources model was "mistaken" and that this also justified relaxing Allied's permit limits. The antibacksliding policy, according to Allied, was not intended to perpetuate in successive permits those mistakes made in earlier permits. *Id.* at 6.

existing permit limits that already reflected Allied's existing treatment capacity. Moreover, because the available assimilative capacity claimed by Allied reflected in part the investment in pollution controls by other dischargers, the permit writer would have to consider the equities of allowing one discharger to backslide and "use up" those water quality improvements.

The practical effect of Allied's argument, a logical extension of EPA's "new information" antibacksliding exception, is to allow backsliding whenever water quality can be shown to exceed water quality standards. Any new model or changed circumstances that arguably indicate the existence of water quality better than minimum water quality standards would entitle a discharger to relaxed permit limits and the right to pollute "up to" the standards or the applicable national effluent limitation guidelines. Thus, Allied and EPA would, as a practical matter, curtail continued progress in eliminating pollutant discharges beyond those minimum requirements and return discussions of water pollution control policy to the arcane, pre-1972 arguments over how much pollution is "too much."

A second and more intriguing example of the implications of EPA's interpretation of the antibacksliding rule involves various proposals to reallocate the assimilative capacity of Wisconsin's Fox River and to allow the dischargers on the river to trade unused allocations. The Fox River, a tributary of Green Bay and Lake Michigan, receives the effluent of the heaviest concentration of pulp and paper mills in North America. Historically, these wastes have contributed to severely degraded water quality in the Fox River and Green Bay.¹²⁴ Since passage of the Clean Water Act, the mills discharging into one stretch of the Fox River have been subject to strict water quality-based effluent limits that require control far beyond those required by the applicable national effluent limitation guidelines.

Recently, one of these mills closed down and ceased discharging. As a result, water quality in that portion of the Fox River improved beyond minimum water quality standards.¹²⁵ The

124. See Bureau of Water Resources Management & Bureau of Fish Management, Wisconsin Dep't of Natural Resources, Lower Fox River—DePere to Green Bay Water Quality Standards Review 10-12 (1985) (draft) [hereinafter cited as Water Quality Standards Review]; WISCONSIN DEP'T OF NATURAL RESOURCES, U.S. GEOLOGICAL SURVEY, U.S. FISH AND WILDLIFE SERV., U.S. ENVTL. PROTECTION AGENCY—REGION V & UNIVERSITY OF WISCONSIN—WATER CHEMISTRY DEP'T, FINAL REPORT OF THE TOXIC SUBSTANCES TASK FORCE ON THE LOWER FOX RIVER SYSTEM 1 (1983); J. SULLIVAN & J. DELFINO, A SELECT INVENTORY OF CHEMICALS USED IN WISCONSIN'S LOWER FOX RIVER BASIN 1-2 (1982).

125. A Wisconsin Department of Natural Resources computer model for dissolved oxygen conditions in the Fox River predicted the improvement in water quality. It was

other five dischargers into that segment of the river asked the Wisconsin Department of Natural Resources¹²⁶ to reallocate the newly-available assimilative capacity of the river and accordingly relax their permit limits even though they were currently in compliance. The mill's closing down and creation of "unused" assimilative capacity, they argued, constituted "new information" and therefore the antibacksliding rule did not prohibit relaxing their permit limits.

Relaxing the mills' permits to "use up" the newly-available assimilative capacity would have reduced the Fox River's water quality to minimum standards regardless of the technological or economic feasibility of requiring the mills to maintain existing levels of control.¹²⁷ Thus, the Wisconsin pulp and paper mills (and EPA, to the extent its "new information" exception to the antibacksliding rule supports the mills' reallocation proposal) would abandon progress towards the goal of eliminating pollutant discharges *beyond* that required to achieve minimum water quality standards or required by national effluent limitation guidelines.¹²⁸

c. Equity and eliminating pollutant discharges— Applying the antibacksliding rule to water quality-based permit limits implicates competing considerations; the Clean Water Act's goal of continued progress towards eliminating all pollutant discharges conflicts with dischargers' interest in avoiding water pollution control requirements that affect any discharger's competitive position within a given industrial category.¹²⁹ The "unfairness" of

not actually measured by water quality sampling. See *Water Quality Standards Review*, *supra* note 125, at 53-56; ENFORCEMENT DIV., U.S. ENVTL. PROTECTION AGENCY, *WATER QUALITY MODEL OF THE LOWER FOX RIVER, WISCONSIN* (1973).

126. Wisconsin administers an approved state NPDES permit program under Clean Water Act § 402(b), 33 U.S.C. § 1342(b) (1982). Wisconsin's program was approved in 1974. See 50 Fed. Reg. 42,527 (1985).

127. The proposed permit modifications were challenged by the National Wildlife Federation. Mr. Van Putten represented the Federation in this proceeding. Following a hearing under state law, EPA Region V vetoed the proposed modifications. EPA based its veto on asserted violations of its antidegradation policy and its concern for increased effluent toxicity, and not on the ground that the modifications would violate the antibacksliding rule. Letter from Charles H. Sutfin, Director, Water Division, EPA Region 5, to Lyman F. Wible, Administrator, Division of Environmental Standards, Wisconsin Department of Natural Resources (July 18, 1985) (copy on file with U. MICH. J.L. REF.).

128. Memorandum from Diane Diks, Water Division, EPA Region V, to Kenneth A. Fenner, Chief, Water Quality Division, EPA (Jan. 15, 1985) (attachment).

129. This Article does not address the more complicated question of the impact of pollution control requirements on the competitive position of American industry in the world market. For an analysis that suggests that these impacts are significant for a limited number of industries, see the Conservation Foundation's publication, H. LEONARD, *ARE ENVIRONMENTAL REGULATIONS DRIVING U.S. INDUSTRY OVERSEAS?* (1984).

imposing site-specific controls upon one discharger that are more stringent than those imposed uniformly upon its competitors is the obvious challenge to both technology-based and water quality-based site-specific limits that are stricter than national effluent limitation guidelines.

Congress clearly sacrificed dischargers' competitive interest in favor of the environmental interest to the extent that ambient water quality considerations require controls more stringent than national effluent limitation guidelines.¹³⁰ And even when these considerations no longer justify more restrictive controls, the zero discharge goal is the supporting rationale for maintaining them. Taking the zero discharge goal as the operative principle of the Act results in an antibacksliding rule that prohibits relaxing permit limits, however derived, whenever a discharger has demonstrated its ability to meet existing limits, including its compliance with them over time.

This approach, however, does not necessarily dictate an insensitivity to the competitive disadvantages that may result from imposing more restrictive limits upon some dischargers within a given industrial category. The solution to such inequities is not allowing dischargers automatically to backslide from their present treatment capabilities but instead increasing the stringency of the national guidelines. Indeed, the capabilities of some dischargers within a given category to meet more stringent controls than those prescribed by national guidelines constitute precisely the kind of evidence EPA is to consider in determining the appropriate level of control to require within an industrial category.¹³¹

Moreover, other exceptions to the antibacksliding rule take serious competitive disadvantages into consideration. A discharger has the opportunity to demonstrate that the operational and maintenance costs of its existing control technologies and practices are significantly greater than the operational and maintenance costs required by the effluent limitation guidelines for its industrial category. The antibacksliding rule then allows relaxation of permit limits under the economic infeasibility exception.¹³²

130. See *supra* text accompanying notes 65-78.

131. See Clean Water Act § 304(b), 33 U.S.C. § 1314(b) (1982); *supra* notes 43-78 and accompanying text.

132. See 40 C.F.R. § 122.62(a)(15) (1986). Of course, the rules do not permit relaxation beyond the level required to meet water quality standards or beyond the level required by the applicable effluent limitation guidelines. Also, for certain "conventional" parameters such as suspended solids, the discharger should be required to demonstrate

B. EPA's Antidegradation Regulation

EPA's antidegradation policy is almost twenty years old.¹³³ A 1968 press release issued by the Department of the Interior first articulated this policy:

Waters whose existing quality is better than the established [ambient water quality] standards as of the date on which such standards become effective will be maintained at their existing high quality. These and other waters of a State will not be lowered in quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of the Interior that such change is justifiable as a result of necessary economic and social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in such waters.¹³⁴

The Department of the Interior mandated that all states develop an antidegradation policy consistent with this statement. Neither the statutory language nor the legislative history of the 1972 or 1977 Amendments explicitly ratified this policy. Nevertheless, Congress apparently knew of the policy's existence and implicitly ratified it in the Act's goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹³⁵

The antidegradation policy differs significantly from the antibacksliding rule. The former is triggered by changes in ambient water quality whereas the latter is triggered by changes in permit limits. Thus, the antidegradation policy applies to new as well as existing pollutant discharge sources, whereas the antibacksliding policy applies only to existing permitted sources.

that relaxing the applicable permit limits will not also result in discharges of toxic substances at or above levels of concern. This showing is necessary because many toxic substances adhere to particulate matter during treatment processes. Therefore, increases in the discharges of particulates may result in increased discharges of toxic substances.

133. The origin of the policy can be traced to a 1966 Department of the Interior report issued pursuant to the Water Quality Act of 1965. U.S. DEP'T OF THE INTERIOR, FEDERAL WATER POLLUTION CONTROL ADMIN., GUIDELINES FOR ESTABLISHING WATER QUALITY STANDARDS FOR INTERSTATE WATERS (1966).

134. Press Release from Secretary of the Interior Udall (Feb. 1968), quoted in Gaba, *Federal Supervision of State Water Quality Standards Under the Clean Water Act*, 36 VAND. L. REV. 1167, 1189-90 (1983).

135. Clean Water Act § 101(a), 33 U.S.C. § 1251(a) (1982) (emphasis added).

The antidegradation policy also applies to nonpoint sources of pollutant discharges.¹³⁶

Despite the longevity of the antidegradation policy, until recently EPA devoted little attention to its implementation by the states.¹³⁷ No federal court has squarely considered either EPA's authority to develop and enforce the policy or its meaning.¹³⁸ Thus, although the legality of the antidegradation policy may be assumed, its scope remains largely undefined.

After some equivocation in proposed rules, EPA in 1983 issued new water quality standards regulations that included a restatement of the antidegradation policy.¹³⁹ EPA subsequently issued a guidance document providing the states with more specific information on applying the policy.¹⁴⁰

Even with these clarifications, however, EPA still has not resolved the most critical issue implicit in the application of the antidegradation policy—what constitutes “degradation” of water quality.¹⁴¹ First of all, this question requires a distinction be-

136. The antibacksliding rule has no application to nonpoint sources of pollution because they are not required to obtain NPDES permits. *See id.* § 502(12), 33 U.S.C. § 1362(12) (defining “discharge of a pollutant” as “any addition of any pollutant to navigable waters from any point source” (emphasis added)). In contrast, the antidegradation policy requires “all cost-effective and reasonable best management practices for nonpoint source control.” 40 C.F.R. § 131.12(a)(2) (1986); *see also* OFFICE OF WATER REGULATIONS AND STANDARDS, U.S. ENVTL. PROTECTION AGENCY, QUESTIONS & ANSWERS ON: ANTI-DEGRADATION 6 (1985) [hereinafter cited as EPA, ANTI-DEGRADATION] (“Nonpoint source activities are not exempt from the provisions of the antidegradation policy.”).

137. For a concise history of the antidegradation policy, see Gaba, *supra* note 134, at 1188-94.

138. *Id.* at 1191.

139. The regulations provide:

Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

40 C.F.R. § 131.12(2) (1986).

140. EPA, ANTI-DEGRADATION, *supra* note 136.

141. The applicability of the antidegradation policy and the difficulty in developing a threshold test of “degradation” are issues analogous to the debate over the existence of a *prima facie* case of “pollution, impairment, or destruction” or the likelihood thereof to establish polluter liability under the Michigan Environmental Protection Act, MICH. COMP. LAWS §§ 691.1201-.1207 (1979). *See* Kimberly Hills Neighborhood Ass'n v. Dion, 114 Mich. App. 495, 320 N.W.2d 668 (1982); Van Putten, *The Michigan Environmental Protection Act*, in ENVIRONMENTAL LAW IN MICHIGAN § 4.07 (K. Smith ed. 1982).

tween protecting existing *uses* and protecting existing *water quality*.¹⁴² EPA clarified this aspect of the policy in the 1983 rulemaking, in which antidegradation was made explicitly applicable “[w]here the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.”¹⁴³ Even after degradation, water quality must “protect existing uses fully.”¹⁴⁴ Thus, the antidegradation policy limits degradation of existing water quality to the point that environmental or recreational uses would be significantly affected.

But EPA has not clarified the more fundamental issue of whether “degradation” implies some demonstrable, even significant, impact on ambient water quality or whether it simply means any net increase of a given pollutant. If the antidegradation policy is interpreted to apply only where some impact on water quality is apparent, then permit writers become ensnared in such disputes as whether a predicted five percent decrease in fish growth, or a predicted decrease in predator foraging success, is significant. Recently proposed revisions to EPA’s water quality criteria documents that discuss pollutant effects in such terms suggest that these examples are not purely hypothetical.¹⁴⁵

Thus, using an “impacts” test to trigger application of the antidegradation policy brings permit writers into the uncertainties and difficulties that Congress sought to evade with the 1972 Amendments. The alternative is to take seriously Congress’s rejection of the “how much is too much” approach to water pollution control. Then, the Act’s blanket prohibition against any pollutant discharge by any person¹⁴⁶ becomes a *per se* rule that any discharge of any pollutant into navigable waters causes some adverse impact on water quality.

Applying this statutory rule to the antidegradation policy, any increase in pollutant discharges presumptively will have an impact on water quality, and the policy will therefore apply. This does not necessarily mean, however, that the new or increased discharges will not be allowed. The antidegradation policy is not a “no-growth” rule. Rather, it mandates a careful analysis of the

142. See Gaba, *supra* note 134, at 1192-94.

143. 40 C.F.R. § 131.12(a)(2) (1986).

144. *Id.*

145. See, e.g., OFFICE OF RESEARCH AND DEV., U.S. ENVTL. PROTECTION AGENCY, GUIDELINES FOR DERIVING NUMERICAL NATIONAL WATER QUALITY CRITERIA FOR THE PROTECTION OF AQUATIC ORGANISMS AND THEIR USES (1984); Office of Water Regulations and Standards, U.S. Env'tl. Protection Agency, Ambient Water Quality Criteria for Dissolved Oxygen (1984) (draft).

146. Clean Water Act § 301(a), 33 U.S.C. § 1311(a) (1982).

social and economic importance of the new or increased discharges, and the balancing of these against the predicted water quality impacts. Thus, the absence of a *de minimus* impact rule does not require extraordinary effort to justify insignificant degradation.

The implications of this interpretation of the antidegradation rule are threefold. First, because water quality impacts are presumed to result from an increase in pollutant discharges, proponents of degradation should be required to develop the information necessary to predict actual water quality impacts. The amount and quality of data required in a specific case should be a function of the importance of the benefitted interest, the availability of alternatives, and the anticipated consequences of the degradation.

Second, under the EPA rule, the degradation must be "necessary to accommodate" the benefitted interest. This implies a consideration of alternatives and whether achievement of the social and economic benefits is possible without increasing pollutant discharges. For example, water recycling and reuse by the discharger may obviate the need for increasing pollutant discharges. Or dischargers could offset increases in point source discharges with reductions in discharges by nonpoint sources that they control.¹⁴⁷ Using the antidegradation policy to ensure that alternatives are adequately evaluated is consistent with the Clean Water Act's technology-forcing strategy for progress towards zero discharge.

Finally, EPA continues to finesse the basic issue of what "important social or economic interests" may be benefitted and therefore justify degrading water quality. The only guidance that EPA has ever given on this point asserts:

This phrase is simply intended to convey a general concept regarding what level of social and economic development could be used to justify a change in high quality

147. This kind of inquiry would be particularly important where the discharger is a municipal wastewater treatment plant. In many cases, reductions in urban runoff may achieve significant pollutant control. Also, EPA has taken the position that increased treatment costs to a municipality cannot suffice to satisfy the "benefitted interests" test. Letter from Charles H. Sutfin, Director, Water Division, EPA Region 5, to Lyman Wible, Administrator, Division of Environmental Standards, Wisconsin Department of Natural Resources (Sept. 6, 1985) [hereinafter cited as Sutfin Letter] (copy on file with U. MICH. J.L. REF.). Because municipalities are required by § 307(b) of the Act, 33 U.S.C. § 1317(b) (1982), to develop pretreatment programs that require reductions in pollutant discharges by industrial dischargers into municipal sewer systems as necessary to meet permit limits, the "benefitted interests" test must also be applied to the industrial dischargers using the particular municipal sewer system. Sutfin Letter, *supra*.

waters. Any more exact meaning will evolve through case-by-case application under the State's continuing planning process. Although EPA has issued suggestions on what might be considered in determining economic or social impacts, the Agency has no predetermined level of activity that is defined as "important."¹⁴⁸

EPA obviously intends "importance" to be a relative concept. How it is defined in any given application should be a function of the availability of alternatives and, also, the "significance" of the predicted degradation. Thus, a benefitted interest would have to be more important to justify degradation projected to have a significant increase in fish mortality than it would to justify a five percent decrease in fish growth. Merely showing lower costs to the discharger is insufficient to constitute an "important" social or economic interest. The "important economic or social development" must be in the "area in which the waters are located,"¹⁴⁹ suggesting that the benefits of the discharge to the larger community must be assessed.

The antidegradation policy plays an important role in implementing the Act's goal of continued progress towards eliminating pollutant discharges. In no case may water quality be degraded without adequate justification in countervailing societal and economic interests that outweigh the degradation. In this sense, the policy values water quality where the market has failed to do so and allows only "efficient" degradation so as not to waste a limited resource. It does so by creating a presumption of adverse water quality impacts by increased pollutant discharges. The presumption triggers a flexible, site-specific consideration of the economic justifications and social need for water quality degradation in light of available alternatives and the significance of the predicted degradation.

CONCLUSION

This Article argues that the "zero discharge" goal of the Clean Water Act has continued vitality in directing the Act's implementation. Specifically, it provides EPA with guidance in maintaining pollution controls now deemed to be more restrictive than necessary to achieve minimum water quality standards,

148. EPA, ANTIDegradation, *supra* note 136, at 8.

149. 40 C.F.R. § 131.12(a)(2) (1986).

and in preserving water quality that exceeds these standards from the impacts of new or increased pollutant discharges. The Act's "zero discharge" goal provides both the philosophical (and legal) underpinnings for solutions to these issues and the critical features of these solutions.

Recently, Congress recognized the importance of these two issues in adopting comprehensive amendments to the Clean Water Act.¹⁵⁰ Section 404 of the bill approved unanimously by both houses of Congress in 1986 prohibited backsliding from existing permit limitations, regardless of whether the original limits were based on technological or water quality considerations.¹⁵¹ It also explicitly limited EPA's ability to use the "new information" exception to circumvent the application of the antibacksliding rule to water quality-based permit limits.¹⁵² Finally, for the first time in the history of the Act, this section explicitly acknowledged and ratified the "antidegradation" rule.¹⁵³ The conference report made clear that by the reference to the antidegradation rule, Congress meant to ratify the rule in effect as of the date of enactment of the 1986 amendments.¹⁵⁴

President Reagan pocket-vetoed this bill on November 6, 1986.¹⁵⁵ As this Article goes to press, congressional leaders have indicated their intention to introduce and pass the same legislation word-for-word in the 100th Congress, when there will be an opportunity to override a presidential veto.¹⁵⁶

This legislation, if it eventually becomes law, would reaffirm Congress's commitment to the "zero discharge" goal of the Act. It would also clearly establish EPA's mandate to seek continued progress towards eliminating pollutant discharges by adopting and enforcing stringent antibacksliding and antidegradation

150. S. 1128, 99th Cong., 2d Sess. (1986).

151. *Id.* § 404(a) (creates new § 402(o)(1) of the Clean Water Act).

152. *See id.* (new § 402(o)(2)(B) of the Clean Water Act).

The conference substitute also provides that neither the new information exception—for both BPJ and water quality based permits— . . . allows permits to be adjusted to require less stringent effluent limitations with respect to any revised waste load allocation or any alternative grounds for translating water quality standards into effluent limitations, except in one narrow circumstance.

Conference Committee mark-up draft report on S. 1128, at 131-32 (copy on file with U. MICH. J.L. REF.).

153. S. 1128, 99th Cong., 2d Sess. § 404(b) (1986) (new § 303(d)(4)(B) of the Clean Water Act).

154. Conference Committee mark-up draft report on S. 1128, at 1 (discussing the antibacksliding provisions in the Senate bill) (copy on file with U. MICH. J.L. REF.).

155. Memorandum Withholding Approval of S. 1128, 22 WEEKLY COMP. PRES. DOC. 1541 (Nov. 10, 1986).

156. 17 ENV'T REP. (BNA) 1163 (Nov. 14, 1986) ("Current Developments").

rules. Without a renewed commitment by both the Congress and EPA to this policy, the nation's commitment to cleaning up its lakes and rivers is likely to falter once minimally acceptable water quality conditions are achieved. From that point forward, water pollution control programs will be stymied by a return to the pre-1972 debate over how much pollution is too much.

