



Notre Dame Law Review

Volume 50 | Issue 5

Article 9

6-1-1975

Nondegradation of Water Quality: The Need for Effective Action

Michael Snyder

Follow this and additional works at: <http://scholarship.law.nd.edu/ndlr>

 Part of the [Law Commons](#)

Recommended Citation

Michael Snyder, *Nondegradation of Water Quality: The Need for Effective Action*, 50 Notre Dame L. Rev. 890 (1975).

Available at: <http://scholarship.law.nd.edu/ndlr/vol50/iss5/9>

This Note is brought to you for free and open access by NDLScholarship. It has been accepted for inclusion in Notre Dame Law Review by an authorized administrator of NDLScholarship. For more information, please contact lawdr@nd.edu.

NONDEGRADATION OF WATER QUALITY: THE NEED FOR EFFECTIVE ACTION

An ounce of prevention is worth a pound of cure.

B. Franklin

I. Introduction

The 1972 Amendments to the Federal Water Pollution Control Act¹ (hereinafter FWPCA), instituted a comprehensive program to achieve ambitious goals for the Nation's waters.² Any discharge of pollutant into the waters of the United States is illegal unless a permit is obtained.³ Permits are issued only for discharges in compliance with technology-based effluent limits and water quality standards,⁴ both designed to effectuate the congressionally mandated goals of swimmable and fishable waters by July 1, 1983 and no discharge of pollutants by 1985.⁵ These comprehensive provisions have imposed an immense implementation burden—one deadline after another for establishing standards,⁶ publishing guidelines,⁷ and issuing permits.⁸ The Environmental Protection Agency (hereinafter EPA) has generally coped well with this administrative load,⁹ and there are encouraging signs of improvement in water quality.¹⁰ However, in one important aspect of FWPCA's comprehensive control program, EPA has failed to take the positive action required to preserve important environmental values. That aspect is nondegradation of water quality.

Nondegradation requires that clean water be kept clean. This concept of environmental control is an essential complement of the effort to clean up polluted waters. Without an effective nondegradation program, presently high-quality waters in remote areas can seriously degrade.¹¹ While the importance

1 Act of Oct. 18, 1972, Pub. L. No. 92-500 §§ 101 *et seq.*, 86 Stat. 816, amending 33 U.S.C. §§ 1151 *et seq.* (1970) (codified at 33 U.S.C. §§ 1251 *et seq.* (Supp. II, 1972)) [hereinafter cited as FWPCA].

2 See generally Zener, *The Federal Law of Water Pollution Control*, in FEDERAL ENVIRONMENTAL LAW 682 (E. Dolgin & T. Guilbert ed. 1974) [hereinafter cited as Zener]; Davis & Glasser, *The Discharge Permit Program Under the Federal Water Pollution Control Act of 1972—Improvement of Water Quality Through the Regulation of Discharges from Industrial Facilities*, 2 FORD. URB. L. J. 179 (1974) (discussion of technical as well as legal matters) [hereinafter cited as Davis]; Ipsen & Raisch, *Enforcement Under the Federal Water Pollution Control Act Amendments of 1972*, 9 LAND & WATER L. REV. 369 (1974); Smith, *Highlights of the Federal Water Pollution Control Act of 1972*, 77 DICK L. REV. 459 (1973).

3 FWPCA §§ 301(a), 502(7), (12); 33 U.S.C. §§ 1311 (a), 1362(7), (12) (Supp. II, 1972).

4 FWPCA § 402, 33 U.S.C. § 1342 (Supp. II, 1972).

5 FWPCA §§ 101(a)(1), (2); 33 U.S.C. §§ 1251(a)(1), (2) (Supp. II, 1972).

6 FWPCA §§ 303(b), 307(a)(1)-(2), (b) (1); 33 U.S.C. §§ 1313(b), 1317(a)(1)-(2), (b) (1) (Supp. II, 1972).

7 FWPCA § 304, 33 U.S.C. § 1314 (Supp. II, 1972).

8 FWPCA § 402(k), 33 U.S.C. § 1342(k) (Supp. II, 1972); see Davis, *supra* note 2 at 191.

9 EPA has missed a number of deadlines set by FWPCA and has been sued by the Natural Resources Defense Council Project on Clean Water. See Hall, *Litigation Under the Federal Water Pollution Control Act Amendments of 1972*, 4 ENV. LAW REP. 50109, 50115-16 (1974).

10 EPA, CLEAN WATER REPORT TO CONGRESS—1974 10 (June 1974) [hereinafter cited as CLEAN WATER]; EPA, ECONOMICS OF CLEAN WATER—1973 12-17 (December 1973, EP-2.14-973) [hereinafter cited as ECONOMICS OF CLEAN WATER].

11 See text accompanying notes 15-16 *infra*.

of nondegradation has been recognized on a policy level, it has not been effectively implemented. EPA has the authority under FWPCA to institute a positive nondegradation program,¹² but has hesitated to do so, preferring instead to let the states deal with the problem in their own way. This approach is inconsistent with the goals and objectives of FWPCA and jeopardizes the clean waters of the country.

II. The Background: Grudging Acceptance for an Essential Aspect of Environmental Control

Nondegradation is a strikingly simple yet very important environmental control concept. It means only that high-quality environmental resources should be protected while low-quality resources are improved. To be specific, a water pollution control program may be very effective at pollution abatement in areas of poor water quality; yet if areas of high water quality become polluted at the same time, the program has only traded one problem for another.

The need for nondegradation seems elemental, but the characteristics of the environmental problem favor a singular emphasis on pollution abatement. The urban industrial areas are the most polluted and, due to their population concentration, generate more urgent demands for pollution control.¹³ Abatement is also favored by its greater visibility of results. A strong pollution abatement effort can achieve noticeable results in a relatively short period of time¹⁴ while a good nondegradation program merely maintains the status quo; the public relations and political value of the former are substantially greater. With these pressures behind it, pollution abatement exerts a strong claim on EPA's limited resources.

Nevertheless, these pressures are not sufficient cause to ignore nondegradation. In fact, the existence of strong environmental controls in urban areas creates an even greater need for nondegradation policies. Tough urban programs cause new industry to locate in remote areas of high environmental quality where environmental control costs are reduced.¹⁵ This phenomenon is well illustrated by the Four Corners power complex. The lack of strong pollution regulations greatly influenced the decision to locate numerous large-scale, fossil-fuel power plants in the remote Four Corners area of the Southwest.¹⁶ EPA must consider this phenomenon in developing its control policies and should avoid inordinate concentration on pollution abatement. To effectively protect the environment,

12 See text accompanying notes 39-53 *infra*.

13 The political pressures exerted against nondegradation are illustrated by the remarks of Caspar Weinberger, Secretary of HEW, in regard to nondegradation of air. 4 BNA ENV. REP., CURRENT DEVELOPMENTS 1207 (Nov. 16, 1973).

14 E.g., Gannon, *A Sick River Is Returned to Nature*, TRUE (April 1966) reprinted in 114 Cong. Rec. 10477 (1968); Williams, *Oregon: The Fight for Survival*, SATURDAY REVIEW/WORLD 10 (November 16, 1974).

15 For a discussion of this phenomenon in relation to air nondegradation see Guilbert, *Up in Smoke: EPA's Significant Deterioration Regulations Deteriorate Significantly*, 4 ENV. LAW REP. 50033, 50033-34 (1974) [hereinafter cited as Guilbert].

16 See Note, *The Four Corners Power Complex: Pollution on the Reservation*, 47 IND. L. J. 704 (1972).

EPA should sustain the essential complementary relation between abatement and nondegradation.

The idea of nondegradation has often been criticized on the grounds that it would unreasonably restrict economic growth.¹⁷ Since almost all industrial emissions into the air or water cause some degradation, absolute nondegradation would indeed entail a halt to construction of many industrial facilities.¹⁸ But few proponents of nondegradation envision such drastic results. Nondegradation need not be absolute, but should guarantee the maximum environmental preservation that is consistent with economic growth; the aim should be to ensure that high-quality air and water are accorded due respect, and that deterioration is minimized. In this respect, nondegradation is somewhat of a misnomer; prevention of significant degradation is more precise.

Still there is no doubt that a nondegradation program, if it is effective, will have considerable economic and social consequences.¹⁹ It may involve prohibitions on degradation in certain areas of exceptional ecological or aesthetic value, and it will probably involve some limitations on degradation in any area. Thus while not limiting the amount of growth, nondegradation will definitely affect the choice of location for new polluting activities. This seems a small price for clean air and water; and yet despite its obvious importance, nondegradation has been only grudgingly accepted as a tenet of environmental control.

A. Nondegradation Under the 1965 Water Quality Act

Before the 1972 Amendments, FWPCA's primary pollution control provisions were those implemented by the Water Quality Act of 1965.²⁰ This Act required the states to develop water quality standards which consisted of: (1) the designated uses for each body of water or portion thereof, (2) criteria defining the level of water quality necessary to protect that use, and (3) an implementation schedule.²¹ These standards were the sole regulatory mechanism before 1972, and since the states were permitted to establish standards lower than existing water quality,²² they offered little protection to clean bodies of water.

17 E.g. 114 CONG. REC. 10468 (1968) (remarks by Rep. Harrison of Wyoming); *Hearings Before the Subcommittee on Air and Water Pollution of the Senate Committee on Public Works on S. 75, S. 192, S. 280, S. 281, S. 523, S. 573, S. 601, S. 679, S. 927, S. 1011, S. 1012, S. 1013, S. 1014, S. 1015, and S. 1017*, 92nd Cong., 1st Sess., pt. I at 595, pt. II at 756, 1070, 1087-89 (1971) [hereinafter cited as *Senate Hearings*]; J. DAVIES, *THE POLITICS OF POLLUTION* 172-73 (1970); text accompanying note 35 *infra*.

18 Air nondegradation is discussed in 38 Fed. Reg. 18986, 18987 (1973); Guilbert, *supra* note 15, at 50036-37; Note, *The Clean Air Act and the Concept of Non-Degradation: Sierra Club v. Ruckelshaus*, 2 *ECOLOGY L. Q.* 801, 803 (1972); the effect of water discharges is discussed in text accompanying notes 85-90 *infra*.

19 See 38 Fed. Reg. 18986 (1973) (air nondegradation proposed regulations); Guilbert, *supra* note 15, at 50036.

20 Act of October 2, 1965, Pub. L. No. 89-234 §§ 1 *et seq.*, 79 Stat. 903.

21 For instance, a river may be given a use designation of primary contact recreation (swimming). Criteria associated with this use might include: dissolved oxygen of at least 6 mg/l, coliform bacteria not in excess of 400 per 100 ml, pH not less than 6.5 or greater than 8.3 See also EPA, *PROPOSED CRITERIA FOR WATER QUALITY* (October 1973, EP 1.2 W29/10/V.1) [hereinafter cited as *PROPOSED CRITERIA*]; NATIONAL ACADEMY OF SCIENCES, *WATER QUALITY CRITERIA* 1972 (March 1973, EP 1.23, EPA R3-73-033) [hereinafter cited as *NAS CRITERIA*]; Zener, *supra* note 2, at 715-16.

22 See Williamson, *Water Quality Control from a State Viewpoint*, 5 *NAT. RES. LAW.* 230, 234 (1972).

The standards also were difficult to enforce due to the imprecision involved in relating standards violation to a particular discharge.²³

In response to these inadequacies, the Department of the Interior, which at that time had water pollution responsibility, issued guidelines which imposed a nondegradation policy upon the state programs.²⁴ Secretary Udall defined the policy in an 8 February 1968 press release. Each state was required to include a statement similar to the following in its water quality standards:

Water whose quality is better than the established standards as of the date of 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 or social development and will not interfere with or become injurious to any assigned uses made of or presently possible in, such waters. This will require that any

industrial, public or private project or development which would constitute a new source of pollution or an increased source of pollution to high quality waters will be required, as part of the initial project design, to provide the highest and best degree of waste treatment available under existing technology, and, since these are also Federal standards, these waste treatment requirements will be developed cooperatively.²⁵

This policy was a subject of considerable controversy. State governors and the U.S. Chamber of Commerce complained that economic development would be unreasonably restricted and argued that nondegradation exceeded the authority of the '65 Act.²⁶ Nevertheless, a statement substantially in accord with the Udall statement was eventually included in all state water quality standards.²⁷ This statement has significant weaknesses and has been applied in practice by only a few states;²⁸ it is important however as the first formal implementation of nondegradation.

B. *Nondegradation Under the Clean Air Act:* Sierra Club v. Ruckelshaus

The Clean Air Act of 1970 is similar in numerous ways to the '72 FWPCA, and judicial interpretations of one can be precedent for the other. It is significant

²³ If there are multiple pollution sources affecting one stretch of a stream, it is very difficult to accurately determine the effect of each source on the stream's water quality. In other words, it may be very difficult to know who is at fault when the standards are violated. See Zener, *supra* note 2 at 716-17; Westman, *Some Basic Issues in Water Pollution Control Legislation*, 60 AMERICAN SCIENTIST 767, 772 (November-December 1972) [hereinafter cited as Westman].

²⁴ See Dunkelberger, *Federal-State Relationships in the Adoption of Water Quality Standards Under the Federal Pollution Control Act*, 2 NAT. RES. LAW. 47, 56 (1969) [hereinafter cited as Dunkelberger].

²⁵ Department of the Interior press release of 8 February 1968, quoted in Zener, *supra* note 2, at 717.

²⁶ See J. DAVIES, *THE POLITICS OF POLLUTION* 169-75 (1970); 114 CONG. REC. 10468 (1968) (remarks by Rep. Harrison of Wyoming); Dunkelberger, *supra* note 24, at 56-59.

²⁷ The state antidegradation statements in effect as of December 1972 are compiled in BNA ENV. REP., STATE WATER LAWS 621:0101 (1973).

²⁸ See text accompanying notes 54-60 *infra*.

then that in *Sierra Club v. Ruckelshaus*,²⁹ the District of Columbia District Court found a congressional intent to include nondegradation in the 1970 Act.³⁰ This law requires the states to develop a plan for implementation of EPA-established national air quality standards.³¹ EPA issued guidelines for the state implementation plans which would have allowed clean air to deteriorate up to the national standards.³² The Sierra Club sued to enjoin and argued that a nondegradation requirement was inherent in the purpose of the Clean Air Act:³³ "to protect and enhance the quality of the Nation's air resources (emphasis added)."³⁴ EPA countered that the economic and social implications of imposing nondegradation are so great that Congress would have expressed itself more explicitly had it intended its inclusion.³⁵ The legislative history strongly supported Sierra Club,³⁶ and the court ordered EPA not to approve any state implementation plan that allowed "significant deterioration of existing air quality."³⁷

The court based its decision on the language of the Act supplemented by legislative history and did not consider questions of environmental policy. However, the decision acknowledged that inherent in the "protect and enhance" language of the Clean Air Act is a congressional recognition of the complementary relation of nondegradation and pollution abatement. Congress offered no guidance as to how nondegradation should be implemented, and the legislative history leaves some question as to whether it fully appreciated the implications, but it unquestionably approved the principle of keeping clean air clean.³⁸

29 344 F. Supp. 253, 4 ERC 1205 (D.D.C.), *aff'd per curiam* 4 ERC 1815 (D.C. Cir. 1972) (without opinion), *aff'd by an equally divided court sub nom.*, *Fri. v. Sierra Club*, 412 U.S. 541, 5 ERC 1417 (1973).

30 Act of Dec. 31, 1970, Pub. L. No. 91-604 §§ 101 *et seq.*, 84 Stat. 1676, *amending* 42 U.S.C. §§ 1857-57(1) (Supp. V, 1969) (codified at 42 U.S.C. §§ 1857-58a (1970) [hereinafter cited as Clean Air Act]). The 1970 Act substantially amended the existing Clean Air Act. See Trumbull, *Federal Control of Stationary Source Air Pollution*, 2 *ECOLOGICAL L. Q.* 283 (1972); Note, *Clean Air Act Amendments of 1970: A Congressional Cosmetic*, 61 *Geo. L. J.* 153 (1972).

31 Clean Air Act § 110, 42 U.S.C. § 1857c-5 (1970). See also Trumbull, *supra* note 30, at 297-300.

32 "In any region where . . . ambient levels of a pollutant are below . . . secondary standard, the plan shall . . . prevent such ambient pollution levels from exceeding such secondary standard." 40 C.F.R. § 51.12(b) (1972) (issued in 36 Fed. Reg. 15486 (1971)).

33 See Note, *The Clean Air Act and the Concept of Non-Degradation: Sierra Club v. Ruckelshaus*, 2 *ECOLOGICAL L. Q.* 801, 809-11 (1972). This Note offers an excellent analysis of *Sierra Club v. Ruckelshaus*.

34 Clean Air Act § 101(b), 42 U.S.C. § 1857(b) (1970).

35 See *ECOLOGICAL L. Q.*, *supra* note 33, at 809-18.

36 *Id.* at 818-22.

37 Preliminary Injunction, May 30, 1972, *quoted in* *ECOLOGICAL L. Q.*, *supra* note 33, at 806. In subsequent actions EPA amended implementation plan guidelines to require nondegradation (37 Fed. Reg. 23836 (1972)) and issued proposed nondegradation guidelines twice (38 Fed. Reg. 18986 (1973) and 39 Fed. Reg. 30999 (1974)) before final regulations were issued in December 1974 (39 Fed. Reg. 42510). For a good critique of these regulations see Guilbert, *supra* note 15. Sierra Club reportedly will challenge these regulations in the D.C. Court of Appeals. See 5 *BNA ENV. REP.*, *CURRENT DEVELOPMENTS* 1234 (Dec. 6, 1974).

38 *ECOLOGICAL L. Q.*, *supra* note 33, at 818-21.

III. Nondegradation Under the 1972 Federal Water Pollution Control Act Amendments

A. Congressional Intent

The legislative history of the '72 FWPCA evidences considerable concern about nondegradation.³⁹ All preliminary versions of the law contained nondegradation provisions.⁴⁰ The final bills in the Senate and House specifically linked nondegradation to the National Permit Discharge Elimination System in § 402: "The Administrator or any State shall not issue a permit under this section for any point source unless such permit shall assure the maintenance or enhancement of the quality of any affected waters."⁴¹ Somewhat mysteriously, the Conference Committee deleted this section from the compromise bill which subsequently became law. No explanation was given in the Conference Report for this deletion,⁴² but it probably reflected concerns that this provision was too strict; the language failed to recognize that some deterioration in quality can result from any discharge.⁴³ The deleted section therefore could have been applied to prohibit construction of any industrial facility that discharges into the water.

The deletion of this provision linking nondegradation to permit issuance should by no means be considered a rejection of nondegradation. While Congress was wary of unduly restricting economic growth, a policy of nondegradation is embodied in the objective of FWPCA: "to *restore and maintain* the chemical, physical, and biological integrity of the Nation's waters (emphasis added)."⁴⁴ Analogous language in the Clean Air Act was held to mandate nondegradation four months before FWPCA became law.⁴⁵ The nondegradation import of FWPCA was therefore quite apparent to its drafters.

Congressional intent to endorse nondegradation is also discerned in the contrast between the '72 objective to "restore and maintain" and the language which it replaced in the prior law: "to *enhance* the quality and value of our water resources (emphasis added)."⁴⁶ The dual verbs "restore and maintain" distinguish the '72 Act and signify the important complementary relation between abatement and nondegradation.

39 See STAFF OF SENATE COMM. ON PUBLIC WORKS, 93rd CONG., 1st SESS., A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 1243 (Comm. Print. 1973) (two volumes) (remarks by Mr. Ruckelshaus in Hearings on H.R. 11896, Comm. on Public Works, Dec. 7, 1972 at 345) [hereinafter cited as LEGISLATIVE HISTORY]; *Senate Hearings*, *supra* note 17 at 68, 79, 384, 390, 564, 469, 595, 756, 1070, 1087-89, 1116; notes 40, 41, and 44 *infra*.

40 See *Senate Hearings*, *supra* note 17, at 214 (S. 523 § 10(b)(1)(B)), 311 (S. 1014 § 10(d)(3)).

41 LEGISLATIVE HISTORY, *supra* note 39, at 1691 (S. 2770 § 402(h)), 1059 (H.R. 11896 § 402(g)).

42 *Id.* at 323 (S. Rep. No. 92-1236, Conference Report, deletes § 402(g) without comment).

43 See text accompanying notes 85-86 *infra*.

44 FWPCA § 101(a), 33 U.S.C. § 1251(a) (Supp. II, 1972). The following references in the legislative history also show congressional intent for nondegradation: LEGISLATIVE HISTORY, *supra* note 39, at 772 (H. Rep. No. 92-911 at 85), 1437-38 (S. Rep. No. 92-414 at 19-20), 1494-95 (S. Rep. No. 92-414 at 76-77).

45 See text accompanying notes 29-38 *supra*.

46 Act of October 2, 1965, Pub. L. No. 89-234 § 1, 79 Stat. 903.

The FWPCA statement of objective evidences approval of nondegradation in another way. Congress declared that efforts to "restore and maintain" be directed toward "integrity of the Nation's waters (emphasis added)."⁴⁷ "The word 'integrity' as used . . . [means that] the natural structure and function of ecosystems is [*sic*] maintained."⁴⁸ Thus the federal water pollution effort is directed toward achieving natural water quality. This natural water objective inherently requires that high-quality water be preserved wherever it exists, hence, nondegradation.

The intent to include nondegradation in FWPCA is further manifested by the water quality standards provisions of § 303.⁴⁹ The state water quality standards developed under the '65 Act were continued in effect provided they were ". . . consistent with the applicable requirements of this Act as in effect immediately prior to the date of [FWPCA]."⁵⁰ As previously explained, water quality standards have been required to contain a nondegradation statement since 1968.⁵¹ By reapplying the standards requirements already in effect, Congress sanctioned nondegradation.

The intent of Congress toward nondegradation, then, could best be characterized as approval in principle without specific guidance as to implementation. Rejection of the strict language linking nondegradation to permits was a recognition of the hazards of specific guidance. Congress saw that to avoid stiffing the economy, it should not inhibit EPA's ability to design a flexible nondegradation program. This concern is consistent with other provisions of FWPCA that require EPA to consider the economic and social costs of clean water.⁵² These considerations, however, only slightly blunt the primary objective to "maintain the . . . integrity of the Nation's waters."⁵³ Accordingly, as the agency authorized to administer FWPCA, EPA is legally obligated to implement a nondegradation program that respects economic vitality but ensures substantial protections to high-quality waters. Unfortunately, EPA has not met this obligation.

B. EPA's Inaction

EPA's response to the mandate for nondegradation has been decidedly weak.

47 FWPCA § 101(a), 33 U.S.C. § 1251(a) (Supp. II, 1972).

48 LEGISLATIVE HISTORY, *supra* note 39 at 763 (H. Rep. No. 92-911 at 76). The natural waters objective also finds expression in LEGISLATIVE HISTORY at 1430, 1468, 1494-95 (S. Rep. No. 92-414 at 12, 50, 76-77). The 1985 no discharge goal also evidences a natural water objective: FWPCA § 101(a)(1), 33 U.S.C. § 1251(a)(1) (Supp. II, 1972). For an excellent discussion of the philosophy of a natural water objective and the opposing point of view see Westman, *supra* note 23. For a contrary view of the meaning of "integrity" see Davis, *supra* note 2, at 187-89.

49 FWPCA § 303, 33 U.S.C. § 1313 (Supp. II, 1972).

50 FWPCA §§ 303(a)(1)-(2), (3) (B)-(C), (b) (1); 33 U.S.C. §§ 1313(a)(1)-(2), (3) (B)-(C), (b) (1) (Supp. II, 1972). Water quality standards for interstate waters were already in existence when '72 FWPCA was passed. These standards were given a limited review (*see* note 107 *infra*). New water quality standards were established for intrastate waters, which prior to '72 FWPCA were not subject to federal standards. *See* Zener, *supra* note 2, at 719-21.

51 *See* text accompanying notes 20-28 *supra*.

52 *See* FWPCA §§ 302(b)(1)-(2), 304(b)(1)(B), (2)(A)-(B); 33 U.S.C. §§ 1312(b)(1)-(2), 1314(b)(1)(B), (2)(A)-(B) (Supp. II, 1972); Zener, *supra* note 2, at 696-702.

53 FWPCA § 101(a), 33 U.S.C. § 1251(a) (Supp. II, 1972).

The state water quality standards still demand maintenance of existing water quality, but to a large extent the demand exists only on paper. While EPA has discussed the need to implement a stronger program, it has yet to formulate a coherent plan for action.

1. Ineffectiveness of Nondegradation Standards

The antidegradation standards inherited under FWPCA from the '65 Act are notorious for their ineffectiveness. In general, the states have shown little interest in enforcing them,⁵⁴ and they probably are not susceptible to effective federal enforcement as currently written. Although significant as a statement of policy these standards were ineffectual even at the time of their adoption. This was largely due to the fact that most states retained discretion to decide whether a new source had demonstrated the "necessary economic or social development"⁵⁵ to justify degradation.⁵⁶ This weakness persists under FWPCA.

Even if this deficiency were corrected, it is questionable whether the Udall nondegradation formulation provides any greater protection to clean water than the new source standards required by § 306 of FWPCA.⁵⁷ Any new source of pollutant discharge must achieve effluent reduction reflecting "best available demonstrated control technology (hereinafter BADCT)."⁵⁸ EPA has published regulations defining effluent limits which reflect BADCT for various industrial categories.⁵⁹ The Udall nondegradation statement does not prohibit new discharge into high-quality waters, but only requires application of "the highest and best degree of waste treatment available under existing technology."⁶⁰ If this standard is any different than BADCT, the difference would hardly be worth the effort of promulgating regulations to define.

EPA need not be confined to the old and no longer useful Udall nondegradation statement. Under the water quality standards provisions of FWPCA, EPA is authorized to issue new standards whenever "necessary to meet the requirements of the Act,"⁶¹ which requirements definitely include effective non-

54 A few exceptions are noted at note 91 *infra*. There are several reasons for the states' failure to implement nondegradation. The Udall statement lacks specific guidance; it is only a vague generality. The statement was imposed over the specific objections of several states (*see* note 26 *supra*), so they have no interest in utilizing it. Additionally, many state programs are understaffed and overwhelmed with permit applications and other FWPCA burdens. An affirmative federal program will be required to initiate state action on nondegradation.

55 Udall nondegradation statement quoted in text accompanying note 25 *supra*.

56 *See* Zener, *supra* note 2, at 718.

57 The insufficiency of these standards for nondegradation is discussed in the text accompanying notes 83-84 *infra*.

58 FWPCA § 306(a)(1), 33 U.S.C. § 1316(a)(1) (Supp. II, 1972). *See* Zener, *supra* note 2, at 694-709.

59 *E.g.*, 40 Fed. Reg. 6432, 6434 (1975) (Effluent Guidelines and Standards for Dairy Products). New Source Standards for the Cultured Products subcategory, for instance, allow a daily maximum in the effluent of .074 pounds of BOD5 and .093 pounds of total suspended solids per 100 pounds of BOD5 input. BOD5 (five-day biochemical oxygen demand) is a standardized measure of the oxygen reduction potential of waste material. As materials are degraded by water organisms, the dissolved oxygen levels in the water are reduced which can be very harmful to the water ecosystem. *See* NAS CRITERIA, *supra* note 21, at 275; R. MITCHELL, INTRODUCTION TO ENVIRONMENTAL MICROBIOLOGY 138-39 (1974) [hereinafter cited as MITCHELL]; Westman, *supra* note 23, at 768.

60 Udall nondegradation statement quoted in text accompanying note 25 *supra*.

61 FWPCA § 303(c)(4)(B), 33 U.S.C. 1313(c)(4)(B) (Supp. II, 1972).

degradation. However it has not chosen to do so. Aside from several very general statements in planning regulations,⁶² EPA's only published pronouncements on nondegradation have been in its *Water Quality Strategy Papers*.⁶³

2. EPA Nondegradation Policy as Expressed in the Water Quality Strategy Papers

A *Water Quality Strategy Paper* has been published annually by EPA since the '72 inauguration of FWPCA. The purpose of these papers is to provide guidance to EPA administrators and state agencies on implementation of FWPCA. As such they have no legal force and are only informal statements of policy. They do however provide an outline of the long-range plan for effectuating FWPCA as well as valuable glimpses of EPA's thinking on specific programs, including nondegradation.

The first strategy paper, published 27 February 1973, stated a national strategic objective to "preserve existing high water quality while sub-standard ambient conditions are improved to meet water quality standards."⁶⁴ Encouragingly, with this statement EPA clearly recognized its responsibility for nondegradation; but the paper provided absolutely no guidance as to how preservation of high water quality should be achieved.

EPA's only extended discussion of nondegradation appears in the 1974 *Water Quality Strategy Paper*.⁶⁵ Even this can best be summed up as recognition that something should be done, with little precision as to what. The paper acknowledged that continued economic and social growth involves additional water use and, quite realistically, assessed the nondegradation problem as "... one of accommodating additional sources and discharges while still maintaining the high levels of water quality that the Act has set out as a national policy."⁶⁶ The key elements of an antidegradation policy were identified as (1) a water quality baseline, (2) a definition of significant degradation relative to that baseline, and (3) a control strategy to insure compliance.⁶⁷ Beyond these generalities, the paper related only a vague conception of a nondegradation program.

Establishment of baseline measurements was assigned as the "near-term strategic priority for FY 1975."⁶⁸ This language apparently authorized the states to begin baseline measurements, but "baseline measurements" are defined nowhere in EPA literature.⁶⁹ Measurement of baseline quality presents serious technical questions. At what depth and how often should sampling be done? How should

62 See 39 Fed. Reg. 19634 (1974) (nondegradation is referred to in 40 C.F.R. § 130.22 and 40 C.F.R. § 131.308).

63 EPA, WATER STRATEGY PAPER (April 1973, EP 1.2 W29/9 [hereinafter cited as '73 STRATEGY]; EPA, WATER QUALITY STRATEGY PAPER (2d ed., March 1974) [hereinafter cited as '74 STRATEGY].

64 '73 STRATEGY at 7.

65 '74 STRATEGY, *supra* note 63.

66 *Id.* at 59.

67 *Id.*

68 *Id.* at 60.

69 Test procedures for the analysis of pollutants have been published (38 Fed. Reg. 28758 (1973)), but these apply only to discharge analysis, not to ambient water quality. Methods for measurement of water quality are set forth in PROPOSED CRITERIA, *supra* note 21, at 21-132 of Volume II, but no attempt is made to prescribe standard methods.

seasonal and meteorological fluctuations in quality be accounted for? If the paper seriously intended that the states begin compiling data, these questions should have been answered.

Furthermore, the paper assumes without explanation that additional water quality data is needed to implement nondegradation. The fact is that considerable information is already available from the waterway segments inventory performed in 1973.⁷⁰ In that inventory, the states classified all segments as either effluent limited (able to meet existing water quality standards with application of technology-related effluent limits) or water quality limited (unable to meet water quality standards without stricter effluent limits).⁷¹ Identification of the high-quality, effluent-limited segments is in itself a significant step toward effective nondegradation. Even if some of these classifications were made without detailed data, it is conceivable that a nondegradation program could proceed on estimates where necessary.⁷² EPA has apparently not considered this option.

While it is the relatively high-quality segments which require further data for nondegradation purposes, EPA has set just the opposite priority for its basin-planning program.⁷³ Analysis of water quality segments is given precedence over effluent-limited segments because of the need to establish load allocations and compliance schedules to meet water quality standards.⁷⁴

EPA's nondegradation position reveals considerable indecision on another question. At one point, the paper states that the steps of defining significant degradation and a control strategy should be "taken by the States themselves in their continuing planning processes."⁷⁵ Two paragraphs later: ". . . it will be necessary to establish national guidelines on degradation to assist the States in their definitions and control strategies, and to standardize the criteria for degradation."⁷⁶ Who will define nondegradation then, the states or EPA?

In short, EPA's published nondegradation position is not a position, but a conglomeration of ideas. It is interesting as the first exposition of EPA's thinking on nondegradation; as an impetus to effective action, its incoherence and absence of deadlines ensure failure. That it was published at all is probably due more to the insistence of environmentalists than official concern for water quality main-

70 See CLEAN WATER, *supra* note 10, at 8-13; PROPOSED CRITERIA, *supra* note 21, at 3-19 of Vol. II (gives average concentration levels of 28 minerals in major U.S. river basins); '74 STRATEGY, *supra* note 63, at 3 and 17-20.

71 See 39 Fed. Reg. 19634 (1974) (Policies and Procedures for State Continuing Planning Process, § 130.11 Classification of basin segments); '73 STRATEGY at 8, 14, A-1. The State Continuing Planning Process is required by FWPCA § 303(e), 33 U.S.C. § 1313(e). Part of this process involves preparing a plan for each basin within the state. The basins are defined by the states in conjunction with EPA. A segment is a relatively discrete portion of a basin that has common physical, chemical, biological and hydrologic characteristics.

72 See the textual discussion of the NRDC proposal accompanying note 123 *infra*.

73 The basin planning program is outlined in '74 STRATEGY, *supra* note 63 at 47-54 and in the references cited in note 71 *supra*.

74 See '74 STRATEGY at 3, 7, and 51. As required by FWPCA § 303(d), 33 U.S.C. 1313(d) (Supp. II, 1972), for its water quality limited segments each state must establish a maximum allowable daily load for each pollutant. From these loads, the state then must develop effluent limits and a schedule of compliance that will ensure attainment of water quality standards. These limits and schedule are incorporated into the state continuing planning process. See Zener, *supra* note 2, at 721.

75 See '74 STRATEGY at 59.

76 *Id.* at 60.

tenance.⁷⁷ The fact remains that over two years after FWPCA's passage there is not an EPA nondegradation program.

EPA's lack of emphasis on nondegradation is not hard to rationalize. The tremendous administrative burden of implementing FWPCA has necessitated careful setting and observance of priorities.⁷⁸ Most of the clamor that led to FWPCA's passage was directed at the abused condition of many rivers, lakes, and streams, and indeed FWPCA's 1983 goal of fishable and swimmable water cannot be attained without a substantial cleanup effort.⁷⁹ For these reasons and others previously mentioned,⁸⁰ it is not surprising that EPA's priorities have favored pollution abatement. Nonetheless, important environmental values as well as FWPCA's goals and objectives are jeopardized by EPA's continued delay in implementing an effective nondegradation program.

IV. The Objectives of an Affirmative Nondegradation Program

An ultimate goal of natural water quality is inherent in FWPCA's objective to "maintain . . . integrity."⁸¹ In setting a course to achieve natural water, Congress rejected the philosophy of previous versions of FWPCA which relied on use-related standards as the sole index of water quality.⁸² Even the '83 fishable, swimmable goal is only a step along the way toward no discharge and natural quality waters throughout the country.⁸³ With natural waters as the eventual goal, existing high-quality waters should be protected to the maximum extent practicable.

A nondegradation program could do little to reduce pollution from existing sources that is not already done under specific provisions of FWPCA. Under these provisions, all point sources must, as a minimum, meet technology-based effluent limits⁸⁴ with stricter standards for dischargers in water quality limited segments.⁸⁵ Even if EPA wanted to impose more rigid controls, it would be legally constrained. The FWPCA provisions affecting existing sources are quite specific in their requirements, and any attempt to go beyond them would likely be challenged for lack of authority. A nondegradation program should therefore focus on new sources of pollution.

77 Natural Resources Defense Council and other environmental groups have urged EPA to implement a nondegradation program. See note 115 *infra* and accompanying text.

78 '74 STRATEGY at 7. Nondegradation is not mentioned as a priority item.

79 "But today, the rivers of this country serve as little more than sewers to the seas. Waste from cities and towns, from farms and forests, from mining and manufacturing, foul the streams, poison the estuaries, threaten the life of the ocean depths." Legislative History, *supra* note 39, at 1253. (Comments of Sen. Muskie opening the Senate debate on S. 2770, November 2, 1971).

80 See text accompanying notes 13-14 *supra*.

81 FWPCA § 101(a), 33 U.S.C. 1251(a) (Supp. II, 1972).

82 Natural water quality does not refer to any specific water quality criteria. It means essentially that condition of a water body in which it maintains an internal balance that is only temporarily disturbed by external stress. Although there is great variance in natural quality from one water body to another due to varying climate and other conditions, biologists can determine the natural quality of a particular body of water with substantial confidence. See references cited in note 48 *supra*, particularly LEGISLATIVE HISTORY at 763 and 1468.

83 See FWPCA § 101(a)(1), 33 U.S.C. § 1251(a)(1) (Supp. II, 1972).

84 See FWPCA § 301, 33 U.S.C. § 1311 (Supp. II, 1972); Zener, *supra* note 2, at 694-95.

85 See FWPCA § 302, § 303(d); 33 U.S.C. § 1312, § 1313(d) (Supp. II, 1972); Zener at 721, 723-26.

The degree of degradation that occurs when a particular new source discharges into a particular body of water depends, very basically, on two factors: the discharge and the water. That the discharge affects degradation is obvious, and discharge control is essential to reducing pollution. The new source standards of FWPCA substantially reduce the potential for significant degradation by imposing effluent limits reflecting BADGT on all new source discharges.⁸⁶ Almost any addition to a water body, however, changes it to some degree and relatively small changes can have startling and unpredictable effects on the biological community.⁸⁷ Short of zero discharge, therefore, no effluent limit can sufficiently protect against significant degradation. Moreover, effluent limits are completely ineffective to prevent an accumulation of new sources in one location which could substantially degrade high-quality water. A nondegradation program should therefore also be concerned with the second factor affecting degradation, the water itself.

For any assumed discharge, the amount of degradation that will occur varies according to the characteristics of the receiving water. The ability of a stream to assimilate organic waste, for instance, depends on the velocity and volume of the flow and the level of the existing load.⁸⁸ The deleterious effects of a particular pollutant will also vary with such water characteristics as temperature, pH, and hardness.⁸⁹ Whether the deterioration caused by a particular discharge is "significant" therefore depends not only on the discharge, but on the receiving water.

Certain nonquantifiable characteristics of a water body are also relevant to whether a particular discharge will cause "significant" degradation. If a water body remote from population centers has special aesthetic or ecological value, any deterioration whatsoever could be considered significant.⁹⁰ Likewise, some urban waters are important as recreation sites, and a new discharge should not be permitted to interfere with recreational activity.⁹¹ All of these factors lead to the conclusion that a nondegradation program, if it is to be effective, should regulate the location of new pollution sources.

A. *The Inadequacy of Impact Assessment*

The *Water Quality Strategy Paper* suggests the possibility of using environmental assessments and impact statements as required by the National Environmental Policy Act⁹² (hereinafter NEPA) to control new source siting.⁹³ Before a new source discharge permit would issue, an applicant would be required to

86 See text accompanying notes 57-59 *supra*.

87 See Westman, *supra* note 23, at 768-69.

88 MITCHELL, *supra* note 59, at 141-46.

89 See NAS CRITERIA, *supra* note 21, at 16, 89, 177-79, 241. pH is a measure of the acidity of water.

90 See NAS CRITERIA at 39-40.

91 *Id.*

92 National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* (1970) [hereinafter cited as NEPA].

93 See '74 STRATEGY at 60. Environmental assessment means the initial threshold review to determine if an impact statement is required. EPA is developing regulations to guide this process for new sources. See 5 BNA ENV. REP., CURRENT DEVELOPMENTS 898 (Oct. 11, 1974).

show in the impact assessment process that no significant degradation would occur.

However, it is unlikely that NEPA impact assessment would be effective to prevent degradation from new source siting. First of all, there is a question whether an impact review of water quality effects can extend beyond specific FWPCA provisions.⁹⁴ Arguably, if a discharge complies with FWPCA effluent limits and standards, the permit could not be denied on the grounds of damage to water quality. Should this view be sustained, NEPA impact assessment would of course be useless to prevent significant degradation of high-quality waters.

The question on the timing of the impact statement also inhibits its use for nondegradation. To effectively control new source siting, impact assessment should be done before a potential discharger has settled on a location and purchased land. There is case law under NEPA however that could preclude EPA from requiring impact assessment at this early stage.⁹⁵

Also troubling is the question whether impact statements could be required for new sources in a state which administers its own permit program. The NEPA impact statement procedure applies only to "major *federal* actions (emphasis added)."⁹⁶ The specific question whether this language encompasses a state permitting program which is subject to federal review has not been litigated, but some precedent suggests that it does not.⁹⁷

Assuming favorable resolution of the legal questions, the impact assessment process has considerable practical disadvantages. Impact statements require consideration of several, but not all, alternative sites.⁹⁸ Thus they do not provide the perspective inherent in other processes which consider all waters in a planning area at one time.⁹⁹ This wider perspective would allow a state to make careful, broadly based decisions on which waters should be protected and to what degree.

Another drawback of impact assessment is its case-by-case approach. The approval of one discharge into a high-quality waterway facilitates approval of the next because high water quality has already been compromised. The first discharge may have only minimal impact, but the cumulative effect could be seriously degrading.

Both legal and practical considerations strongly suggest that NEPA impact analysis does not sufficiently regulate new source siting.

94 The basis of this question is § 511(c)(2) of FWPCA (33 U.S.C. 1371(c)(2)) which relieves agencies of any obligation to review FWPCA effluent limits or impose any stricter discharge standards as part of NEPA assessment. See F. ANDERSON, NEPA IN THE COURTS 112-13 (1973) [hereinafter cited as ANDERSON]; Zener, *supra* note 2, at 781-84.

95 See Gage v. Commonwealth Edison, 356 F. Supp. 80, 4 ERC 1767 (N.D. Ill. 1972); ANDERSON at 64-73.

96 NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1970).

97 Although this specific question has not been litigated, there are a number of cases on the degree of federal involvement necessary to trigger an impact statement. *E.g.*, Biderman v. Morton, 497 F.2d 1141 (2nd Cir. 1974); City of Highland Park v. Train, 374 F. Supp. 758 (N.D. Ill. 1974); O'Brien v. Brinegar, 379 F. Supp. 289 (D. Minn. 1974). See also ANDERSON at 61-64.

98 See ANDERSON at 217-21.

99 See notes 110-112 *infra* and accompanying text.

B. *Affirmative Controls on New Source Siting*

Effective prevention of significant degradation requires more than impact assessment. The states should survey the waters within their boundaries to identify waters of high recreational, aesthetic and ecological significance. Once identified, these waters could be classified according to the amount of degradation that will be permitted, essentially a process of discharge zoning. It would be desirable to prohibit any new discharges in the most valuable waters. Such a restriction is already in effect in a few states.¹⁰⁰

New point-source discharges are not the only source of degradation. Non-point sources also contribute significantly to water pollution and must be considered in a nondegradation program.¹⁰¹ Much less is known about controlling nonpoint-source pollution and, as a result, EPA will not emphasize treatment of nonpoint sources for several years.¹⁰² In the meantime, where necessary to preserve valuable waters, a nondegradation program should regulate to the extent practicable the location of activities such as strip mining and heavy construction which may cause significant nonpoint-source pollution. Such activities could be prohibited in certain areas as part of the discharge zoning process.

A nondegradation program should do more than zone certain water bodies for no degradation. Other high-quality waters should be protected from significant degradation by accounting for the ability of some waters to accommodate a particular new discharge better than others. Comparing the receiving capacity of one stream to another can be quite complex; the quality characteristics of the water should be examined in relation to the constituents of the expected discharge. For instance, a stream might have an abnormally high concentration of nutrients and inorganics while still retaining considerable capacity to assimilate organic waste. Careful matching of discharges to stream sites in this way would go far toward protecting high-quality waters while allowing necessary industrial uses.

Matching discharges to receiving waters with any degree of precision requires considerable data and expertise, undoubtedly more than are now available in many areas. Nevertheless, a nondegradation program should make some effort to correlate new sources and existing quality. FWPCA already requires essentially this type of analysis to develop load allocations for water quality limited segments.¹⁰³ As data becomes available the effort could be expanded, as part of a nondegradation program, to include effluent-limited segments.

100 Vermont prohibits any discharges into streams anyplace upstream of the most upstream discharge from a municipal treatment plant. See Vermont Water Classification and Quality Regulations, Rule 10, in BNA ENV. REP., STATE WATER LAWS 931:0504-05 (1974). Oregon has declared a policy to maintain wilderness areas in the pristine state. See Oregon Water Quality Control Regulations, Div. I, Subdiv. 4, in BNA ENV. REP., STATE WATER LAWS 886:0502A (1975).

101 See CLEAN WATER, *supra* note 10, at 14-16; *Senate Hearings*, *supra* note 17, at 96.

102 See LEGISLATIVE HISTORY, *supra* note 39, at 1457-58, 1470 (S. Rep. No. 92-414 at 39-40, 52); '74 STRATEGY, *supra* note 63, at 61-66; Zener, *supra* note 2, at 765-70.

103 See FWPCA § 303(d), 33 U.S.C. 1313(d) (Supp. II, 1972); note 74 *supra*.

C. Other Objectives of Nondegradation

Nondegradation can provide water pollution control benefits which are not directly related to preserving natural water quality. One of these is ensuring that new sources of pollution do not impede progress toward the goal of waters suitable for fishing and swimming by July 1, 1983.¹⁰⁴ While natural waters and no discharge remain the ultimate goal,¹⁰⁵ '83 quality is a vital interim step which EPA has given high priority in its water quality planning.¹⁰⁶

Specific provisions of FWPCA, although intended to effectuate '83 quality, are deficient in two ways. First, some state water quality standards that were in effect prior to '72 have use designations such as industrial water supply that allow lower than '83 quality.¹⁰⁷ Therefore, theoretically at least, presently swimmable waters subject to these low standards could legally deteriorate to unswimmable levels. With respect to existing dischargers, this deficiency can be cured by enforcing § 302 of FWPCA.¹⁰⁸ Section 302 allows EPA to impose effluent limits or alternate control strategies stricter than otherwise required when necessary to ensure attainment or maintenance of '83 quality.¹⁰⁹ The second deficiency however is that § 302 does not explicitly apply to new sources. This presents a potential loophole which would allow new sources to make presently swimmable waters unswimmable, hindering attainment of the '83 goal.

A nondegradation program should fill this breach by setting '83 quality criteria as the absolute upper limit on degradation in all waters. This should apply to presently dirty waters that become swimmable and fishable as well as to presently clean waters. A nondegradation program should also prohibit any new discharges into heavily polluted waters until such time as they become cleaner than '83 requirements. By instituting these measures, a nondegradation program will help ensure maximum progress toward the important '83 interim goal.

Nondegradation can also benefit EPA's water pollution control efforts by providing an impetus to pollution abatement in urban, industrial areas. Urban areas are generally preferable to remote areas as sites for industry due to their greater accessibility to labor, markets, transportation, and communication facilities. Strict environmental standards have offset these advantages to some degree and encouraged industry, when faced with a choice to expand at the present location or move, to relocate in remote areas where environmental control costs are reduced.¹¹⁰ Effective nondegradation will tend to reverse these decisions. Remote areas will be less available as an easy out, and industry will be more encouraged to make the investment in pollution control required to meet urban standards.

Nondegradation is also valuable as an adjunct to the state continuing

104 FWPCA § 101(a)(2), 33 U.S.C. § 1251(a)(2) (Supp. II, 1972).

105 See text accompanying notes 47-48 and 81-83 *supra*.

106 See '74 STRATEGY, *supra* note 63, at 10-16.

107 See, e.g., Kentucky Water Quality Standards, § 3(2) in BNA ENV. REP., STATE WATER LAWS 786:0501 (1971). EPA has for the present given low priority to review of these standards. See '74 STRATEGY at 7, 27-31; EPA, GUIDELINES FOR DEVELOPING OR REVISING WATER QUALITY STANDARDS 38 (January 1973, EP 1.8 W29). 1978 has been set as a target date for revising state standards to bring them in line with the '83 goal.

108 33 U.S.C. § 1312 (Supp. II, 1972).

109 See '74 STRATEGY at 32-33; Zener, *supra* note 2, at 724-26.

110 See text accompanying notes 15-16 *supra*; cf. Guilbert, *supra* note 15, at 50033-34.

planning process required by FWPCA.¹¹¹ As recognized by FWPCA, regulating the location of new sources is a vital aspect of long-range planning to control water pollution.¹¹² A nondegradation program which requires the states to gather water quality data and identify their most valuable waters will stimulate this process. These water use decisions will be a significant aid to utilization of areawide land use planning as an environmental control device.¹¹³ As pollution abatement becomes increasingly successful, state planning to limit the environmental effects of future growth may become the crux of water pollution control.

In sum, an affirmative nondegradation program which exerts some control over new source siting is essential to maximum protection of high water quality. This program should include a procedure to classify waters according to the degree of permissible degradation. The most valuable waters may be immunized against any new degradation. In other waters, some effort should be made to correlate new discharges with receiving capacity. To aid progress toward the goal of fishable and swimmable water, 1983 quality should be set as an absolute ceiling on degradation in all waters. These broad guidelines constitute an outline for effective nondegradation. Natural Resources Defense Council (hereinafter NRDC), an environmental group which has been actively involved in implementation of FWPCA,¹¹⁴ has proposed a nondegradation program that meets these requirements.

V. A Proposed Nondegradation Program

In a series of communications with EPA in 1973 and 1974,¹¹⁵ NRDC defined a coherent nondegradation program that, if implemented, should go far toward maintaining integrity. All water segments would be classified into one of two categories. Category I waters would be those valuable as natural resources: ". . . rivers in national parks and wildlife refuges, wild rivers, and bodies of water of high recreational, ecological, or aesthetic significance."¹¹⁶ No degradation of water quality would be permitted in Category I waters.

¹¹¹ See notes 71 & 73 *supra*.

¹¹² See FWPCA § 208(b)(2)(C)(ii), at 33 U.S.C. § 1288(b)(2)(C)(ii) (Supp. II, 1972); '74 STRATEGY, *supra* note 63, at 53.

¹¹³ Areawide land use planning is generally recognized as essential to environmental control in the future. See generally ROCKEFELLER BROTHERS FUND, *THE USE OF LAND* Ch. III (W. Reilly ed., 1973); AMERICAN BAR ASSOCIATION, *DEVELOPMENT OF THE ENVIRONMENT: LEGAL REFORMS TO FACILITATE INDUSTRIAL SITE SELECTION* Ch. 2 (1974); Note, *Protection of Environmental Quality in Nonmetropolitan Regions by Limiting Development*, 57 IOWA L. REV. 126 (1971). Planning programs have already been instituted in several states. See EPA, *ENVIRONMENTAL PROTECTION THROUGH PUBLIC AND PRIVATE DEVELOPMENT CONTROLS* (May 1973, EP 1.23/3 R5-73-018) (a study of the Brandywine Plan); Williams, *Oregon: The Fight for Survival*, SATURDAY REVIEW/WORLD 10 (November 16, 1974).

¹¹⁴ See Hall, *Litigation Under the Federal Water Pollution Control Act Amendments of 1972*, 4 ENV. LAW REP. 50109, 50115-19 (1974).

¹¹⁵ Memorandum from Bruce Terris and Helen Needham to Mark Pisano, December 5, 1973 (Mr. Pisano is EPA Director of Water Planning. Terris and Needham are attorneys on behalf of NRDC) [hereinafter cited as Dec. 5 Memo]; Memorandum from Bruce Terris and Helen Needham to Mark Pisano, December 18, 1973 [hereinafter cited as Dec. 18 Memo]; Letter from J. G. Speth to Mark Pisano, January 11, 1974 (Mr. Speth is counsel for NRDC's Project on Clean Water) [hereinafter cited as Jan. 11 Letter]; letter from Mark Pisano to J. G. Speth, Mar. 29, 1974.

¹¹⁶ Jan. 11 letter at 2.

All other waters would be included in Category II. Significant degradation in these waters would be an allowable fixed percentage increase above baseline for each water quality constituent. For instance, a five percent limit is suggested for dissolved oxygen;¹¹⁷ if the existing level of dissolved oxygen in a stream is five parts per million, 4.75 parts per million would be the limit of permissible degradation. A separate percentage would be set for each constituent. By accounting separately for each constituent, this plan would accommodate discharges to receiving capacity. Deterioration to the degradation floor for one constituent would not prevent a new discharge comprised of other nonlimited constituents. The percentage definition of degradation also would have the advantage, as NRDC points out,¹¹⁸ of allowing smaller absolute degradation in higher quality waters, thus giving greatest protection to the cleanest water.

NRDC considers protection of '83 water quality to be critically important.¹¹⁹ Accordingly, its proposal would not allow Category II waters to degrade below '83 quality regardless of baseline.

NRDC suggests that the plan be enforced through the permit system.¹²⁰ All applicants for new source permits would have the burden of showing that their discharge would not violate significant degradation as defined by the program. No permit would issue until this burden had been met.

The NRDC plan has much to commend it. It is a coherent whole that would meet the immediate needs of an affirmative program. Its primary difficulties are reliance on baseline data and the uncertainties of determining discharge load allocations that correspond to water quality criteria. The latter difficulty is endemic to pollution control and will become less of a problem as techniques are refined.¹²¹ Nevertheless, to ensure that the imprecision in this determination does not cause inadvertent standards violation, a sufficient margin of safety should be demanded as part of the burden of proof for a permit applicant.¹²²

In regard to baseline, the NRDC proposal acknowledges the relative unavailability of data by suggesting that estimates be made where existing data is insufficient.¹²³ This may indeed be a necessary shortcut to implementation of nondegradation, but it is not ideal. If baseline data is estimated, the permittee may be able to meet his burden of proof by doing his own sampling to establish that the actual baseline was higher than the estimate. This would not be objectionable if baseline measurement techniques were precisely defined. Until they

117 Dec. 18 Memo at 1. NRDC has recommended a 5% limit for dissolved oxygen, temperature, and pH and a 10% limit for other water quality parameters, NRDC does not have technical support for these particular limits. Undoubtedly they would allow considerable room for additional sources in Category II waters, however, EPA should attempt to analyze the suitability of a particular limit. It is possible that lower limits would be more appropriate. The suitability of a particular percentage limit is intertwined with prescribing baseline measurement since many parameters (particularly DO and temp.) can vary considerably with the seasons and the weather. See text accompanying notes 68-69 *supra*.

118 See Dec. 5 Memo at 2.

119 See Dec. 5 Memo at 2; Dec. 18 Memo at 2.

120 Dec. 5 Memo at 3-4.

121 See notes 23, 74, and 103 *supra* and accompanying text.

122 Cf. FWPCA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C) (Supp. II, 1972).

123 See Dec. 5 Memo at 3; text accompanying notes 70-74 *supra*.

are, however, it is important to recognize that measurement methods can significantly influence results.¹²⁴

A. *Division of Responsibility Between EPA and the States*

Whatever nondegradation program is eventually adopted, a question which must be confronted is what degree of autonomy should be left to the states. The concern for new source siting inherent in nondegradation militates for deference to the states. They know best the characteristics of their waters and the growth potential of their localities.¹²⁵

However, there are also good reasons to retain substantial control over nondegradation at the federal level. The states have not in general utilized their existing nondegradation authority, and they are not likely to act differently now unless forced.¹²⁶ Furthermore, the competition among states to attract and hold industry directly opposes effective pollution control and tends to force state standards up to the minimum federal requirements. This factor led Congress to institute nationally uniform effluent limits in FWPCA.¹²⁷

The opposing points of view both have merit, and the NRDC proposal achieves an acceptable compromise. The percentage definition of Category II significant degradation is uniformly applied to all states to minimize the effect of economic competition. At the same time, the states retain considerable flexibility to meet the peculiarities of their own situation. The classification of waters into categories is done solely by the states, which allows them to set aside for zero degradation a quantity of water that does not conflict with their growth needs. In Category II waters, the states themselves control new source siting, subject only to the percentage limit.

B. *Timing*

The timing of nondegradation is not a very complex issue. It should be implemented as soon as possible. NRDC has urged that the states be required to include a nondegradation program in their mid-'75 basin plan submissions to EPA.¹²⁸ EPA has not responded, and this deadline is almost certain to pass without action.

EPA apparently senses no urgency about nondegradation. The *Water Quality Strategy Paper* talks of antidegradation as an emphasis only after presently polluted waters improve;¹²⁹ July 1978 is the target date for including a nondegradation program in the state planning process.¹³⁰ This timing is unresponsive to the congressional intent. The obligation to maintain integrity is not

124 See notes 68-69 and accompanying text *supra*.

125 See '74 STRATEGY, *supra* note 63, at 59-60; text accompanying notes 75-76 *supra*.

126 See note 54 and accompanying text *supra*.

127 See *Senate Hearings, supra* note 17, at 54, 1118; Zener, *supra* note 2, at 701; Hall, *Litigation Under the Federal Water Pollution Control Act Amendments of 1972*, 4 ENV. LAW REP. 50109, 50118 (1974).

128 See Dec. 5 Memo, *supra* note 114, at 4.

129 See '74 STRATEGY, *supra* note 63, at 16, 54, 59.

130 *Id.* at 51.

conditioned upon successful pollution abatement, but requires that ecologically and aesthetically valuable waters and waters of natural or near natural quality be protected now. The eventual result of continued delay in implementing non-degradation could be waters uniformly degraded to the '83 standards. While this is assuredly not an immediate threat, EPA's obligation is to maintain the integrity of all waters; and if any waters significantly degrade, they have not met the charge.

The timing of implementation directly affects baseline quality. The baseline should be measured as of October 18, 1972, the date of FWPCA's passage. Therefore, in water bodies that have been subjected to new discharges since 1972, existing quality should be adjusted to reflect '72 levels.¹³¹ Of course, it is possible that whatever degradation limit is defined will have already been violated; in this case no additional discharge should be permitted until water quality improves below degradation limits.

VI. Conclusion

The NRDC proposal offers a good beginning for design of a nondegradation program. A few technical matters need to be worked out in detail,¹³² and procedures for public participation in the waters' classification process should also be studied. None of these problems, however, are as significant as the problem of overcoming federal and state inertia.

Nondegradation has lain dormant ever since the Udall statements were included in state standards. For various reasons,¹³³ the states are not likely to take the initiative unless prodded by EPA, and EPA has shown only token interest in nondegradation while concentrating on pollution abatement. This concentration ignores the important complementary relation between abatement and nondegradation which Congress endorsed in the "restore and maintain" language of FWPCA.

EPA has comfortably asserted that nondegradation will come to the fore of water pollution control as abatement proceeds.¹³⁴ This is certainly true,¹³⁵ and just as certainly not enough to satisfy FWPCA. Congress decided that the benefits of clean water were worth the substantial costs of cleaning up pollution.¹³⁶ Where the benefits can be preserved without incurring the costs, it should be done. This basic appeal to common sense is the ultimate logical justification for nondegradation, and it makes sense now. Continued delay in implementing a positive nondegradation program will only increase the future costs of achieving natural waters.

131 See Dec. 5 Memo at 3.

132 See note 116 *supra*. The mixing zone concept also needs study in regard to nondegradation. Mixing zone is the term for the area in which an effluent is at higher than ambient concentrations until it diffuses. Should the degradation limit be determined in the mixing zone and how large a mixing zone should be allowed? See NAS CRITERIA, *supra* note 21, at 112-115.

133 See note 54 *supra*.

134 See note 128 and 129 and accompanying text *supra*.

135 See, *cf.*, Guilbert, *supra* note 15, at 50036.

136 LEGISLATIVE HISTORY, *supra* note 39, at 1429-30, 1465-66 (S. Rep. No. 92-414 at 11-12, 47-48). See generally ECONOMICS OF CLEAN WATER, *supra* note 10.

The threat to economic growth posed by nondegradation is not as serious as some have suggested.¹³⁷ New industry would be restrained only when it wished to locate in places where water quality would be seriously affected. Although growth would thus be directed away from the most valuable natural waters, growth would indeed continue. Industrial expenditures for pollution control equipment would likely increase as a result of nondegradation, but these costs are concomitant to the political choice for clean water represented by FWPCA and do not justify EPA's delay.

Ultimately, nondegradation is one element of the challenge to direct growth toward improving the quality of existence rather than accepting growth as an end in itself.¹³⁸ Clean water is an aspect of the quality of existence to which Congress has given its explicit sanction. As the appointed steward of clean water, EPA should begin positive action to implement nondegradation without further delay.¹³⁹

—*Michael Snyder*

137 See notes 17 and 18 and accompanying text *supra*.

138 See, e.g., Sources cited at note 113 *supra*.

139 There is some indication that EPA is planning further statements on nondegradation in the near future. See 5 BNA ENV. REP., CURRENT DEVELOPMENTS 1655 (Feb. 21, 1975).

