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COMMENTS

NONPOINT POLLUTION CONTROL IN VIRGINIA

I. INTRODUCTION

Congress has established a national goal of "clean water" by 1983¹ and the elimination of all pollutant discharge into the navigable waterways by 1985.² The nation has made great strides toward controlling and eliminating point source pollutants.³ There has been no corresponding progress in the area of nonpoint pollution control.⁴ Such pollution from agriculture, mining, silviculture, and urban runoff is causing lakes to die prematurely and is seriously affecting Virginia's fishing industry. This comment will review the federal requirements for control of nonpoint source pollution, Virginia's role in an implementation program, and, finally, some recommendations to aid Virginia in achieving the 1985 no pollution goal.

II. NONPOINT POLLUTION—WHY IT MUST BE CONTROLLED

A. *The Nature of the Problem*

Nonpoint pollution includes soil erosion from agricultural, silvicultural, and mining sources, as well as urban runoff.⁵ Soil erosion is the major pollution threat,⁶ carrying the pesticides, fungicides, rodenticides and nu-

1. Act § 101(a)(2), 33 U.S.C. § 1251(a)(2) (Supp. V, 1975) which states: "[I]t is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983."

2. Act § 101(a)(1), 33 U.S.C. § 1251(a)(1) (Supp. V, 1975).

3. Act § 502(14), 33 U.S.C. § 1362(14) (Supp. V, 1975) defines point source as: "[A]ny discernable, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged."

4. The term "nonpoint source" is almost as difficult to define as it is to control. It is generally considered to be any source which is not a point source. The Act, § 304(f)(A)-(E), 33 U.S.C. § 1314(e) (Supp. V, 1975), includes as nonpoint sources any pollution resulting from: (1) Agricultural and silvicultural activities; (2) Mining activities; (3) Construction activity; (4) Disposal of pollutants in wells and subsurface excavations; and (5) Salt water intrusion resulting from reductions of fresh water.

5. *Id.* See also State Water Control Board, Virginia Water Quality Inventory (305(b) report), Report to EPA Administrator and Congress, Information Bulletin 526, at 43-56 (1976).

6. As Senator Culver (Iowa) stated: "It has been estimated by the U.S. Conservation Service SCS, that cropland is responsible for 50% of the total sediment entering our inland waterways. Over 400 million acres of cropland contribute 2 billion tons of sediment annually to our streams, lakes and rivers." 123 Cong. Rec. S19,683 (daily ed. Dec. 15, 1977). See, Va.

trients placed in the soil as well as other contaminants used or created by land use.⁷ In Virginia, nonpoint pollution⁸ is presently considered uncontrolled and a threat to the marine environment.⁹

The Virginia fishing industry has felt the effects of nonpoint pollution.¹⁰ The State Water Control Board (SWCB) has investigated several incidents of fish kills which resulted from the concentrated runoff of chemical applicators used to fertilize farmlands.¹¹ This runoff seriously affects mollusks¹² which can concentrate these pesticides in their bodies up to 70,000 times the level found in the surrounding water.¹³ Additionally, shellfish beds in the Tidewater area have been condemned due to high levels of fecal coliform¹⁴ "which most likely came from nonpoint sources."¹⁵

The silviculture contribution to nonpoint pollution is generally in the

305(b) Report, *supra* note 5, at 45; Comment, *A Procedural Framework for Implementing Nonpoint Source Water Control in Iowa*, 63 IOWA L. REV. 184,184 (1977).

7. The chemicals used in farm operations are generally insoluble in water and attach to soil particles which then erode into streams due to rain or irrigation. The fertilizers contribute nutrients to the stream that cause excessive green plant growth (algae). This causes accelerated eutrophication, or natural aging of the water source. A study in Northern Virginia on the Occoquan Reservoir has shown that over 90% of the nutrient loading (i.e., excessive fertilizers such as nitrogen) were attributable to nonpoint sources. There has also been a significant worsening trend in the runoff of octophosphates within the State. See Va. 305(b) Report, *supra* note 5, at 11, 43-45.

8. *Id.*

9. JOINT SUBCOMMITTEE ON THE COASTAL RESOURCES MANAGEMENT ACT, ISSUE PAPER 7 (1978).

10. Va. 305(b) Report, *supra* note 5, at 9, indicates that: "During 1975, there were 168 fish kills reported in Virginia's waters. These represent not only pollution caused fish kills but also natural kills as well as kills occurring in private ponds, in most cases resulting from nutrient enrichment from livestock and fertilizer runoff."

11. Va. 305(b) Report, *supra* note 5, at 43.

12. Includes all invertebrate bivalves such as the oyster, clam and mussel as "molluscan shellfish." Va. 305(b) Report, *supra* note 5, at 57.

13. Va. 305(b) Report, *supra* note 5, at 45.

14. Defined as excrement from warm-blooded animals which contains coliform bacteria; organisms which live in the intestinal tracts of these warm-blooded animals, including humans. Some of these bacteria are pathogenic and can cause such waterborne diseases as salmonella and typhoid. F. GRAD, 1 TREATISE ON ENVIRONMENTAL LAW, § 3.01, 3-7 (1977).

15. Va. 305(b) Report, *supra* note 5, at 46. The State Water Control Board (SWCB), in 1972, initiated an intensive animal waste control program in the Tidewater area. During the period 1972-74, a total of 633 potential animal waste sources were inspected. Of these 633 sources, only 175 sources achieved compliance with the SWCB no-discharge guidelines. This intensive program was terminated in 1975 due to lack of federal animal waste source guidelines; federal questioning as to the effectiveness of state guidelines; and reductions of the SWCB staff resources. Since 1972, there has been a net loss of 170,835 acres of shellfish growing areas due to animal waste (nonpoint) sources. Va. 305(b) Report, *supra* note 5, at 63-66.

form of silt from soil erosion in skid trails, haul roads and firebreaks.¹⁶ The mining industry, although controlled by regulations during active periods, becomes critical as a nonpoint source when the mine is abandoned.¹⁷ The pollutants in that case are both sediment from strip mining¹⁸ and the oxidation of pyritic contaminants.¹⁹

B. Federal Water Pollution Control Act Amendments

In 1972 Congress enacted the Federal Water Pollution Control Act Amendments (FWPCA).²⁰ These amendments were designed to restore the nation's waters to their natural chemical, physical and biological integrity.²¹ This restoration was to be accomplished by changing the program from a water quality standards control mechanism to a discharge control mechanism.²² The discharge control mechanism was articulated in section 402 of the FWPCA as the National Pollution Discharge Elimination System (NPDES).²³ This NPDES established a permitting program to impose "effluent limitations"²⁴ and required specific treatment technology to be applied to water discharges containing pollutants.²⁵

16. Va. 305(b) Report, *supra* note 5, at 47.

17. Va. 305(b) Report, *supra* note 5, at 48.

18. *Id.*

19. Pyrite is a common mineral found in some coal seams. When exposed to air and water, this mineral breaks down into iron oxide and sulfuric acid. The iron oxide is relatively inert but the sulfuric acid, even though diluted by the stream water, destroys vegetation and aquatic life. In Louisa County, acid seepage from an abandoned mine has effectively killed a stream called Contrary Creek.

20. The Act was added by Pub. L. 92-500 without reference to prior acts and intervening amendments due to the extensive amendment, reorganization, and expansion of the act's provisions. 33 U.S.C. § 1251 (Supp. V, 1975). This amendment, as determined by the Senate Committee Report, was to provide better standards, effective enforcement, and increased funding. S. REP. NO. 92-414, 92d Cong., 2d Sess., *reprinted in*, [1972] 2 U.S. CODE CONG. AND AD. NEWS 3668, 3675-77.

21. Act § 201(a), 33 U.S.C. § 1251(a) (Supp. V, 1975).

22. This change was from a reliance on ambient water quality levels to a measurement of effluent levels of discharge. S. REP. NO. 92-414, 92d Cong., 2d Sess., *reprinted in*, [1972] 2 U.S. CODE CONG. AND AD. NEWS 3668, 3678. Ambient standards measure general water quality and overall characteristics of that body of water. Discharge sources are regulated only as necessary to maintain general water quality levels as required by law. Effluent levels measure precisely the discharge from all such sources and regulate that discharge. *See* notes 24-25 *infra*.

23. Act § 402, 33 U.S.C. § 1342 (Supp. V, 1975).

24. Effluents are defined as the outflow of all pollutants from a source. The effluent limitations require each discharger to meet a uniform pollution abatement level regardless of the quality of the water receiving the discharge. Comment, *Area-wide Planning Under the FWPCA Amendments of 1972; Intergovernmental and Land Use Implications*, 54 TEX. L. REV. 1047, 1051 n. 24 (1976).

25. By 1977, all publicly owned treatment works must meet effluent limitations based on

The States were charged with the primary responsibility for implementing the national goals²⁶ and managing the NPDES program.²⁷ State control was, however, subject to extensive oversight by the Environmental Protection Agency (EPA).²⁸

The FWPCA caused some significant gains for the environment²⁹ in the area of point source pollution control³⁰ as a result of the section 402 NPDES permit system. The Senate Environment and Public Works Committee recognized this improvement but also noted that nonpoint source pollution had been almost totally overlooked by both the EPA and the states.³¹ The

"secondary treatment." Act § 301(b)(1)(B), 33 U.S.C. § 1311(b)(1)(B) (Supp. V, 1975). (Primary treatment involves removal of material that floats or will settle in sewage; secondary treatment involves the employment of chemical technology and biological processes to purify the water to a limited degree. Grad, *supra* note 14, at 3-8). By 1977, all private point sources of discharge were to conform to effluent limitations based on the "best practicable control technology currently available." Act § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) (Supp. V, 1975). By 1983, all publicly owned treatment works will be required to meet limitations based on best practicable waste treatment technology required by the construction grant program for treatment facilities. *Id.* § 1311(b)(2)(B). Private discharges will be required to meet the "best available control technology economically achievable." *Id.* § 1311(b)(2)(A).

26. Act § 101(b), 33 U.S.C. § 1251(b) (Supp. V, 1975) states in part:

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator . . . under this chapter.

27. Act § 402(b), 33 U.S.C. § 1342(b) (Supp. V, 1975), stated that a state could administer its own permit program for discharges into navigable water provided the state had legal authority for such a program and it was approved by the EPA Administrator. *Compare with* Act § 101(b), 33 U.S.C.A. § 1251(b) (Supp. Pam. 1970-77), which added the provision expressing Congressional policy that the states manage the construction grant program and implement permit programs under section 1342 and 1344.

28. *See* note 27 *supra*; Act § 309(a)(2), 33 U.S.C. § 1319(a)(2) (Supp. V, 1975), states that if a state failed to enforce permit conditions, the Administrator could re-impose federal enforcements.

29. *See* S. REP. NO. 95-370, 95th Cong., 1st Sess., *reprinted in*, [1977] 3 U.S. CODE CONG. AND AD. NEWS 4326, 4328 (Hereinafter cited as *Leg. Hist.*). The commission found costs in achieving the 1983 regulatory requirements to be small and the benefits realized from these costs to be substantial. In economic terms alone the benefit would reach \$33.3 billion and as much as \$88.1 billion by 1985. *Id.* at 4328.

30. *Leg. Hist.*, *supra* note 29, at 4328-29. Point source pollution generally deals with discharges from municipal and industrial waste treatment facilities. *See* note 25 *supra*. The total estimated cost of waste treatment in industrial facilities, as a percentage of gross sales is under one percent (for all industries). Grad, *supra* note 14, at 3-9. In Virginia, active mining operations are considered point sources and are required to obtain NPDES permits as well as operate their own waste treatment facilities. Va. 305(b) Report, *supra* note 5, at 48.

31. The Senate Environment and Public Works Committee noted that nonpoint pollution control was specifically reserved to the states under section 208 of the Act; however, actual abatement programs had not been developed or implemented. *Leg. Hist.*, *supra* note 29, at

general reason for the failure to address this form of pollution was based upon the practicable feasibility of nonpoint pollution control management.³²

Point sources are clearly identifiable³³ and the means of control clearly delineated by the law.³⁴ Nonpoint sources, however, derive from vast areas of land³⁵ and may enter a water source in an infinite number of points. It is difficult to determine both an adequate means of measuring the pollutant discharge as well as what constitutes a nonpoint pollutant.³⁶

Congress determined that existing soil conservation practices had not been effective in meeting the problem of water degradation³⁷ and that "existing measures [were] too production-oriented and geographically disconnected."³⁸ In order to achieve the national goal of "clean water" by

4334-36. Senator Muskie also noted in his report that, "Currently there is no attempt to focus conservation efforts on those areas which have serious water quality problems caused by soil erosion." *Id.* at 4362.

32. *A Procedural Framework*, *supra* note 6, at 185. *But cf.*, *Natural Resources Defense Council, Inc. v. Train*, 396 F. Supp. 1393 (1975), *aff'd sub nom.*, *Natural Resources Defense Council, Inc. v. Costle*, 568 F.2d 1369 (1977). In *Costle*, EPA argued unsuccessfully that administrative or technological infeasibility was justification for failure to enforce certain portions of the NPDES program. The court held that "technological or administrative infeasibility of such limitations may result in adjustments in the permit programs, as will be seen, but it does not authorize the Administrator to exclude the relevant point source from the NPDES program." *Id.* at 1379.

33. *See* note 3 *supra*.

34. *See generally*, Act § 301, 33 U.S.C. § 1311 (Supp. V, 1975); Act § 402, 33 U.S.C. § 1342 (Supp. V, 1975).

35. Senator Muskie's Report to the Senate on the Clean Water Act of 1977 noted:

The magnitude of the effect of soil erosion on water quality is documented. Suspended solids reaching the Nation's streams from runoff are estimated to be 700 times greater than the loadings caused by sewer discharges. The Mississippi River system delivers approximately 250 million tons of sediment to the Gulf of Mexico annually, which is equivalent to the weight of 250,000 acres of topsoil measured to the depth of 7 inches. All of the 97 percent of the Nation's rural land is a potential source of nonpoint pollution and over 400 million acres of cropland deliver 2 billion tons of sediment annually to the streams and lakes. This runoff may carry toxic materials and nonpoint sources may actually prevent attainment of water quality goals in spite of the progress being made with controlling point sources of pollution.

Leg. Hist., *supra* note 29, at 4362. *See* text accompanying notes 5-19, *supra*.

36. *See* note 4 *supra*. Virginia has clearly defined sediment as a pollutant. In an opinion to the SWCB, the Attorney General stated that "the deposit of excessive and unnatural quantities of sediment in State waters would constitute pollution for the purposes of the State Water Control Law." Opinion of the Attorney General of Virginia to the Secretary of the Water Control Board, September 7, 1971.

37. *Leg. Hist.*, *supra* note 29, at 4362.

38. *Id.*

1983,³⁹ nonpoint pollution control measures had to be implemented. Under the FWPCA it was possible for a state to eliminate point pollution by relying on newly constructed treatment facilities and NPDES permit programs. The state could still, however, fail to meet the national clean water goal due to continued pollution from nonpoint sources.⁴⁰ As point pollution problems decrease, nonpoint pollution becomes a greater menace.⁴¹

C. *The Clean Water Act of 1977*

The Clean Water Act of 1977⁴² (CWA) presented stronger and clearer direction for states to identify and control sources of nonpoint pollution.⁴³ This guidance is provided by section 208 as amended by the CWA.⁴⁴ Section 208 provides, in part, that each state would develop methods and procedures for areawide planning (including land use requirements) to control such sources as agriculture, silviculture, mining and urban runoff.⁴⁵

39. See note 1 *supra*.

40. See note 35 *supra*. Mr. Pisano, formerly Director of the EPA Water Planning Division, has commented that nonpoint source pollution is "possibly equal to or greater than the total problem caused by all point sources." Water Planning Division, EPA, 208 Bulletin No. 5, November 28, 1975.

41. "[A]gricultural runoff has significant and adverse effects on the quality of the Nation's waters. Nonpoint source pollution from animal wastes, fertilizers, pesticides, and eroded soil is difficult to control because of the diffuse nature of the problem and is growing in magnitude." *Leg. Hist.*, *supra* note 29, at 4362.

42. Pub. L. 95-217 § 2, 91 Stat. 1566 (1977). This Act is in reality another amendment to the Federal Water Pollution Control Act. The 1977 amendments in conjunction with the stated congressional intent provide the basis of the increased federal attention to nonpoint pollution sources.

43. The Senate Environment and Public Works Committee Report stated: "The committee clearly intends 208 to produce specific nonpoint source abatement programs and will review the program as more plans are completed." *Leg. Hist.*, *supra* note 29, at 4335. This committee intention was demonstrated by increased funding provided for planning and agricultural incentives to control nonpoint sources. See text accompanying notes 65-69, *infra*. *But cf.*: Note, *Agricultural Non-point Source Water Pollution Control Under Sections 208 and 303 of the Clean Water Act: Has Forty Years of Experience Taught Us Anything?*, 54 N.D. L. REV. 588, 597 (1978) (Stating that CWA is "feeble legislation for treatment of non-point source water pollution problems.")

44. Act § 208, 33 U.S.C.A. § 1288 (Supp. Pam. 1970-77). Although direct federal regulation was considered to control nonpoint sources, the Senate Committee chose to continue the experiment with state control as implemented under the FWPCA of 1972. This state control, however, was subject to review by EPA and continued funding of any 208 agency was contingent on a demonstrated ability of these agencies to deal with problem areas. Finally, the committee stated that where states are reluctant to develop control measures and management practices, "a Federal presence can be justified and afforded." *Leg. Hist.*, *supra* note 29, at 4336.

45. Act § 208, 33 U.S.C.A. § 1288(b)(2)(F)-(K) (Supp. Pam. 1970-77).

Growth management and land use control⁴⁶ were indicated as the means of controlling nonpoint pollution instead of the normal process of technological treatment currently applied to urban and industrial waste.⁴⁷ The complexity and diversity of this problem requires such an approach.⁴⁸

Three major programs are authorized under section 208.⁴⁹ These include urban growth management,⁵⁰ waste treatment facility construction,⁵¹ and the identification and prevention of nonpoint pollution sources through areawide planning.⁵² In view of Virginia's strong agriculture, silviculture, mining and fishing industries, this comment will focus on the implications of area-wide planning to control nonpoint sources.⁵³

1. *Areawide Planning: The 208 Plan*

Areawide planning under section 208 of the CWA includes: (1) recognition of areas within the state that have substantial water quality control problems;⁵⁴ (2) designation of the state by the governor as an areawide

46. This method was intended by the FWPCA of 1972 and restated in the Clean Water Act of 1977. In remarks before the Practicing Law Institute's Conference on April 9, 1973, the Counsel for the House Public Works Committee, Mr. Lester Edelman, noted that section 208 of the FWPCA amounted to a land use act within the water act. Federman, *The 1972 Water Pollution Control Act: Unforeseen Implications for Land Use Planning*, 8 URB. LAW. 140, 142 (1976).

47. This process is considered inapplicable to nonpoint sources since there are no discrete points of emission for these sources of pollution. *A Procedural Framework*, *supra* note 6, at 190. *See note 25 supra*.

48. According to the Senate Report on the Clean Water Act, "[t]he problems of soil erosion and water pollution from nonpoint sources are nearly identical." *Leg. Hist.*, *supra* note 29, at 4362. This requires a "system of technical and financial assistance for instituting soil conservation practices for improving water quality." *Id.* *See note 35 supra*.

49. Act § 208(b), 33 U.S.C.A. § 1288(b) (Supp. Pam. 1970-77).

50. *Leg. Hist.*, *supra* note 29, at 4330:

The committee underscores, by its actions, the intention of the 1972 act: the purpose of these funds is not to finance the future growth needs of the United States. Rather, the purpose is to eliminate backlog with limited provisions for growth set forth specifically in the statute to recognize the cost-effectiveness factors and to achieve a balance between the pressures for economic development and the need for environmental improvement.

See Land Use Implications, *supra* note 24, at 1054-62.

51. This waste treatment facility program also includes the development of alternate treatment plants including 100 percent grants to fund the development of alternate and innovative technologies. *Leg. Hist.*, *supra* note 29, at 4331.

52. Urban growth management and the waste treatment facility programs are beyond the scope of this Comment and will not be discussed further.

53. *See text accompanying notes 5-19, supra*.

54. *See Act* § 208(a)(2)-(4), 33 U.S.C.A. § 1288(a)(2)-(4) (Supp. Pam. 1970-77).

planning agency for all areas not otherwise designated;⁵⁵ (3) designation of a governmental agency within the state⁵⁶ to supervise and control the implementation,⁵⁷ operation⁵⁸ and monitoring of the planning region;⁵⁹ and (4) a plan, acceptable to the administration of EPA, that shows state compliance with federal standards⁶⁰ and that is capable of meeting the national water quality goal by 1983.

The program specifically reserves nonpoint control to the states and local governments of the states.⁶¹ The EPA, however, retains final approval authority over all state plans and the failure to submit a satisfactory plan could result in the withdrawal of federal funds⁶² or EPA intervention.⁶³

The necessity of federal funds for waste management facilities and the mere threat of direct federal intervention has been enough, in some areas, to create a willingness to initiate local regulatory programs.⁶⁴ The CWA provides additional financial aid as an inducement to both agricultural interests and state planners to develop nonpoint pollution control.⁶⁵ Under amended section 208, provision is made for federal funding of 100% of the planning costs for state plans submitted prior to October 1, 1977,⁶⁶ and for funding of 75% of all planning costs in the years following the initial two planning years.⁶⁷

Recognizing the potential costliness of such pollution prevention measures, Congress has also provided funds directly to farmers on a contract basis to help defray the costs of implementing nonpoint pollution control.⁶⁸ Designed for areas with severe agricultural pollution problems, this program provides up to \$200 million in aid for fiscal year 1979 and \$400 million

55. See Act § 208(a)(6), 33 U.S.C.A. § 1288(a)(6) (Supp. Pam. 1970-77).

56. See 40 C.F.R. § 130.15 (1977).

57. See 40 C.F.R. § 130.33 (1977).

58. See 40 C.F.R. § 130.12 (1977).

59. See 40 C.F.R. § 130.20 (1977).

60. See 40 C.F.R. § 130.17 (1977).

61. See notes 31 and 44, *supra*.

62. Funds can currently be withheld only in the event that the state plan fails to meet the regulatory requirements and the Regional Administrator of the EPA determines that a state is being recalcitrant and not exhibiting a "good faith effort." *A Procedural Framework, supra* note 6, at 198. See 40 C.F.R. § 130.31(c) (1977).

63. See note 43 *supra*.

64. *Leg. Hist., supra* note 29, at 4335.

65. Act § 208(f), 33 U.S.C.A. § 1288(f) (Supp. Pam. 1970-77).

66. *Id.* § 1288(f)(2).

67. \$150 million will be appropriated each year for fiscal years 1978-80. *Id.* § 1288(f)(3).

68. Grants made to farmers for nonpoint pollution control will be administered by the Secretary of Agriculture through the Soil Conservation Service and other agencies that the Secretary might designate. Act § 208(j), 33 U.S.C.A. § 1288(j) (Supp. Pam. 1970-77).

for fiscal year 1980.⁶⁹ Congress has also required various federal agencies to provide technical assistance to the states on a limited no-cost basis⁷⁰ for the purpose of developing "Best Management Practices"⁷¹ for nonpoint source control.⁷²

2. Virginia's Approach to 208 Planning

In Virginia, the agency designated by the General Assembly to develop an areawide waste management plan is the State Water Control Board (SWCB).⁷³ SWCB's statewide planning began in August of 1977.⁷⁴ In the first year of the program, emphasis has been given to nonpoint source pollutants.⁷⁵

The Board is developing Best Management Practice (BMP) Handbooks that outline nonpoint source control practices for agriculture, forestry, mining, urban areas, hydrological modifications and sources affecting groundwater.⁷⁶ These handbooks demonstrate Virginia's approach to nonpoint pollution: education of potential polluters rather than active and direct regulatory action.⁷⁷ This informative rather than regulatory role is due in part to limitations on appropriations and personnel.⁷⁸

The CWA requires that each areawide planning region submit a Water Quality Management (WQM) Plan to EPA.⁷⁹ The state must make an

69. *Id.* § 1288(j)(9).

70. Includes consultation and technical assistance from the EPA, Army Corps of Engineers, and the United States Fish and Wildlife Service. Act § 208(g)-(i), 33 U.S.C.A. § 1288(g)-(i) (Supp. Pam. 1970-77).

71. Best Management Practices (BMP) are defined as "a practice, or combination of practices that is determined by a State (or designated areawide planning agency)", for the purpose of reducing the amount of pollution generated by nonpoint sources to a level compatible with existing water quality goals. These BMP's must include problem assessment, examination of alternative practices, and public participation so that the approved practices are the most effective, practicable means (including technological, economic, and institutional considerations). 40 C.F.R. § 130.2(q) (1977).

72. *See* 40 C.F.R. § 131.11(j)-(1) (1977) which requires application of BMP's to nonpoint pollution source control.

73. *See* VA. CODE ANN. § 62.1-44.15 (Cum. Supp. 1978).

74. Memorandum from E. Southerland, Engineer, Bureau of Water Control Management, State Water Control Board (June 5, 1978).

75. *Id.*

76. *Id.*

77. Telephone interview with Ms. E. Southerland, Engineer, Bureau of Water Control Management of the State Water Control Board (September 15, 1978).

78. Opinion of the Attorney General of Virginia for the Office of the Secretary of Commerce and Resources, Legal Authorities Report, June 1978, at 37. *See* note 15 *supra*.

79. This water quality management plan must include: (1) A statewide assessment of water quality problems and the causes of these problems; (2) a ranking of each segment based on

assessment of the existing water quality problems and prepare an overview of the state's proposal for solving the problems.⁸⁰ The submission deadline for this first report was November 1, 1978.⁸¹ Virginia's submission to EPA consisted of draft copies of the proposed BMP Handbooks.⁸² Unless additional information is submitted, it is doubtful whether Virginia will meet existing federal requirements for 208 areawide planning.⁸³

D. *Proposed Modification of Section 208*

EPA has recently proposed significant changes in the section 208 areawide planning and funding.⁸⁴ The proposed changes define even more stringent requirements for the states, including (1) a more defined role for states with a clearer delineation of the EPA/State Agreement;⁸⁵ (2) a requirement for specific outputs to be identified in the grant agreement based on national/state/areawide priorities (these outputs will be tied to funding);⁸⁶ (3) no planning funds⁸⁷ will be authorized by the EPA unless a significant portion of the plan has been implemented (to encourage implementation of section 208 areawide programs);⁸⁸ and (4) greater use of incentives, sanctions, and technical assistance.⁸⁹

the statewide assessment of water quality problems; (3) An overview of state's approach to solving its water quality problems, including a discussion of nonpoint sources of pollution; (4) A year-by-year estimate for financial resources needed to conduct the state program; (5) A listing of state priorities on plan preparations and implementations, areawide plans and other programs; and (6) A brief summary of the state monitoring strategy. This report is to be submitted annually. 40 C.F.R. § 130.20 (1977).

80. *Id.*

81. 40 C.F.R. § 130.11(c) (1977).

82. Telephone interview with Ms. E. Southerland, Engineer, Bureau of Water Control Management of the State Water Control Board (September 27, 1978).

83. *See* note 79 *supra*.

84. 43 Fed. Reg. 40,742 (1978) (Proposed Rule to be codified at 40 C.F.R. §§ 35, 130, 131 if approved by the EPA Administrator).

85. The Agreement should perform four major functions: (1) Serve as a decision document that reflects decisions and problem areas at state and local levels as well as the process by which these problems will be solved; (2) Establish state/EPA program priorities as well as state and substate responsibilities and allocation of funds; (3) Serve as a management tool for evaluation of major pollution control objectives; and (4) Provide effective communications between EPA, state and local government. *Id.* at 40,743.

86. Grant funds will be managed in a manner designed to assure that grantees are accountable for meeting grant commitments. Eligibility for continuing section 208 or section 106 funds will depend upon EPA assessment of the past performance of the applicant agency. *Id.*

87. *See* text accompanying notes 65-67, *supra*.

88. The proposed rules for the Water Quality Program require that: "A WQM agency must implement a significant portion of a WQM plan to be eligible for continuing 208 grants beginning in fiscal year 1980." 43 Fed. Reg. 40,742, 40,743 (1978).

89. *Id.*

The emphasis is now clearly on implementation⁹⁰ of the water quality management plans and "continuing planning."⁹¹ Use of sanctions will include the possibility of withholding "all or part of funds which the State would otherwise receive under sections 106, 205(g), 208, and 314 of the Act."⁹² Additionally, there is no plan for federal 208 grants after fiscal year 1983,⁹³ requiring states to become self-sufficient by that time.

Virginia failed to complete WQM plans required to be submitted by November 1, 1978.⁹⁴ It is possible that the proposed federal regulations, if implemented, may adversely affect Virginia's federal grant program under the CWA.

III. CURRENT STATE CONTROL OF NONPOINT POLLUTION—THE HODGEPODGE

Virginia water policy is based upon statutes, case law and agency regulations. None of these sources of state authority is adequate to combat nonpoint pollution.⁹⁵ There is no state agency which has the regulatory power to meet all federal requirements for nonpoint pollution planning.⁹⁶ Each agency has some policy making authority but does not have the broad legal basis required for comprehensive land use management.⁹⁷ *Ad hoc* enactments by the General Assembly have yielded inconsistent guidance for state agencies.⁹⁸ This conflict readily appears in the state's regulation of the wetlands.⁹⁹

90. *Id.*

91. As the initial planning period for water quality management plans draws to a close, the continuing planning phase will be implemented which includes plan update and revision and is the subject of this proposed change in the regulations. This is to be distinguished from the "continuing planning process" of section 303(e) of the CWA. Compare Act § 303(e), 33 U.S.C.A. § 1313(e) (Supp. Pam. 1970-77) (Concerning EPA review of water quality standards for point source pollutants).

92. 43 Fed. Reg. 40,742, 40,754 (1978).

93. 43 Fed. Reg. 40,742, 40,743 (1978).

94. See text accompanying notes 79-83 *supra*.

95. Walker and Cox, *Virginia Water Policy: The Imprecise Mandate*, 14 WM. & MARY L. REV. 312, 324 (1972).

96. See text accompanying notes 54-61 *supra*.

97. Note, *Public Regulation of Water Quality in Virginia*, 13 WM. & MARY L. REV. 424, 439 (1971).

98. Walker and Cox, *supra* note 95, at 315, 319.

99. VA. CODE ANN. § 62.1-13.1 (Repl. Vol. 1973) states that, "it is declared to be the public policy of this Commonwealth to preserve the wetlands and to prevent their despoliation and destruction and to accommodate necessary economic development in a manner consistent with wetlands preservation." However, in VA. CODE ANN. § 21-293 (Repl. Vol. 1975) it states that, "the reclamation of overflowed swamps and tidal marshes shall be considered a public benefit and conducive to the public health, convenience, utility and welfare." Virginia's

The protection of Virginia's 27,000 miles of streams, initially relegated to local governments, has not always been effective. In some instances the waterways were treated as open sewer dumps¹⁰⁰ under the rationale of *ius publicum*¹⁰¹ or were relegated to a lower priority beneath the economic interests of the area.¹⁰² These economic or "social considerations" also influenced the permit procedure of the SWCB.¹⁰³

In 1972, the state enacted a new constitution which declared a concern for the environment as a matter of public policy.¹⁰⁴ This section needs no

isolated approach to each piece of the environmental package creates such contradictory statutory language.

100. In *City of Hampton v. Watson*, 119 Va. 95, 89 S.E. 81 (1916), the Virginia Supreme Court held that tidal waters were held in trust for the benefit of the public and that sewage disposal was in the public interest. In 1918, a similar suit was instituted in *Darling v. City of Newport News*, 123 Va. 14, 96 S.E. 307 (1918), *aff'd*, 249 U.S. 540 (1919). In this case, the U.S. Supreme Court followed the opinion in *Hampton* and concluded that dumping of sewage was a legitimate public function. In *Commonwealth v. City of Newport News*, 158 Va. 521, 164 S.E. 689 (1932), the Attorney General of Virginia argued unsuccessfully that the public trust doctrine protected a citizen's right to fish and bathe in the coastal waters against raw sewage dumping by the city. The Court rejected this argument inferring a legislative intent to allow pollution since no bill to specifically prohibit such pollution had been enacted by the General Assembly.

Sewage treatment plants were finally required by the General Assembly in 1942; construction beginning in 1946. In 1948, the State Water Control Law was used to justify degrading water quality of a river. In *American Cyanamid Co. v. Commonwealth*, 187 Va. 831, 48 S.E. 2d 279 (1948), the defendant corporation was required to only comply with the less stringent State Water Control Law despite a clear violation of the existing State Fish Law. This decision was based on the economic factors involved in attracting industry into the state.

This philosophy of protecting local economic interests in the absence of a legislative mandate to curtail such pollution destroyed extensive tidewater shellfish beds and fouled the rivers and bays. See generally *Public Regulation of Water Quality in Virginia*, *supra* note 97, at 425-35.

101. The term is explained by the court in *Commonwealth v. City of Newport News*, 158 Va. 521, 546, 164 S.E. 689, 696 (1932): "As sovereign, the State has the right of jurisdiction and dominion for governmental purposes over all the lands and waters within its territorial limits, including tidal waters and their bottoms."

102. "The aesthetic and recreational features involved in the pollution problem are important, but the opportunity to make a living may be even more so." *American Cyanamid Co. v. Commonwealth*, 187 Va. 831, 839-40, 48 S.E.2d 279, 284 (1948).

103. See *Public Regulation of Water Quality in Virginia*, *supra* note 97, at 474.

104. VA. CONST. art XI § 1 states:

To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.

implementing legislation.¹⁰⁵ Standing alone, this policy statement mandates state and local government officials¹⁰⁶ to consider the environmental impact of their actions. Further, it gives meaning and substance to the concept of a public trust in the water, land and other natural resources of the state.¹⁰⁷ This section does not, however, provide "a constitutional right to a decent environment,"¹⁰⁸ nor does it require the General Assembly to enact protective environmental legislation¹⁰⁹ or confer upon citizens the right to sue specific private polluters or others who degrade the environment.¹¹⁰ The constitution does, however, implicitly allow private citizens standing to bring legal action to protect the "public trust" where state agencies fail to do so.¹¹¹

The nature of nonpoint source pollution encompasses both water pollution control and land use management, neither of which are under the purview of a single agency.¹¹² Four state agencies are currently "mandated" to assume some responsibility for water pollution and land use control.¹¹³ These agencies are, however, bound by their statutory charters, which in many instances are both too broad and too narrow in scope.¹¹⁴

The primary agency charged with water pollution control is the State

105. The article is self-executing with regard to "those entities which are constitutionally bound by public policy, namely the government, its courts and its agencies." Howard, *State Constitutions and the Environment*, 58 VA. L. REV. 193, 208 (1972).

106. Unlike the Federal Constitution, state constitutions are documents of limitation. A state, therefore, exercises all powers not specifically reserved to the federal government. To consider section 1 of article XI as having no operative effect in the absence of legislation is contrary to the intent of the drafters of the new constitution. Howard, *supra* note 105, at 208 n. 64.

107. Howard, *supra* note 105, at 207, 209.

108. Howard, *supra* note 105, at 207.

109. In 1969 Delegate Clive DuVal proposed to the General Assembly a draft version of section 1, article XI, which would have declared that the people of Virginia "have a right to clean air and water." This proposal was not adopted. *Id.*

110. *Id.*

111. Under this rationale, a Virginia citizens' group could bring action against the State for the abatement of nonpoint source pollution by requiring the state agencies to comply with the environmental mandate of the Constitution.

112. See notes 95-99 *supra*, and accompanying text.

113. The agencies include: (1) The State Water Control Board which is concerned primarily with point source pollution; (2) The State Department of Health which through its land use permits (i.e., septic tank permits) monitors public health aspects of pollution; (3) Virginia Marine Resources Commission which is responsible for all activities (land and water) that have a direct and significant impact in the coastal zones; and (4) The Soil and Water Conservation Commission which directs the statewide program to control soil erosion and sedimentation. Legal Authorities Report, *supra* note 78, at 38, 56-59.

114. Miri, *Some Problems of Water Resource Management in Virginia: A Preliminary Examination*, 13 WM. & MARY L. REV. 388, 421 (1971).

Water Control Board.¹¹⁵ SWCB has broad policy making power which has not been fully exercised.¹¹⁶ The Virginia Code states that the SWCB may require any owner who produces waste to cease doing so or to take measures necessary to prevent the escape or discharge of such waste.¹¹⁷ The Virginia definition of "waste", which includes lime, offal, chemicals, and all other substances, is adequate to reach most nonpoint sources.¹¹⁸

The SWCB is charged with preparing plans which "may include comprehensive water and related land resource plans."¹¹⁹ These apparent powers of the SWCB are, however, limited by other portions of the Code. The power to prevent any "waste" discharge is limited by the Soil Conservation Districts Law¹²⁰ which states that persons¹²¹ owning, occupying, or operating private agricultural, horticultural or forest lands may not be held accountable for "land disturbing activities."¹²² Another limitation on the power of the SWCB is the requirement to seek General Assembly approval and implementing legislation for any proposed land and water resource plans.¹²³

The requirement for implementing legislation from the General Assembly also retards the effectiveness of the Council on the Environment.¹²⁴

115. VA. CODE ANN. § 62.1-44.15(1) (Cum. Supp. 1978) requires SWCB "[t]o exercise general supervision and control over the quality, management and distribution of all State waters and to administer and enforce this chapter, and all certificates, standards, policies, rules, regulations, rulings and special orders promulgated thereunder."

The term "water" is defined as "all waters, on the surface or under the ground, wholly or partially within or bordering the State or within its jurisdiction and which affect the public welfare." VA. CODE ANN. § 62.1-10(a) (Repl. Vol. 1973). The term "state waters" means "all water, on the surface and under the ground, wholly or partially within or bordering the State or within its jurisdiction." VA. CODE ANN. § 62.1-44.3(4) (Repl. Vol. 1973).

116. Walker and Cox, *supra* note 95, at 324.

117. VA. CODE ANN. § 62.1-44.17(1) (Repl. Vol. 1973).

118. This also includes decayed wood, sawdust, shavings, bark, refuse, garbage, ashes, tar, and oil (except industrial wastes and sewage) which may cause pollution. VA. CODE ANN. § 62.1-44.3 (Repl. Vol. 1973).

119. VA. CODE ANN. § 62.1-44.38 (Repl. Vol. 1973).

120. The SWCB is limited due to the restrictive language of VA. CODE ANN. § 62.1-44.44(a) (Repl. Vol. 1973) which states that "[n]othing in this chapter shall be construed as superseding any provisions of chapter 1 (§ 21-1 *et seq*) of Title 21 of the Code of Virginia, or as limiting or affecting any powers, duties or responsibilities conferred or imposed heretofore or hereafter on the Virginia Soil and Water Conservation Commission."

121. VA. CODE ANN. § 21-89.3(b) (Cum. Supp. 1978) defines "person" as "any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, county, city, town or other political subdivision of this State, any interstate body or any other legal entity."

122. VA. CODE ANN. § 21-89.6(e) (Repl. Vol. 1975).

123. VA. CODE ANN. § 62.1-44.38(b) (Repl. Vol. 1973).

124. The Code defines the role of the Council as adviser, coordinator and reporter to the

This Council consists of those agency heads whose organizations most directly affect the Virginia environment.¹²⁵ The Council is mandated by Article XI of the Constitution of Virginia¹²⁶ and the stated policy of the Commonwealth "to promote the wise use of its air, water, land and other natural resources and to protect them from pollution, impairment or destruction so as to improve the quality of its environment."¹²⁷ The extent of the Council's power, however, is processing permits requiring environmental approval from multiple state agencies¹²⁸ and recommending policy changes for the environment to the governor on an annual basis.¹²⁹

Virginia has no comprehensive water policy capable of satisfactorily meeting the federal nonpoint source control requirements under section 208.¹³⁰ Sound and effective state planning cannot be achieved without a sturdy framework in the form of a clear, broad statutory enactment which vests authority in a single agency.¹³¹

IV. RECOMMENDATIONS FOR VIRGINIA

Virginia relies on voluntary participation by agricultural nonpoint source polluters.¹³² Currently the state makes available information on prevention measures¹³³ and through its appointed agencies can make proposals to the General Assembly concerning environmental protection based on the "public policy" considerations of the constitution.

Governor on environmental matters. VA. CODE ANN. § 10-180 *et seq.* (Repl. Vol. 1978). Additionally, the council may only make and enforce regulations that control its own staff. Legal Authorities Report, *supra* note 78, at 47.

125. VA. CODE ANN. § 10-181 (Repl. Vol. 1978).

The Council on the Environment shall be composed of ten members and an administrator who shall all be citizens of the State. Three shall be appointed by the Governor on the basis of merit without regard to political affiliation, subject to confirmation by the General Assembly, but they shall be permitted to serve in the interim between appointment and confirmation or rejection. They shall hold office at the pleasure of the Governor until their successors take office. The administrator of the Council on the Environment shall serve as chairman. The chairman of the State Water Control Board, the Board of Conservation and Economic Development, the Game and Inland Fisheries Commission, the Marine Resources Commission, the Soil and Water Conservation Commission and the State Air Pollution Control Board and the Commissioner of Health shall also be members of the Council.

126. *See* note 104 *supra*.

127. VA. CODE ANN. § 10-178 (Repl. Vol. 1978).

128. VA. CODE ANN. § 10-184.2 (Repl. Vol. 1978).

129. VA. CODE ANN. §§ 10-184.1(5) and 10-186(1)(b) (Repl. Vol. 1978). *See* note 124 *supra*.

130. *See* notes 73-83 *supra*, and accompanying text.

131. Walker and Cox, *supra* note 95, at 325.

132. Telephone interview with Ms. E. Southerland, *supra* note 82.

133. *Id.*

In order to meet increased federal requirements¹³⁴ and to continue to benefit from federal financing of municipal and areawide treatment facilities, Virginia must take a more affirmative role. This role should be in the form of land use management under the control of a single agency, the State Water Control Board. The regulatory power currently authorized to the SWCB is more clearly defined than that of any other state agency in the area of water pollution.¹³⁵ Since the obvious results of nonpoint source pollution is water quality deterioration, this should be clearly within the SWCB jurisdiction. This power should be delegated by the General Assembly and in terms clear enough to require specific action to be accomplished by the SWCB in accordance with the time schedule set out by the Clean Water Act.¹³⁶ By adopting the federal guidelines and making a good faith effort to meet those guidelines, the Commonwealth will continue to benefit from federal grants for 208 planning.¹³⁷ This would also provide a source of funds for the additional manpower necessary to implement such a program. Further, agricultural interest groups could contract directly with the Secretary of Agriculture to reduce their pollution levels.¹³⁸

V. CONCLUSION

Virginia's attempts at controlling nonpoint source water pollution are not adequate to provide the positive controls that are necessary to ensure that the Commonwealth can meet the 1985 goal of zero pollution. The information program, based upon the draft BMP handbooks, may encourage some regional urban planners and some concerned farmers to take positive actions on a voluntary basis, but the fact remains that such a program cannot succeed unless an overall program is implemented in which all parties participate. The federal program envisions actual implementation of the water quality management plans and includes regulatory programs for the BMP's. This regulatory requirement will necessitate more than the gentle urging that the State Water Control Board has proposed for its overall nonpoint water pollution control program. On the other hand, such an information program is an encouraging step by a state agency that is both uncertain as to its authority in nonpoint control and is at best overworked and understaffed in those specific areas of water pollution management where its authority is clear. Any plan that is to succeed and also meet the federal guidelines and program requirements

134. See notes 42-72 *supra*, and accompanying text.

135. Legal Authorities Report, *supra* note 78, at 38.

136. See Act § 101(a), 33 U.S.C.A. § 1251(a) (1978). See notes 1-2 *supra*.

137. See notes 64-67 *supra*, and accompanying text.

138. See notes 68-72 *supra*, and accompanying text.

must be more than merely informative. The General Assembly must provide a firm statutory framework for the lead agency and also provide the financial support necessary to sustain such a difficult project.

Nonpoint sources are difficult to identify both as to the actual pollution content and as to who is to be held responsible for the discharge for enforcement purposes. Controlling the infinite number of tiny rivulets that flow from an improperly graded cropland and then measuring the level and quantity of pollution contained in that run off is at best discouraging. Such control means could include passive measures such as limitations on the use of certain chemicals in agricultural operations or active measures that would require advanced technological pollution treatment facilities on every farm. The answer lies somewhere in the middle of these two proposals.

Solutions to these problems in light of today's economic realities, must satisfy some "cost-benefit analysis." The government can no longer justify environmental regulations on the basis of aesthetics. There must now be some economic benefit to be derived by the nation or the state as a whole for the control of nonpoint pollution. Benefits of nonpoint control can be documented: (1) The identification and control of these pollutants allows a more just distribution of responsibility for pollution of the waters and could relieve some of the burden on industrial permit holders controlled by NPDES; (2) Lakes and reservoirs would not be as likely to suffer from premature eutrophication; (3) Shellfish beds in the Tidewater could be restored to useful purposes; and (4) Reduction of siltation would protect topsoil and retain the enriching nutrients. The problem remains, however, that methods of control that have been already identified or implemented are still primitive. Certainly, an effective means of control will never be financially ascertainable so long as this type of pollution is ignored or at best documented only in overly broad terms without an attempt to identify specific problem areas.

The failure of the state to implement acceptable areawide management plans could clearly result in a prohibition against further 208 funding by EPA. It is doubtful, however, that such a bludgeon would ever be used if the state can show a valid effort to meet the government's goals. Indeed, how could such a decision to withhold funds be justified when the guidance in the regulations is itself so vague (including the definition of a nonpoint pollutant)? It is clear that the states must "implement," but the standards by which these implemented programs are to be judged have not been articulated.

Even though the federal government cannot adequately define the problem precisely or provide detailed guidance, this does not relieve the Com-

monwealth of the constitutional mandate to "protect the atmosphere, lands, and waters from pollution, impairment, or destruction." This duty cannot be accomplished without an unequivocal commitment by the General Assembly to a program that will do more than provide more papers for planners and administrators to digest and file away. Clearly, the state must establish a single agency with the authority and power to identify and subsequently control nonpoint source water pollution problems. The partisan interests that were responsible for the current "hodgepodge" of laws must realize that time is running out. The Commonwealth will not meet the 1985 goals without some positive measures to combat this growing problem.

Even though there is no "right" in Virginia to clean air and water, there is a sworn duty on all of the state's elected and appointed officials to uphold the state constitution which declares that it is the "policy of the Commonwealth to conserve, develop, and utilize its natural resources." The state's waters will never be conserved or protected so long as a single source of pollution is allowed to continue unabated.

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