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Public Regulation of Water Quality in Virginia

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NOTES

PUBLIC REGULATION OF WATER QUALITY IN VIRGINIA

INTRODUCTION

> *And the Spirit of God moved upon the face of the waters And God said, Let the waters bring forth abundantly the moving creatures that hath life, and God saw that it was good.*
>
> *And God said, Let us make man in our image and God said unto them, Be fruitful and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea and over every living thing that moveth upon the earth.*[1]

Several million years later English settlers began to execute this divine mandate in the Colony of Virginia. The waters of Virginia in 1607 were barely touched by the hand of man. Streams were sparkling and clear, there was no soil erosion or siltation from farming or urban construction. There were no vast asphalt pavements or concrete city blocks to collect dirt and grime that later would be washed into the rivers and streams by rainfall. And of course there was no municipal sewage or industrial waste. Since that first year of settlement, Virginia has strived to develop and utilize, often defiling her water resources. For the last 150 years, however, the State has turned away from uncontrolled development and has begun to balance the need for development against the concomitant need for conservation. In some cases Virginia has taken steps to return her rivers and streams to their "natural" state.

This note will attempt to describe some of the legal aspects of the evolution of the state's role regarding water use, and to discern its present policy and evaluate its execution. The first section will illustrate the way in which the state encouraged and protected her rivers and streams during the period 1607 to 1900. The second part will trace the his-

1. *Genesis* 1:2-28 (King James).

> [A]cceptance of pollution is deeply embedded in our societal psyche. The Judeo-Christian tradition is a most anthropocentric influence. As a society we still believe that man can exploit nature interminably Despite Copernicus, our relationship to the environment is still based on a man-centered universe. We reject the Darwinian notion that we are part of nature.

Reitze, *Pollution Control, Why Has It Failed?*, 55 A.B.A.J. 923, 924 (1969).

torical development of the legislature's increasing involvement during the period 1900 to 1946 and will be divided into two parallel sections entitled Tidal Waters and Inland Waters. Finally, an analysis will be made of the present state law—primarily the Water Control Law of 1946 and various State agency rulings—and an evaluation will be made of their success in turning from uncontrolled development toward the elimination of pollution in Virginia's waters.

HISTORICAL DEVELOPMENT

Early Period: 1607-1900

Very early in her history, Virginia demonstrated what was to become a growing concern for the economic utilization and development of her water resources. As early as 1667, the Colonial Assembly responded to a need to provide for "industrial" development along her waterways by providing a legal procedure which enabled riparian owners to condemn the land of a noncooperative neighbor in order to facilitate the construction of a mill dam.[2]

The provision of the Colonial Act authorized a circuit court to condemn the land in certain cases as

> it would conduce much to the convenience of this country [to have mills for grinding corn at convenient places and where such construction is] obstructed by the perversenesse of some persons not permitting others, though not willing themselves to promote soe publique a good.[3]

Other colonial legislation was directed toward developing the waterways and canals for transportation as well as keeping the rivers and streams open for commerce.[4] In this regard the State not only authorized and encouraged private transportation companies to open rivers and streams for development,[5] but protected the companies' investments by providing stringent sanctions against placing obstructions in

2. 2 HENING'S STATUTES AT LARGE 260 (1667) [hereinafter cited as HENING]. The Mill Acts, although of little value to the present age, are preserved in virtually the same form as they existed in the 17th Century. VA. CODE ANN. §§ 62.1-116 to -127 (Repl. Vol. 1968). For a full discussion of the Mill Acts see A. EMBREY, WATERS OF THE STATE 169-73 (1931) [hereinafter cited as EMBREY]. *See also* Miri, *Some Problems of Water Resource Management in Virginia: A Preliminary Examination*, 13 Wm. & Mary L. Rev. 388, 395 (1971) [hereinafter cited as Miri].

3. 2 HENING 260 (1667).

4. EMBREY, *supra* note 2, at 237-55.

5. *Id.* at 230-56.

the colony's waterways. In terms reminiscent of modern federal legislation protecting navigation,[6] the Colonial Legislature prohibited ships from dumping their ballast into state waters.[7] It also ordered the immediate clearing of trees which were felled into the state's waterways,[8] and required circuit courts to have streams cleared of other obstructions.[9]

Finally, in addition to the legislation directed at economic development and navigation, acts were passed by the Colonial Assembly to protect the free passage and spawning of fish.[10] Enforcement of these provisions was also delegated to the courts.

During the years immediately following the Revolutionary War, the legislature of Virginia continued the colonial policy of encouraging and protecting commerce, navigation, and fishing in state rivers and streams.[11] In 1836 the State enacted the first modern conservation-oriented laws designed to protect and preserve fish and oysters.[12] The season and method in which fish and oysters could be taken was delineated. Enforcement of these provisions was again delegated to the courts with instructions to appoint inspectors as became necessary [13]

The first legislation which could be construed to have protected the quality of the state waters appeared in 1849 when the General Assembly provided for maximum fines of $20.00 for a free person and 39 "stripes" for any slave who maliciously cast any poisonous substance into the waters of Russell, Scott, or Washington counties.[14]

These provisions were extended 25 years later to include all state waters above tidewater.[15] They were further expanded to prohibit the casting into the water of dead animals or other substances[16] harmful to the fish or waterways.[17]

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6. *See, e.g.*, 33 U.S.C. §§ 601-10, 1160 (1970).

7. 3 HENING 46 (1961). This provision remained in force until its repeal 265 years later. Virginia Acts of Assembly 1956, ch. 267 at 325.

8. 3 HENING 392 (1705); This Act is extant today in VA. CODE ANN. § 62.1-194.2 (Repl. Vol. 1968).

9. *See also* 4 HENING 110 (1722).

10. EMBREY, *supra* note 2, at 169-73.

11. *See, e.g.*, VA. CODE ch. 235 (1819).

12. Virginia Acts of Assembly 1836, ch. 78 at 53; VA. CODE tit. 29, ch. 101 (1849).

13. VA. CODE tit. 29, ch. 101 § 30 (1860).

14. Virginia Acts of Assembly, 1849-50, ch. 61 at 43; VA. CODE tit. 29, ch. 101 (1860).

15. Virginia Acts of Assembly 1874-75, ch. 25 at 21.

16. Virginia Acts of Assembly 1874, ch. 35 at 29, *as amended* 1874, ch. 285 at 414.

17. Virginia Acts of Assembly 1874-75, ch. 25 at 21; VA. CODE § 2108 (1887). This law in its present form is broader than the earlier acts and does not require resulting

In addition to these general prohibitions against contaminating nontidal waters, the Assembly attempted to protect specific rivers from special types of pollutants. Discharging tar and lime, for example, was forbidden in the James and the Appomattox rivers.[18]

During the latter half of the 19th century the concern over water quality manifested itself in the creation of several administrative agencies. In 1872, for example, a State Board of Health was established and required to make "investigations and inquiries respecting the causes of disease." [19] Similarly, in 1875 the predecessor to the present day Marine Resources Commission was created in a Commissioner of Fisheries.[20] The commissioner initially was charged with studying and reporting the propagation of fish, but in later years his role evolved into a more regulatory function.[21]

By the turn of the 20th century, the laws in Virginia relating to water quality were quite similar to those in other states.[22] As previously noted, Virginia had enacted legislation designed to protect fish and fishing, as well as various specific prohibitions against casting deleterious matter into state waters, and by 1900 the Board of Health and Commission of Fisheries had begun to exercise very limited control over the State's waters.[23]

injury to fish in order for penalties to be invoked. VA. CODE ANN. § 62.1-194 (Repl. Vol. 1968).

18. Virginia Acts of Assembly 1874-75, ch. 188 at 195; Virginia Acts of Assembly 1878-79, ch. 61 at 52; VA. CODE § 2108 (1887). *See also* American Cynamid Co. v. Commonwealth, 187 Va. 831, 835 n.1, 48 S.E.2d 279, 281 n.1 (1948).

19. Virginia Acts of Assembly 1871-72, ch. 91 at 71.

20. Virginia Acts of Assembly 1874-75, ch. 248 at 323.

21. *See* VA. CODE ANN. §§ 28.1-1 to -46 (Repl. Vol. 1969).

22. Professor Clark, describing the situation in general, noted that:

> By the early twentieth century many states had enacted some form of water-pollution control legislation. These laws dealt with specific water-pollution problems—primarily those of making water safe for the health of man, animals, and fish. Most states had enacted statutes that prohibited the poisoning of or placing of dead animals in municipal or other domestic water supplies. As circumstances required, state laws also forbade the placing in public waters of many other kinds of materials, including sawdust, slaughter house wastes, oil and tars, and other materials deleterious to fish and aquatic life.
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> By 1917 there were great numbers of prohibitions against particular kinds of pollution. Also by this time, statutes provided greater protection for the purity of municipal water supplies, and almost every state had vested regulatory powers in boards of health.

3 R. CLARK, WATERS AND WATER RIGHTS § 206.1 at 27-28 (1967). *See also* Hines, *Nor Any Drop to Drink: Public Regulation of Water Quality*, 52 IOWA L. REV. 186, 202-11 (1966).

23. *See* notes 24 to 26 *infra* and accompanying text.

Pollution of Tidal Waters: Regional Solutions

Early in this century, reports from state and federal health authorities drew public attention to the pollution of Virginia's tidal waters by municipalities and industry, and to the resulting contamination of oysters and oyster beds.[24] The popular press, commenting on the possibility of contracting typhoid or scarlet fever from consuming contaminated oysters, precipitated a nationwide "pollution scare" and a mass boycott of oyster consumption. The result was a paralyzation of the seafood industry with consequent financial loss "undoubtedly amounting to millions of dollars" in Virginia.[25] Aside from the financial loss to the seafood industry, of added concern was the effect of this condition upon waterfront property values, recreational uses, and the tourist trade, as well as the menace to public health.[26]

Solution in the Courts

The first to grapple with the problem were private citizens whose financial interests were jeopardized by the drainage of city sewers into their oyster planting areas. Early reports had shown the sources of pollution to be wastes from ships and industry, and sewage from municipalities, the latter being the chief source of contamination, and largely responsible for the existing condition.[27] In 1916 a local oyster fisherman, apparently relying on these reports, brought suit for trespass and damages to his oyster beds allegedly caused by the emptying of Hampton's sewers into Hampton Creek. In *City of Hampton v. Watson*,[28] the Virginia Supreme Court of Appeals recognized that the State had granted the plaintiff a valid leasehold to the oyster beds, but held that any injury to the bed caused by a recognized public use would be *damnum abseque injuria*.[29] The court based its holding on the premise that the beds and the tidal waters were owned by the state and held

24. The first notice of pollution came in 1909 when county health officials notified oyster planters in Hampton Creek that the "waters were too polluted to permit the sale of oysters therefrom." Hampton v. Watson, 119 Va. 95, 89 S.E. 81 (1916). Other reports came in 1912 and 1914 from the State Board of Health and the U.S. Public Health Service. U.S. HEALTH BULL. No. 74 (March, 1916) *See also* REPORT OF THE COMMISSION ON POLLUTION, VA. S. DOC. No. 6, Reg. Sess. 17 (1933-34) [hereinafter cited as POLLUTION REPORT OF 1933].

25. 1914 COMM'R OF FISHERIES ANN. REP. 18.

26. REPORT OF THE COMMISSIONER TO INVESTIGATE AND SURVEY THE SEA FOOD INDUSTRY OF VIRGINIA, VA. S. DOC. No. 2, Reg. Sess. 12 (1928).

27. POLLUTION REPORT OF 1933, *supra* note 24 at 9.

28. 119 Va. 95, 89 S.E. 81 (1916).

29. *Id.* at 102, 89 S.E. at 83.

in trust for the benefit of the public and hence could not be disposed of to the public's detriment.[30] The court found sewage disposal to be in the public interest: "Indeed the history of sewers shows that from time immemorial the right to connect them with navigable streams has been regarded as part of the *jus publicum*." [31] Implicitly the court recognized the private property right of the plaintiff, but said that the grant of this right was subject to the superior public right to use tidal waters as a sewage pipeline to the sea.

In 1918, a second suit was brought under similar circumstances. In *Darling v. City of Newport News*,[32] the United States Supreme Court followed the opinion of the Virginia court in *Hampton* and stated further that:

> The mere ownership of a tract of land under the salt water would not be enough of itself to give a right to prevent the fouling of the water as supposed. The ownership of such land, *as distinguished from the shore*, would be subject to the natural uses of the water.[33] (Emphasis supplied).

The Court's distinction between ownership of oyster beds and ownership of tidal shoreline did not resolve the question of a private right of action when pollution from a public sewer infringed the right of a riparian owner to have pure water flowing past his land. The question was later resolved in *Du Pont Rayon Co. v. Richmond Industries*,[34] where a downstream riparian owner, who was a rayon manufacturer, sought to enjoin the discharge of waste from a dyeing plant into the Richmond sewage system and thence into the James River. Quoting at length from *Hampton* and *Darling* the court concluded that:

> [N]either the public health nor the industrial development of . tidewater cities, both of which are dependent upon sewage disposal, can be subordinated to the rights of a riparian owner to make use of the public waters for private purposes.[35]

It is important to note that none of these decisions dealt with the creation of a public nuisance or injury resulting from negligence or unreasonable use of the sewers. The opinions must be limited to

30. *Id.* at 100-01, 89 S.E. at 82.
31. *Id.* at 101, 89 S.E. at 82 *quoting from* City of Newark v. Sayre, 60 N.J. Eq. 361, 45 A. 985 (1900).
32. 123 Va. 14, 96 S.E. 307 (1918), *aff'd* 249 U.S. 540 (1919).
33. 249 U.S. 540, 543 (1919).
34. 85 F.2d 981 (4th Cir. 1936).
35. *Id.* at 984.

instances where the public right to empty sewage into a tidal stream is exercised with reasonable care for the protection of other recognized private and public rights.[36]

In 1932, fifteen years after *Darling*, the City of Newport News attempted to protect the health of its citizens by conducting the city's sewage away from the shore of the city and into the waters of Hampton Roads through a pipeline.[37] Authorities in nearby Nansemond County objected to the extension of the pipeline, contending that the sewage would be carried by the tide to contaminate oyster beds on the south side of the James River.[38] The Governor of Virginia and the Commission of Fisheries, in agreement with Nansemond County, sought an injunction to restrain the city not only from extending the pipeline, but also from continuing to discharge untreated sewage through its existing sewers into Hampton Roads.[39]

Since the prior decisions had held private interests inferior to the interests of the public, the Attorney General of Virginia relied on the public trust doctrine,[40] arguing that the rights of fishing and bathing in public waters were incidents of the public trust, which could not constitutionally be impaired by the General Assembly.[41] The defense of the City of Newport News was based upon authorization from the legislature to undertake construction of the pipeline and to continue existing use of its sewage system.[42] Rejecting the Attorney General's contention, the court in *Commonwealth v. City of Newport News*[43] adopted the position that, unlike the public right of navigation,

> the right of fishery in tidal waters is an incident of the *jus privatum* of the State, and is not an inherent and inseparable incident of its *jus publicum;* the state legislature, in absence of any constitutional provision on the subject, has the right to take away such

36. Darling v. City of Newport News, 249 U.S. 540, 543 (1919); DuPont Rayon Co. v. Richmond Industries, 85 F.2d 981, 984 (4th Cir. 1936). City of Hampton v. Watson, 119 Va. 95, 101, 89 S.E. 81, 82 (1916). *See also* Grant v. United States, 192 F.2d 482 (4th Cir. 1951).

37. POLLUTION REPORT OF 1933, *supra* 24 at 27

38. *Id.*

39. *Id. See also* Commonwealth v. City of Newport News, 158 Va. 521, 530, 164 S.E. 689, 691 (1932)

40. 158 Va. at 532, 164 S.E. at 691. *See* Note, *Private Remedies To Abate Water Pollution In Virginia And New Theories In Environmental Law,* 13 WM. & MARY L. REV. 477 (1971) for a discussion of the Public Trust doctrine in Virginia.

41. 158 Va. at 532, 164 S.E. at 691.

42. Virginia Acts of Assembly 1930, ch. 148 at 357, *quoted in* 158 Va. at 555-6, 164 S.E. at 700.

43. 158 Va. 521, 164 S.E. 689 (1932).

> right or authorize, permit or suffer its tidal waters or their bottoms to be used for purposes which impair or even destroy their use for purposes of fishery. [44]

The court also regarded the right of bathing as a decided incident of the state's *jus privatum*.[45] Furthermore, the court noted that in the nine sessions of the General Assembly since the decision in *Darling v. City of Newport News*, no provisions were adopted to prohibit the city from discharging its sewage into Hampton Roads or to require that it be treated.[46] Since the legislature had taken action to prohibit pollution of other rivers in other areas, the court inferred a legislative intent to acquiesce in the pollution of the Newport News area.[47]

Combining the holdings in the foregoing cases, it was evident that the two incompatible public uses of tidal waters—for fishing and for conduits of sewage—were superior to private rights, but were susceptible to regulation by the legislature in any manner not inconsistent with the greater right of navigation or any right similarly protected from legislative manipulation.[48]

The holding in *Commonwealth v. City of Newport News*, moreover, offered little comfort to communities adversely affected by municipal pollution, and accordingly attempts were made by threatened cities and counties to escape its application. Following the *Newport News* decision, Warwick County passed ordinances to prohibit the discharge of raw sewage from any new disposal system into the James River.[49] Acknowledging that the legislature held exclusive authority over pollution of tidal rivers, Warwick County relied on the power granted to it by the General Assembly to

> provide against and prevent the pollution of water in their respective counties whereby it is rendered dangerous to the health or lives of persons residing in the county; [and] [t]o adopt such

44. *Id.* at 552, 164 S.E. at 698-99.

45. *Id.* at 531, 164 S.E. at 691.

46. *Id.* at 555, 164 S.E. at 700.

47. *Id.* For a discussion of these provisions see notes 55-61 *infra* and accompanying text.

48. Discussing the parameters within which the state may act, Justice Holmes indicated that the legislative authority may be fully exercised "[u]nless precluded by some right of a neighboring state, or by some act of its own, or of the United States, [or] unless it should create a nuisance that so seriously interfered with private property as to infringe constitutional rights." Darling v. City of Newport News, 249 U.S. 540, 543 (1919)

49. Ordinances are quoted in Old Dominion Land Co. v. Warwick County, 172 Va. 160, 164-65, 200 S.E. 619, 620 (1939).

> measures as they may deem expedient to secure and promote the health, safety, and general welfare [50]

In 1939, the county attempted to validate these ordinances before the Supreme Court of Appeals of Virginia. In *Old Dominion Land Co. v. Warwick County*,[51] the court reaffirmed its position that the authority to prevent pollution in tidal water rested solely with the General Assembly But it found no delegation of authority to the county in this instance.[52] Such ordinances are invalid, the court concluded, where the prohibited act "does not constitute a nuisance or is not injurious to the health or inhabitants of the county" [53]

Thus it became apparent that if control of the pollution problem was to be handled by local government, the legislature would have to grant authority to localities to act in situations where there was no immediate threat to health and where the pollution did not amount to a nuisance.

After the failure of private litigants and the Virginia executive branch to effect a solution through the courts, it became clear that the state legislature was the proper entity to remedy the problem. Its authority to act had been explicitly confirmed in every opinion concerning pollution rendered by the court. In *City of Hampton v. Watson*, for example, the court stated that "[t]he degree of pollution to be permitted is a matter over which the legislature has full power and control." [54]

Legislative Reaction

The initial response of the General Assembly was the enactment of legislation designed to protect specific geographical areas. In 1914, for example, a bill was passed "to preserve the purity of the waters of the Lynnhaven River and to prevent injury to the oyster beds therein." [55] Moreover, it became "unlawful to lay any sewer pipes or stable drains on the shores or [to cast into it] any dead animals or fowls." [56] In 1930, similar but more stringent legislation was enacted

50. VA. CODE § 2743 (1919), *as amended* Virginia Acts of Assembly 1924, ch. 193 at 307; 1926, chs. 377, 520 at 664-5, 870-1; 1930, ch. 247 at 664-5. Relevant provisions of the Code as it existed at the time of trial are quoted in Old Dominion Land Co. v. Warwick County, 172 Va. 160, 167, 200 S.E. 619, 621 (1939).

51. 172 Va. 160, 200 S.E. 619 (1939).

52. *Id.* at 168, 200 S.E. at 621-22.

53. *Id.*

54. 119 Va. at 101, 89 S.E. at 82, *quoting from* City of Newark v. Sayre, 60 N.J. Eq. 361, 45 A. 985 (1900). *See also* note 48 *supra*.

55. Virginia Acts of Assembly 1914, ch. 307 at 528.

56. *Id.*

to protect shellfish areas in Chuckatuck, Urbanna, Bennett, and Carter's Creek, and in Milford Haven.[57] In 1936, Queen's Creek in York County,[58] the Chickahominy River,[59] the tidal waters of Isle of Wight County,[60] and several other areas[61] were protected by similar pollution control laws.

In addition to these provisions, the legislature extended authority to tidewater towns and cities to take limited action to prevent pollution.[62] But regardless of the limited authority of one political subdivision or the number of rivers specifically protected, it became apparent that further action was necessary to ensure the treatment of sewage. It also became apparent that the problem was cumulative, involving numerous political entities, and was thus not amenable to piecemeal solution. This became particularly evident when the means of sewage disposal used by one local government became detrimental to another, as occurred between Newport News and Nansemond County.[63] State intervention was critically needed. The difficult problem facing the legislature was the extent to which it should become involved in local affairs. The predilection for local autonomy was, and still is, a dominant political philosophy in Virginia.[64] On the other hand, it was cogently argued that the only solution was state administrative resolution of the local conflicts.[65]

Realizing its responsibility, the General Assembly undertook an investigation of the problem, and between 1927 and 1934, it created three successive commissions to recommend solutions.[66]

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57. Virginia Acts of Assembly 1930, ch. 147 at 357, *as amended* Virginia Acts of Assembly 1934, ch. 245 at 364.

58. Virginia Acts of Assembly 1936, ch. 122 at 211.

59. Virginia Acts of Assembly 1936, ch. 197 at 334.

60. Virginia Acts of Assembly 1936, ch. 345 at 553.

61. *See, e.g.*, Virginia Acts of Assembly 1936, ch. 393 at 705, *amending* VA. CODE § 3262 (1919).

62. VA. CODE §§ 2743, 3031 (1919). *See* note 50 *supra* and accompanying text.

63. *See* notes 49-54 *supra* and accompanying text.

64. *See, e.g.*, Makielski, *The Special District Problem in Virginia*, 55 VA. L. REV. 1182 (1969); McSweeney, *Local Government Law in Virginia, 1870-1970*, 4 U. RICH. L. REV. 174, 199 (1970). *See also* note 155 *infra* and accompanying text.

65. *See, e.g.*, 1915 COMM'R OF HEALTH ANN. REP. 32-35; 1915 COMM'R OF FISHERIES ANN. REP. 13-19; ADDRESS OF GOVERNOR E. LEE TRINKLE BEFORE THE GENERAL ASSEMBLY, VA. H. Doc. No. 2, Reg. Sess. 14-15 (1924).

66. A Commission to Investigate and Survey the Sea Food Industry in Virginia was created in 1927 Virginia Acts of Assembly 1927, ch. 84 at 183. Its report is found in VA. S. Doc. No. 2, Reg. Sess. (1928). The Commission on Pollution was created in 1933. Joint Resolution, 1 Sept. 1933, VA. S. JOURNAL, Ex. Sess. 115 (1933). *See* POLLUTION REPORT OF 1933, *supra* note 24. The Hampton Roads Sewage Disposal Commission was

The report of the Hampton Roads Sewage Disposal Commission, published in 1938, offered a "regional solution," proposing two bills providing for the development of massive treatment facilities, as well as restrictions on the discharge of sewage into the waters of Hampton Roads.[67] The first proposed bill was drafted for general state-wide application in order to meet possible objections based on section 63 of the Constitution of Virginia, which forbids in certain instances the enactment of any special or private law The second proposal, which contained parallel provisions, specifically called for the creation of the Hampton Roads Sanitation District.[68] The recommendation that the bills be enacted concurrently was accepted in 1938 when the legislature provided for the creation of the Hampton Roads Sanitation District[69] and a general Sanitation Districts Law [70]

Both enactments provided local options which required that each political subdivision encompassed in the proposed district call a referendum of its qualified voters. Any county, town, or city in which a majority of voters disapproved was to be excluded from the proposed district.[71]

The required referendums were completed between 1938 and 1940 with the great majority of the political subdivisions of Hampton Roads

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created in 1934 at the suggestion of the earlier Commission on Pollution. Virginia Acts of Assembly 1934, ch. 244 at 362, *as amended* Virginia Acts of Assembly 1936, ch. 353 at 562.

67. REPORT OF THE HAMPTON ROADS SEWAGE DISPOSAL COMMISSION, VA. H. DOC. No. 11, Reg. Sess. (1938). It is interesting to note an apprehension of several members of the prior Commission on Pollution who felt that:

> [The] sanitary restrictions and rigid rules and regulations arbitrarily and unreasonably made governing a port for the purpose of preventing pollution may result in injurious effect upon the commercial and industrial life of the area when a more liberal policy is in effect in neighboring and competitive ports in other states. Ship owners, harrassed with such regulations, are likely to look elsewhere for a port call. Industrial activity such as shipbuilding plants and coal and cargo piers, so predominant in the port of Hampton Roads, would be seriously retarded.

POLLUTION REPORT OF 1933, *supra* note 24, at 31. The fear of losing shipping to other ports was evidently sufficient to exempt ships from the law which was eventually passed. Ships continue to be a major source of pollution in Hampton Roads. *See* note 272 *infra* and accompanying text.

68. REPORT OF THE HAMPTON ROADS SEWAGE DISPOSAL COMMISSION, VA. H. DOC. No. 11, Reg. Sess. (1938).

69. Virginia Acts of Assembly 1938, ch. 334 at 505, *as amended* Virginia Acts of Assembly 1960, ch. 66 at 69; 1962, ch. 584 at 912; 1964, ch. 520 at 805.

70. Virginia Acts of Assembly 1938, ch. 335 at 510 [codified at VA. CODE ANN. §§ 21-141 to -223 (Repl. Vol. 1960)].

71. Notes 69-70 *supra*.

voting approval.[72] Sanction for the district was given by the General Assembly in 1940,[73] and the issuance of revenue bonds to finance the planned construction of sewage treatment plants was authorized in 1942.[74] After a delay caused by World War II, definite planning, financing, and construction of the treatment plants was commenced by the Commission in 1946.[75]

Inland Waters: Statewide Concern

Having traced the early development of the State's involvement with water regulation and the special problems of tidal waters, the following discussion will consider statewide problems of inland waters.

During the half century in which the tidewater areas were striving for a solution to their special problems, freshwater streams were beginning to show the symptoms of unbridled industrial progress. Even while reports first appeared in Tidewater, voices of concern were raised regarding the future of inland waters.

As early as 1909, the State Health Commissioner noted apprehensively that there were no provisions for regulation or protection of water supplies or for prohibiting pollution of streams aside from the old law banning the throwing of dead bodies into state waters.[76] He warned that:

> The growth of the cities and towns and the thicker settlement of the country tends more and more to serious pollution of our streams, and even under the present conditions some of the smaller streams show evidences of serious contamination.[77]

Thereafter, the Commission continued to deplore the sewage situa-

72. REPORT OF THE HAMPTON ROADS SEWAGE DISPOSAL COMMISSION, VA. H. DOC. No. 8, Reg. Sess. 9 (1940)

73. Virginia Acts of Assembly 1940, ch. 351 at 619.

74. Virginia Acts of Assembly 1942, ch. 380 at 598.

75. OFFICIAL STATEMENT OF THE HAMPTON ROADS SANITATION DISTRICT, April 12, 1967 at 8, on file at the District's office in Norfolk, Virginia. The District provides waste treatment facilities for the communities in the District, however, the cities and counties must provide their own lateral facilities—pumping stations and sewer lines—to carry the sewage to the point of connection. The District serves the cities of Hampton, Newport News, Williamsburg, Norfolk, Virginia Beach, and Chesapeake, and the Counties of James City, York, Isle of Wight, and Nansemond. The City of Portsmouth provides its own facilities. ANNUAL FINANCIAL REPORT OF THE HAMPTON ROADS SANITATION DISTRICT, June 30, 1971, on file at the District's office in Norfolk, Virginia.

76. 1909 COMM'R OF HEALTH ANN. REP. 28.

77. *Id.* at 31.

tion and to suggest regulatory control.[78] Furthermore, the Health Commissioner was not alone in his concern; speaking of "our inland waterways" in 1924, the Governor of Virginia warned that the problems of industrial pollution were becoming more serious every year, so that "only the coolest heads and sanest policies should prevail" when the conflicts of manufacturers, landowners, delvers for water products, fishermen, and bathers are under consideration.[79]

Ten years later the Commissioner of Game and Inland Fisheries filed this report:

> Our Commission instigated the organization of a cooperative committee of ten on stream pollution comprised of representatives from industrial, municipal and State officials under the immediate direction of the State Board of Health to handle this troublesome question. The principal rivers of the State were surveyed by an experienced sanitary engineer, and industrial plants installed additional equipment which greatly mitigated this menace to our fish life.[80]

Such a cooperative effort among state agencies and industry, however, was not sufficient to provide an adequate solution to the ever-growing problem.[81] The common law remedies available to riparian owners,[82] the special laws protecting fish and health,[83] and the common law remedy of public nuisance available to the state and local governments were also insufficient.[84] It was readily apparent that the law did not provide the kind of solutions necessary for overall management and protection of the waters of the state. Nor could legal remedies be used to resolve local problems of competing and mutually exclusive uses which were not limited to tidal waters.[85]

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78. *See, e.g.*, 1911 COMM'R OF HEALTH ANN. REP. 13; 1924-25 COMM'R OF HEALTH ANN. REP. 21, 118.

79. ADDRESS OF GOVERNOR E. LEE TRINKLE BEFORE THE GENERAL ASSEMBLY, H. DOC. No. 2, Reg. Sess. 16-17 (1924).

80. ADDENDA TO THE ADDRESS OF GOVERNOR JNO. GARLAND POLLARD BEFORE THE GENERAL ASSEMBLY, SEN. DOC. No. 1, Reg. Sess. 63-4 (1934).

81. *See* note 89 *infra* and accompanying text.

82. *See* Note, *Private Remedies To Abate Water Pollution In Virginia and New Theories In Environmental Law*, 13 WM. & MARY L. REV. 477 (1971)

83. *See* notes 12-23 *supra* and accompanying text.

84. *See* Note, *Private Remedies To Abate Water Pollution In Virginia and New Theories In Environmental Law*, 13 WM. & MARY L. REV. 477 (1971).

85. Note 88 *infra*. This problem is yet to be resolved. The City of Richmond, Virginia, for example, continues to discharge inadequately treated sewage into the James River to the detriment of downstream communities. This unfortunate situation caused

Since the early 1920's, the legislature has responded to these problems in three ways. First, it has created or expanded the power of existing state agencies to attack the limited problems of their own jurisdictional areas. Secondly, beginning in 1920, numerous special districts or special authorities emanated from the General Assembly Each special district or authority was given limited power to provide local solutions to particular local water or sewer problems.[86] Finally, the legislature enacted a general water control law and entrusted one agency—the Water Control Board—with its administration. The remainder of this section will consider the development and application of this legislation.

The Water Control Law originated from a special study undertaken by the General Assembly in 1944. Recognizing the growing problem of water pollution, both in tidal and nontidal streams, the legislature, in a familiar approach, directed the Virginia Advisory Legislative Council to "make a thorough survey and study of the pollution problem in Virginia." [87]

One year later, the Advisory Council reported an alarming growth of pollution and its detrimental effect upon the interests of the state.[88]

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the Boards of Supervisors of Chesterfield and Henrico Counties in July, 1971, to protest vociferously against Richmond's nonresponsive attitude and to seek federal assistance. *See* note 268 *infra* and accompanying text.

86. Beginning in 1920 with the creation of the Arlington Sanitary District, Virginia Acts of Assembly 1920, ch. 486 at 810, the legislature has established the following special districts relating to water: Sanitary Districts, VA. CODE ANN. §§ 21-113 to -140.2 (Repl. Vol. 1960, *as amended* Cum. Supp. 1971); Special Service Districts in Consolidated Cities, VA. CODE ANN. § 15.1-18.2 (Repl. Vol. 1964); Water and Sewer Authorities, VA. CODE ANN. §§ 15.1-1239 to -1270 (Repl. Vol. 1964, *as amended* Cum. Supp. 1971); Planning and Service Districts, VA. CODE ANN. §§ 15.1-1400 to -1499 (Cum. Supp. 1971); Soil and Water Conservation Districts, VA. CODE ANN. §§ 21-1 *et seq.* (Repl. Vol. 1960, *as amended* Cum. Supp. 1971); Public Facilities Districts, VA. CODE ANN. § 21-427 (Repl. Vol. 1960); Sanitation Districts in Tidal and Non-Tidal Waters, (see notes 69 & 70 *supra*). For further information see Makielski, *supra* note 64.

In addition to these special local powers, cities, towns and counties have been granted varying degrees of control over water quality through their regulation of water supplies and sewage systems. The charters of each political subdivision must be consulted to determine their exact authority; however, the following provisions of the Virginia Code (Repl. Vol. 1964 and Cum. Supp. 1971) represent some of the more important powers: § 15.1-14(5) (nuisances may be abated and health and safety of citizens protected); § 15.1-31 (flood prevention); § 15.1-37 (dam construction for public water supply); 15.1-283 (drainage); § 15.1-292 (power to prevent pollution or injury to water works); § 15.1-299 (power to assure adequate water and sewer facilities in subdivisions). For further information regarding cities, towns and counties see Makielski, *supra* note 64; McSweeney, *supra* note 64.

87. Virginia Acts of Assembly 1944, H. J. Res. 23 at 807.

88. VALC REPORT ON POLLUTION CONTROL AND ABATEMENT, H. Doc. No. 15, Reg.

After finding that the damages inflicted upon riparian owners by pollution were "real and serious" and that the available remedies were "so slight as to be almost worthless," the Council submitted a bill designed to control industrial and municipal waste.[89]

In its proposal, the Council suggested strong administrative control over industry and municipalities, but cautioned against overbearing action by the state. It suggested that existing industry should be compelled to take steps to treat its effluents "*only when it can reasonably control its pollution*" and that municipalities be required to treat their sewage "*when they can reasonably do so.*" [90] [Emphasis supplied] As will be seen, this exhortation to treat industry and municipalities with reservation has had a restrictive effect on the later policy of the Water Control Board in administering the law.[91] The Council, on the other hand, was forceful in suggesting that expansion of existing industry and the building of new sewage treatment plants be approved by the state before their construction. This would insure that the plans provided adequate safeguards against pollution.[92]

The bill proposed by the Advisory Council was enacted in 1946.[93] Although the law altered the proposed bill in some cases,[94] and has since been amended numerous times[95] it is unnecessary here to trace the

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Sess. 6 (1946) [hereinafter cited as 1946 POLLUTION ABATEMENT REPORT]. Speaking of the special problems of the towns and cities the Report found that:

> Some of our cities are among the worst offenders in the field of pollution. They complain of the acts of others which tend to spoil their public water supply yet dump their wastes in adjacent rivers below them without proper regard for their neighbors.

And noting the effects of industrial pollution the Council warned that:

> If our streams are so polluted that new industry, requiring large quantities of pure water, cannot settle upon them we have lost large sums in wages to the public and revenue for the government. The loss in recreation values cannot be set down but they are vast. [P]ublic water supplies which are fed by rivers will be seriously and adversely affected by a failure to control and abate pollution.

Id.

89. 1946 POLLUTION ABATEMENT REPORT 5, 7

90. *Id.* at 5.

91. *See* notes 220-229 *infra* and accompanying text.

92. 1946 POLLUTION ABATEMENT REPORT 7

93. Virginia Acts of Assembly 1946, ch. 399 at 960 [codified at VA. CODE ANN. §§ 62.1-44.1 *et seq.* (Repl. Vol. 1968, *as amended* Cum. Supp. 1971)].

94. Notes 156-158 *infra* and accompanying text.

95. The most significant changes came in 1968 and 1970. *See* REVISION OF TITLE 62 OF THE CODE OF VIRGINIA, REPORT OF THE CODE COMMISSION, VA. H. DOC. No. 10, Reg. Sess. 6-20 (1968); Virginia Acts of Assembly 1968, ch. 659 at 1961; Virginia Acts of Assembly 1970, ch. 638 at 1314.

changes or to outline the subsequent course of other agencies. The important modifications of the Water Control Law and other legislation will be noted later as they become pertinent to the analysis of the law in its present form.

WATER CONTROL LAW OF VIRGINIA

Perspective

Before examining Virginia's current Water Control Law, it is necessary to examine its political and administrative perspective. This law's effectiveness is limited by its relative position among other laws and agencies with overlapping jurisdiction over water quality There are, for example, at least 10 other state agencies or commissions which have inter-related responsibilities for the planning or management of water quality[96] Moreover, numerous local districts and special authorities created by the General Assembly affect water quality in some manner, through planning, or operating sewage disposal facilities or water supply works, or abating soil erosion.[97] Aligned in varying degrees of harmony with these special authorities are county, city, and town governments which affect water quality by the way in which they dispose or fail to dispose of their urban wastes, by their handling of soil erosion and runoff, by the manner in which they enforce their own ordinances protecting public water supplies, and by their use of zoning authority[98]

Finally, upon the myriad of state and local entities are superimposed several interstate compacts such as the Potomac River Basin Compact,[99] the Ohio River Valley Water Sanitation Compact,[100] and numerous

96. The most important State agencies concerned with water quality are as follows: The State Corporation Commission (*see* notes 159-81 *infra* and accompanying text); The State Board of Health (*see* note 183 *infra* and accompanying text); The Commission of Game and Inland Fisheries (*see* notes 170-72 *infra* and accompanying text); The Soil and Water Conservation Commission [VA. CODE ANN. §§ 21-6 to -10 (Cum. Supp. 1971)]; The Marine Resources Commission [VA. CODE ANN. §§ 28.1-1 *et seq.* and §§ 62.1-3, -4 (Repl. Vol. 1969, *as amended* Cum. Supp. 1971)]; The Division of Water Resources [VA. CODE ANN. §§ 10-8.1, 10-113 *et seq.* (Repl. Vol. 1964, *as amended* Cum. Supp. 1971)]; The Commission on Outdoor Recreation [VA. CODE ANN. § 10-167 *et seq.* (Cum. Supp. 1971)]; The Virginia Institute of Marine Sciences [VA. CODE ANN. §§ 28.1-195 *et seq.* (Repl. Vol. 1969)]; The Division of Planning and Community Affairs [VA. CODE ANN. §§ 15.1-1400 *et seq.* (Cum. Supp. 1971)]; The Governor's Council on the Environment (*See* note 213 *infra*).

97. *See* note 86 *supra.*

98. *Id.*

99. VA. CODE ANN. § 62.1-69.1 *et seq.* (Cum. Supp. 1971). *See* notes 288-91 *infra* and accompanying text.

100. VA. CODE ANN. § 62.1-70 *et seq.* (Repl. Vol. 1968). *See also* Brown & Duncan,

federal agencies such as the increasingly active Environmental Protection Agency, the Army Corps of Engineers, the Department of Agriculture, and the Department of the Interior.[101]

It is important to recognize this labyrinth of overlapping and often conflicting political units which influence water quality, and to note the disharmony and inefficiency that often results. However, discussion of their various functions and rules is beyond the scope of this note.

The Water Control Board

The Water Control Law is primarily a regulatory and policy-setting Act which asserts the State's aspiration regarding water quality and provides penalties and prohibitions to maintain this quality Its basic purpose is to abate pollution and to protect and improve the quality of state waters for future use. To this end, a regulatory agency has been created and vested with the powers necessary to implement the statute.

The law is administered by a seven-member State Water Control Board which is appointed by the governor and confirmed by the General Assembly[102] The Board is required to meet at least four times annually; recently it has met six times per year.[103] It is assisted by a staff of 115 personnel[104] who handle most of the administrative work load—inspection, certification, and enforcement actions. However, final approval of standards, rules and regulations, policies, certificates, and special orders must come from the Board itself.[105] The staff is divided into four divisions: Planning and Grants, Technical Services, Pollution Abatement, and Enforcement.[106]

Legal Aspects of a Federal Water Quality Surveillance System, 68 MICH. L. REV. 1131, 1140 (1970).

101. For an extended discussion of federal agencies and the federal regulation of water quality see Brown & Duncan, *supra* note 100; Hines, *Nor Any Drop to Drink: Public Regulation of Water Quality Part III: The Federal Effort*, 52 IOWA L. REV. 799 (1967).

102. VA. CODE ANN. §§ 62.1-44.7, 44.8 (Cum. Supp. 1971). Members of the Board, who must be citizens of the State, are selected "from the State at large for merit without regard to political affiliation; and shall, by character and reputation, reasonably be expected to inspire the highest degree of cooperation and confidence in the work of the Board." VA. CODE ANN. § 62.1-44.9 (Cum. Supp. 1971).

103. VA. CODE ANN. § 62.1-44.11 (Cum. Supp. 1971).

104. State Water Control Board Memo, Budget Request, July 10, 1971, at 2 [hereinafter cited as 1971 Budget Request.]. Between 1968 and 1971, the size of the staff has increased from 39 to 115 and an increase of 39 more personnel was requested by the Board's Budget Request for 1972-74. *Id.*

105. VA. CODE ANN. § 62.1-44.14 (Cum. Supp. 1971).

106. For a discussion of the organization of other state water control agencies see CLARK, *supra* note 22, § 227 at 205-15; Hines, *supra* note 22 at 216-19.

Powers and Duties

Most of the powers and duties of the Board are enumerated in section 62.1-44.15 of the Virginia Code.[107] Essentially, the Board has general supervisory, administrative, and enforcement power over all state waters.[108] It is authorized to (1) conduct scientific experiments concerning water quality;[109] (2) issue certificates (which all owners are required to obtain)[110] and prescribe conditions for the discharge into, or alteration of state waters;[111] (3) approve plans and applications (which must be submitted by all owners)[112] for future construction of waste treatment or sewage treatment plants;[113] (4) make inspections and investigations;[114] (5) bring suit against owners who are responsible for large scale killing of fish;[115] and (6) ensure compliance with the law through issuance of special orders[116] or by pursuing appropriate legal remedies.[117] Further, the Board may adopt regulations necessary to enforce its management programs[118] and to control discharges from boats.[119] It may adopt rules of procedure;[120] establish requirements for treatment of wastes;[121] establish standards and policies for water quality;[122] develop plans and programs for pollution abatement;[123] and administer programs for financial assistance regarding water quality.[124]

107. VA. CODE ANN. § 62.1-44.15 (Cum. Supp. 1971).

108. VA. CODE ANN. § 62.1-44.15(1) (Cum. Supp. 1971). *See* notes 156-83 *infra* and accompanying text.

109. VA. CODE ANN. §§ 62.1-44.15(2), -44.15(4) (Cum. Supp. 1971).

110. VA. CODE ANN. § 62.1-44.5 (Cum. Supp. 1971). *See* notes 184-85 *infra* and accompanying text.

111. VA. CODE ANN. § 62.1-44.15(5) (Cum. Supp. 1971). *See* note 163 *infra* and accompanying text.

112. VA. CODE ANN. §§ 62.1-44.16, .17, .19 (Cum. Supp. 1971).

113. VA. CODE ANN. § 62.1-44.15(9) (Cum. Supp. 1971).

114. VA. CODE ANN. §§ 62.1-44.15(6), .15(11), .13, .20, .21 (Cum. Supp. 1971). *See* notes 187-88 *infra* and accompanying text.

115. VA. CODE ANN. § 62.1-44.15(11) (Cum. Supp. 1971).

116. VA. CODE ANN. § 62.1-44.15(8) (Cum. Supp. 1971). *See* notes 192-201 *infra* and accompanying text.

117. VA. CODE ANN. § 62.1-44.23 (Cum. Supp. 1971). *See* notes 207-08 *infra* and accompanying text.

118. VA. CODE ANN. § 62.1-44.15(10) (Cum. Supp. 1971).

119. VA. CODE ANN. § 62.1-44.33 (Cum. Supp. 1971). *See* notes 271-86 *infra* and accompanying text.

120. VA. CODE ANN. § 62.1-44.15(7) (Cum. Supp. 1971).

121. VA. CODE ANN. § 62.1-44.15(14) (Cum. Supp. 1971). *See* notes 239-46 *infra* and accompanying text.

122. VA. CODE ANN. § 62.1-44.15(3) (Cum. Supp. 1971). *See* notes 252-56 *infra* and accompanying text.

123. VA. CODE ANN. § 62.1-44.15(13) (Cum. Supp. 1971).

124. VA. CODE ANN. § 62.1-44.15(12) (Cum. Supp. 1971).

In addition to the powers enumerated in the Code, the Governor has designated the Board as the agency responsible for issuing certificates of assurance that federally controlled projects will not degrade Virginia's water quality [125]

There are some limitations on the Board's powers. First, the Board must exercise its authority in accordance with procedures such as public hearings,[126] publication of notice,[127] notice by certified mail[128] or otherwise,[129] or by seeking the advice of local, regional, or state planning authorities.[130]

Further, the Board's power may be curtailed by express limitation in the Water Control Law[131] or through the exercise of judicial review on petition of "[a]ny owner aggrieved by a final decision of the Board," [132] or by the petition of an adversely affected owner for a declaratory judgment to test the validity of any standard, policy, or regulation adopted by the Board.[133] Finally, the Board's power to carry out state policy may be limited by nonstatutory influences such as the threat of curtailment of funds or powers by the legislature, or removal from office by the Governor, or by numerous pressure groups and nonjudicial factors.

Scope and Jurisdiction

Virginia's Water Control Law is, on its face, forceful and compre-

125. Letter from the Governor of Virginia, June 25, 1970, referred to in Attorney General's SCC Opinion, note 159 *infra*, at 2. 33 U.S.C. § 1171(b)(1) (1970) provides in pertinent part that:

> Any applicant for a Federal license or permit to conduct any activity . which may result in any discharge into the navigable waters of the United States, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, that there is reasonable assurance that such activity will not violate applicable water quality standards. No license or permit shall be granted if certification has been denied by the State.

126. VA. CODE ANN. §§ 62.1-44.25, .28 (Cum. Supp. 1971). *See also* §§ 62.1-44.15(3)(b), .15(8)(b) (Cum. Supp. 1971).

127. *See, e.g.*, VA. CODE ANN. § 62.1-44.15(3)(b), .15(8)(b), .16(1)(a), .19(2) (Cum. Supp. 1971).

128. VA. CODE ANN. § 62.1-44.15(9), .15(10) (Cum. Supp. 1971).

129. VA. CODE ANN. § 62.1-44.15(5), .15(8)(b) (Cum. Supp. 1971).

130. VA. CODE ANN. § 62.1-44.15(13) (Cum. Supp. 1971). *See* note 252 *infra* and accompanying text.

131. VA. CODE ANN. § 62.1-44.15.1 (Cum. Supp. 1971). *See* notes 230-31 *infra* and accompanying text.

132. VA. CODE ANN. § 62.1-44.29, .30 (Cum. Supp. 1971)

133. VA. CODE ANN. § 62.1-44.24 (Cum. Supp. 1971)

hensive. The Water Control Board has broad authority, and its jurisdiction is expansive because of liberal definitions of the activities to be regulated.[134]

1. *Geographic Jurisdiction*

The Board's jurisdiction over state waters is complete and extends to "all water, on the surface and under the ground, wholly or partially within or bordering the State or within its jurisdiction." [135] Thus all lakes, streams, rivers, or other bodies of water, as well as all water below the surface, within or contiguous with the state, are subject to the control of the Board. It is difficult to imagine a body of water in the state which would escape this all-encompassing definition,[136] which is far broader than that of many states which limit their water control agency's jurisdiction to "surface" waters, or to "public" waters.[137]

Furthermore, the statute also provides that no right shall exist or be acquired "by virtue of past or future discharge of sewage, industrial wastes or other wastes or other action by the owner," [138] thus preventing private owners from acquiring prescriptive rights which would limit the Board's authority

2. *Types of "Pollution"*

The Board's jurisdiction extends to various types of discharges into state waters. Pollution is defined as:

> [S]uch alteration of the physical, chemical or biological properties of any State waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses.[139]

134. For a discussion of the scope and jurisdiction of the Water Control Agencies in other states see Hines, *supra* note 22, at 219-26; CLARK, *supra* note 22, § 228 at 215-30.

135. VA. CODE ANN. § 62.1-44.3(4) (Cum. Supp. 1971).

136. For an exercise in how not to write a definition of "State water" see VA. CODE ANN. § 62.1-81 (Repl. Vol. 1968); Miri, *supra* note 2, at 404-07

137. *See, e.g.*, Hines, *supra* note 22 at 220; CLARK, *supra* note 22, § 228.1 at 216-19. For a comparison of Virginia's more limited definition as it appeared in the original Act, see Virginia Acts of Assembly 1946, ch. 399 § 1514-b(3)(3) at 960.

138. VA. CODE ANN. § 62.1-44.4 (Cum. Supp. 1971).

139. VA. CODE ANN. § 62.1-44.3(6) (Cum. Supp. 1971). The original definition was

"Pollution" also includes "sewage," "industrial waste," and "other wastes" which also are broadly defined.[140]

Virginia's definition of pollution is far superior to that of other jurisdictions which limit the types of pollutants or discharges which are subject to control, or require serious damage to the water before discharges are considered pollutants.[141]

A practical example of the adaptability of Virginia's definition can be seen in the following illustrations: Sedimentation, which seriously threatens Virginia's rivers and streams, is not specifically defined as a pollutant. In 1971 the Water Control Board, concerned with the problem, asked the Attorney General of Virginia to render an opinion on whether sediment may be construed to be a pollutant under the State Water Control Law [142]

In reply, the Opinion noted that:

> Sediment, or the suspended mineral or organic solids carried to watercourses by erosion and surface runoff, has been estimated to place a volume load upon the nation's streams, lakes and estuaries at least 700 times that of suspended solids from sewage discharge.[143]

The Opinion concluded 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 " [144]

A similar conclusion could be drawn in regard to "thermal" pollution. The relevant questions under Virginia's definition appear to be: (1) does the discharge alter the physical, chemical or biological properties of the water? And, (2) if so, will such an alteration create a nuisance, or infringe those interests which the definition intends to protect? The answer to the first inquiry must necessarily be in the affirmative, for to raise the temperature of water is by definition to alter one of its physical properties. Moreover, if the discharge of great quantities of hot water from, for example, a nuclear-electric plant, would render the receiving waters detrimental to fish or aquatic life, the discharge would be pollu-

limited to "discharges or deposits" of "wastes." Virginia Acts of Assembly 1946, ch. 399 § 1514-b(3)(5) at 960.

140. VA. CODE ANN. §§ 62.1-44.3(7), (8), (9) (Cum. Supp. 1971).

141. *See, e.g.*, Hines, *supra* note 22, at 220; CLARK, *supra* note 22, § 118.2 at 221-24.

142. Opinion of the Attorney General of Virginia to the Secretary of the Water Control Board, September 7, 1971.

143. *Id.*

144. *Id.* See note 145 *infra*.

tion under Virginia's definition and thus susceptible to Water Control Board regulation.[145]

Furthermore, it may be argued that even the withdrawal of water—such as for consumptive use by a municipality—would fall under the Water Control Board's jurisdiction. If, for example, a town taps a small river and the downstream flow consequently is diminished, the stream's physical properties surely would be altered. And if as a result of the diminished flow, the stream's ability to assimilate other pollutants such as sediment and run-off is decreased, surely the alteration could render the downstream water "unsuitable for recreational" or "agricultural" uses. More critically, it would render the water "unsuitable with reasonable treatment for use as present or possible future sources of public water supply" by other municipalities. The Board has begun to exercise limited authority over withdrawals and diversions, but only on a piecemeal basis.[146] Presently, no state or federal agency regulates or controls competing consumptive uses of the same water supply, as will become necessary eventually [147]

One other illustration of Virginia's expansive definition of pollution is stream flow regulation from dam impoundments. A dam may reduce the downstream flow of water and affect the quality in the same manner as a withdrawal by a municipality, as shown above. This problem will be analyzed in a later section concerning jurisdictional limitations.[148]

Finally, in discussing the Board's jurisdiction over types of pollutants, it is important to note that a loophole in the common law action for nuisance has been closed by the Water Control Law If an owner's alteration or discharge alone is insufficient to constitute pollution, but does cause pollution when combined with other de minimus alterations

145. Although the Opinion did not make note of it, an earlier report of The Virginia Code Commission, in discussing the reasons for expanding the definition said:

> The present definition covers only pollution which is caused by waste discharges into State waters. Pollution may occur from at least two sources which are not now adequately covered: (1) Heating of stream water in power plants or other heat exchange operations which involve only a physical change, that of temperature, and (2) loss of dissolved oxygen from deep water in reservoirs back of dams, with the subsequent discharge from the bottom of the dam of very low or zero dissolved oxygen content water. The revised definition covers these and other similar cases that might not come under the present definition.

REPORT OF THE VIRGINIA CODE COMMISSION ON REVISION OF TITLE 62, VA. H. Doc. No. 10, Reg. Sess. 8 (1968).

146. *See* Miri, *supra* note 2, at 411.

147. *Id.*

148. Notes 156-81 *infra* and accompanying text.

or discharges from other owners, it falls within the jurisdiction of the Board.[149]

In summary, the Water Control Board's authority over types of pollution is extensive and includes almost any conceivable deleterious alteration of state water.

3. *Persons over Whom the Board Has Jurisdiction*

Throughout the Act, the persons the Board has authority to regulate are referred to as "owners." The applicable provision states that:

> "*Owner*" means the State or any of its political subdivisions, including, but not limited to, sanitation district commissions and authorities, and public or private institution, corporation, association, firm or company or any person or group of persons acting individually or as a group.[150]

This definition is basically the same as that in the original enactment in 1946, with one significant change. The 1946 version expressly exempted from Water Control Board jurisdiction the Hampton Roads Sanitation District Commission and the owners who were connected with it.[151] In 1970, the legislature deleted this exemption[152] and reworded the definition of "owner" to include "sanitation district commissions and authorities." [153] Hence, the Water Control Board now has authority to regulate the often-overloaded sewage treatment plants operated by the Hampton Roads Sanitation District Commission and the pumping stations and feeder lines which are maintained by the political subdivisions within the District.[154] The Board took steps late in 1971 to have the District certified in accordance with the change in the law [155]

149. VA. CODE ANN. § 62.1-44(3)(6)(c)(i) (Cum. Supp. 1971).

150. VA. CODE ANN. § 62.1-44.3(5) (Cum. Supp. 1971).

151. Virginia Acts of Assembly 1946, ch. 399 § 1514-b24 at 969-70. *See also* VA. CODE ANN. § 62.1-18 (Repl. Vol. 1968).

152. *Compare* VA. CODE ANN. § 62.1-18 (Repl. Vol. 1968) *with* VA. CODE ANN. § 62.1-44.6 (Cum. Supp. 1971).

153. *Compare* VA. CODE ANN. § 62.1-15(5) (Repl. Vol. 1968) with VA. CODE ANN. § 62.1-44.3(5) (Cum. Supp. 1971).

154. *See, e.g.*, notes 201 & 270 *infra*.

155. At the time of publication it is not clear whether the Hampton Roads Sanitation District Commission will accept this assertion of authority without a legal confrontation. There is a strong feeling among HRSD officials that the district—not the state—should make the decision as to how much and how quickly their facilities should be improved, and as to what the quality of the waters in Hampton Roads should be.

Thus the Water Control Board presently has authority to regulate discharge into or alteration of state waters by any person, corporation, or political subdivision of the state, including the Hampton Roads Sanitation District.

4. *Jurisdictional Limitations*

The jurisdictional authority of the Board is not unlimited. As noted above, the Virginia Water Control Law was enacted after recommendations were submitted by the Advisory Council in 1946. The Council's proposed bill provided that the Board should have jurisdiction and power "[t]o exercise general supervision over the administration and enforcement of *all laws* relating to the pollution of the State waters." [156] (Emphasis supplied). This proposal was rejected by the General Assembly and the language was changed to grant the Board power to enforce and administer "this law, and all rules, regulations and special orders promulgated thereunder." [157] The Board's authority to enforce only the provisions of that chapter, however, was enlarged in 1970 to include the power and authority "[t]o exercise general supervision and control over the *quality of all State waters* and to administer and enforce this chapter, and all [provisions] promulgated thereunder." [158] (Emphasis supplied)

This change indicates that the General Assembly intended to place the authority for supervision and control over the quality of all waters in the hands of the Water Control Board. But this expansion of the Board's jurisdictional authority was evidently not deemed significant by the Attorney General of Virginia.

In February 1971, the Board's authority to establish low flow release standards for a proposed dam for nuclear power was challenged by the State Corporation Commission (SCC) and the Virginia Electric and Power Company (VEPCO) The SCC had licensed VEPCO to construct a nuclear power station on the North Anna River. The license provided for a minimum release schedule for flows from the dam impoundment, but the Water Control Board felt that a higher release schedule was necessary to "protect the water quality down-

156. 1946 POLLUTION ABATEMENT REPORT *supra* note 88 at 13, *quoted in* American Cyanamid Co. v. Commonwealth, 187 Va. 831, 837, 48 S.E.2d 279, 283 (1948).

157. Virginia Acts of Assembly 1946, ch. 399 § 1514-b 9(1) at 962.

158. VA. CODE ANN. § 62.1-44.15(1) (Cum. Supp. 1971). *Compare* this section *with* VA. CODE ANN. § 62.1-27(1) (Repl. Vol. 1968).

stream." [159] The problem confronting the Attorney General was an apparent discrepancy between the Water Control Law[160] and the Water Power Act.[161]

The Water Power Act authorizes the SCC when granting licenses for dam construction to "determine what provision, if any, shall be made by the licensee to prevent the unreasonable obstruction of then existing navigation or *any unreasonable interference with stream flow.*" [162] (Emphasis supplied)

Relevant provisions of the Water Control Law empower the Water Control Board:

> *To issue certificates for the* discharge of sewage, industrial wastes and other wastes into or adjacent to or the *alteration otherwise of the physical, chemical or biological properties of State waters under prescribed conditions* and to revoke or amend such certificates.[163] (Emphasis supplied).

The conflict is obvious. To resolve the conflict it is necessary to examine the general provisions of both laws. The Water Power Act states:

> [T]he control and regulation on the part of the State of *the development of the waters of the State* shall be paramount, and *shall be exercised through the agency of the State Corporation Commission.*[164]

> Before acting upon any application, the Commission shall weigh all the respective advantages and disadvantages from the standpoint of the State as a whole and the people thereof [165] (Emphasis supplied).

The Water Control Law states:

> This chapter is intended to supplement existing laws and no part thereof shall be construed to repeal any existing laws *specifically*

159. Opinion of the Attorney General of Virginia to the Executive Secretary of the Water Control Board, February 5, 1971. [hereinafter cited as 1971 SCC Opinion].
160. VA. CODE ANN. §§ 62.1-44.1 *et seq.* (Cum. Supp. 1971).
161. VA. CODE ANN. §§ 62.1-80 *et seq.* (Repl. Vol. 1968)
162. VA. CODE ANN. § 62.1-91 (Repl. Vol. 1968).
163. VA. CODE ANN. § 62.1-44.15(5) (Cum. Supp. 1971).
164. VA. CODE ANN. § 62.1-82 (Repl. Vol. 1968).
165. VA. CODE ANN. § 62.1-88 (Repl. Vol. 1968).

> *enacted for the protection of health or the protection of fish, shellfish and game of the State*, except that the administration of any such laws pertaining to the pollution of State waters, as herein defined, shall be in accord with the purpose of this chapter and general policies adopted by the Board.[166] (Emphasis supplied).

The Attorney General's Opinion resolved this jurisdictional conflict in favor of the SCC, ruling that where development of state waters by dam construction is concerned, the SCC has paramount control.[167] It is submitted, however, that this result does not necessarily follow; in a case where development of state waters would involve approving the construction of a dam for public water supply, the SCC may require a license, but the Health Department is the final arbiter of the sanitary and physical quality of the water.[168]

A fair reading of the Water Control Law requires a similar construction regarding pollution or water quality

Additionally, the Opinion stressed the fact that the General Assembly has conferred authority upon numerous special agencies to "exercise control over defined—and limited—areas of water uses. . . ." [169] The Opinion concluded that in the area of water power projects the broad authority of the SCC must prevail. This conclusion was based on the premise that the Water Control Law was intended merely to supplement the existing Water Power Act.[170]

However, in *American Cyanamid Co. v. Commonwealth*,[171] the Supreme Court of Appeals of Virginia was faced with a similar conflict between the Water Control Law and the Fish Law which was previously administered by the Commission of Game and Inland Fisheries. Therein, the Court stated:

> [I]f a later statute does not by its terms or by necessary implication repeal entirely a former one *in pari materia*, yet if it clearly appears that the later statute was intended to furnish the only rule to govern a particular case, it repeals the former to that extent. And in deciding that question "the occasion and the reason

166. VA. CODE ANN. § 62.1-44.6 (Cum. Supp. 1971).

167. 1971 SCC Opinion, *supra* note 159, at 6-7.

168. VA. CODE ANN. § 62.1-46 (Repl. Vol. 1968). The jurisdiction of the Health Department is fairly clear. However, the jurisdiction of the SCC is extremely muddled. *See* Miri, *supra* note 2, at 404-07

169. 1971 SCC Opinion, *supra* note 159, at 6. *See* note 96 *supra* for a listing of some of these agencies.

170. 1971 SCC Opinion, *supra* note 159, at 7.

171. 187 Va. 831, 48 S.E.2d 279 (1948).

> of the enactment, the letter of the act, the context, the spirit of the act, the subject matter and the provisions of the act, have all to be considered." [172]

The Water Power Act was enacted in 1928;[173] the purpose of the Act was to encourage water power development,[174] and a fair reading of the Act indicates that its provision for regulating stream flow was inserted to protect the interests of navigation rather than water quality.[175] Conversely, the provision authorizing the Water Control Board to exercise control over water quality of *all* state waters was enacted in 1970, and its apparent purpose was to extend the Board's authority to regulate pollution and to determine conditions for the alteration of water quality in all instances where there is a clear threat of water quality degradation.[176] No other state agency has the necessary expertise or technology to determine the water quality requirements of the state.

It follows that where dam construction and water quality are both involved, the Water Control Board properly exercises its authority regarding water quality conditions. The SCC is not qualified to regulate such matters, for the SCC "provides no machinery for establishing standards of quality for waters."[177] The Opinion of the Attorney General conditioned the superior SCC jurisdiction by adding that the

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172. *Id.* at 841-42, 48 S.E.2d at 285 *quoting from* Fox's Adm'rs v. Commonwealth, 57 Va. (16 Gratt.) 1, 10 (1860). Concluding that the Water Control was to govern, the court noted that:

> Here the General Assembly did intend the existing law to continue, and said so, but to be administered in accord with the purposes of the Water Control Law and the general policies of the Board. The Fish Law does not deal specifically with existing industrial waste, which is one of the principal concerns of the Water Control Law It provides no machinery for establishing standards of quality for waters in relation to their reasonable and necessary use as determined to be in the public interest.

173. Virginia Acts of Assembly 1928, ch. 424 at 1099.

174. Garden Club v. Virginia Public Service Co., 153 Va. 659, 673, 151 S.E. 161, 164 (1930) Another reason, and perhaps the primary motivation for passage of the Act was the desire of the State to fill a power vacuum with some Virginia agency in the face of encroachment by the Federal government. Thus the broad declaration of jurisdiction over "the development of the waters of the State" may be viewed as a stop gap measure to assure state, not federal control; and the placing of this power in the hands of the SCC was logical in 1928 since there was no other State agency with the capability of handling it. *See* REPORT OF THE WATER POWER AND DEVELOPMENT COMMISSION, VA. H. Doc. No. 7, Reg. Sess. 5 (1926); EMBREY, *supra* note 2, at 303-81.

175. *See* VA. CODE ANN. §§ 62.1-80 *et seq.* (Repl. Vol. 1968)

176. *See* notes 156-158 *supra* and accompanying text.

177. *See* quoted material in note 172 *supra.*

SCC "must consider the advice and judgment of the State Water Control Board regarding the effects of the proposed project upon the quality of State waters." [178] This solution, however, does not provide for balanced evaluation of the competing interests since each agency tends to approach a particular project or policy from its own point of view.[179] Thus, overriding needs for water quality may be subordinated to other considerations deemed by the SCC to be of greater importance.

Nevertheless, assuming the Opinion to be correct, and combining the language of the Water Control Law with that of the Opinion, it would appear that the Water Control Board presently has authority to exercise general supervision and control over the quality of all state waters and to enforce the Water Control Law except where the SCC has authority to license dam construction. In the latter situation, the SCC has superior jurisdiction, but must consider the advice and judgment of the State Water Control Board regarding water quality

Finally, the Attorney General acknowledged the fragmentation of governmental responsibilities and suggested legislation "that would redefine—and perhaps redetermine—more clearly the locus of responsibility for controlling stream flow releases from water power projects where water quality standards of the State are affected." [180]

It should be noted in conclusion, that regardless of the validity of the Opinion, the Water Control Board's authority to control releases from impoundments in instances where the SCC has no authority is unquestioned.[181]

There are two other areas in which the Board's jurisdiction over water quality activities is limited. Where sewage systems and sewage treatment works are involved, the Board shares supervisory powers with the Department of Health;[182] and as noted earlier, the Department of Health apparently has exclusive jurisdiction over public water sup-

178. 1971 SCC Opinion, *supra* note 159, at 7

179. Miri, *supra* note 2, at 407 Professor Miri's article may be referred to for a parallel analysis of the jurisdictional problems, and fragmentation of state agencies from a water resources point of view. *Id.* at 401.

180. 1971 SCC Opinion, *supra* note 159, at 10. It should be noted that, according to the Opinion, the Water Board's authority to issue certificates to federally sponsored projects is also predicated on the Board's authority to exercise jurisdiction under state law. Thus where the Board lacks jurisdiction, no state agency has authority to issue the assurance required by federal law. In such a case, certification will be made by the appropriate federal agency 33 U.S.C. § 1171(b)(1) (1970) quoted in part at note 125 *supra.*

181. *See* Miri, *supra* note 2, at 411.

182. VA. CODE ANN. § 62.1-44.18 (Cum. Supp. 1971).

plies "insofar as the sanitary and physical quality of waters furnished for drinking purposes may affect public health." [183]

Thus, the Water Control Board's jurisdiction over water quality is exclusive vis-à-vis other state agencies except where sewage treatment works and water supplies for drinking purposes are involved, and possibly where construction of dams is concerned.

Surveillance and Enforcement

Having described the broad jurisdiction of the Water Control Board, it remains to ascertain the means available to the Board to monitor and enforce the law

All owners desiring to utilize state water are required to obtain a certificate from the Board authorizing them to discharge into or alter the quality of the water.[184] Once certificates have been issued, and conditions under which owners may discharge into state water have been prescribed, the Board requires the owner periodically to furnish reports regarding effluent discharges.[185] The Board then compares these reports with the effluent limitations placed on the owner's certificate. Severe penalties for violation of this requirement provide incentive for accuracy in reporting.[186] However, the Board is not limited to this means of monitoring.

The Water Control Law also authorizes and requires the Board to make investigations and inspections to ensure compliance with its policies and regulations.[187] To facilitate this requirement, the Board is permitted to "enter any establishment, or upon any property, public, or private, for the purpose of obtaining information or conducting surveys or investigations necessary in the enforcement of the provisions of [the Water Control Law]." [188]

Under authority of these provisions the Board presently receives information from four sources in addition to the reports of the owners themselves. First, the state is divided into five administrative regions. An area representative from the Board is permanently stationed in the headquarters of each region, and is tasked with monitoring and in-

183. VA. CODE ANN. § 62.1-46 (Repl. Vol. 1968).

184. VA. CODE ANN. § 62.1-44.5 (Cum. Supp. 1971).

185. VA. CODE ANN. § 62.1-44.21 (Cum. Supp. 1971). *See also* § 62.1-44.15(6) (Cum. Supp. 1971); State Water Control Board Requirement No. 4 (1961); State Water Control Board Policy No. 2 (1971).

186. VA. CODE ANN. § 62.1-44.32 (Cum. Supp. 1971).

187. VA. CODE ANN. §§ 62.1-44.13, .15(6) (Cum. Supp. 1971)

188. VA. CODE ANN. § 62.1-44.20 (Cum. Supp. 1971).

vestigating the entire geographical area to ensure compliance with the law.

Second, to assist the regional representative, the staff at the Water Control Board office in Richmond provides technical guidance and frequently dispatches special teams to investigate problem areas discovered by field representatives.

Third, there are over 500 mechanical monitoring stations located in rivers and streams, and many are being placed in lakes and other bodies of water throughout the state. Samplings taken from these stations indicate the water quality at their locations. Samplings are made at least monthly, and if unusual variations in the conditions for that portion of the stream are reported, further samples are taken and a closer investigation is conducted by field representatives, or by the Board staff from Richmond, to determine the source and cause of the variation.

Finally, reports from game wardens and officials from other state and federal agencies, such as the Coast Guard, the Health Department, and the Marine Resource Commission, as well as complaints from local citizens, provide a fourth source of information. These reports have become particularly useful in recent years. For example, there were 175 complaints investigated by the Board's "Hazardous Alert Team Standby" in Richmond during the first half of 1971, compared with a total of 137 such investigations during the entire year of 1970. This figure does not include numerous complaints handled by field representatives.[189]

For years, the Board has recognized the need for improved monitoring and surveillance of state waters. This year in its budget request the Board asked for increased funding to strengthen its enforcement and monitoring program.[190] If abatement of pollution is a serious concern,[191] surveillance clearly should be a matter of primary consideration. Without knowledge of the condition of the state's rivers and streams, no part of the law is enforceable. More importantly, valid scientific proof of violations is essential to effective enforcement.

Once the Board has detected and documented a problem, through available information gathering techniques, several powers exist to remedy it.

The Water Control Law allows the Board to issue cease and desist orders to owners who are contributing to the pollution of state

189. Information obtained from the Water Control Board, Sept. 1971.

190. Note 213 *infra* and accompanying text.

191. Notes 219-51 *infra* and accompanying text.

waters,[192] or contravening water quality standards or policies.[193] The Board may also issue special orders requiring recalcitrant owners to: (1) construct facilities in accordance with final approved plans and specifications;[194] (2) comply with terms and provisions of the Board's certification;[195] (3) comply with the Board's directives[196] and requirements;[197] (4) comply with water quality standards and policies,[198] and the provisions of the Water Control Law or any decision of the Board.[199]

Before any special order becomes effective against the owner, procedural safeguards, such as notice to the owner and a hearing on the

192. VA. CODE ANN. § 62.1-44.15(8)(a)(i) (Cum. Supp. 1971)

193. VA. CODE ANN. § 62.1-44.15(8)(a)(v) (Cum. Supp. 1971). As an illustration of how these orders are invoked in practice the following excerpt from the Board's enforcement summary is quoted:

> [Morton Frozen Foods, Inc., Crozet, Virginia] made application for and received a certificate on May 12, 1954 and May 26, 1955 for discharge of waste to State waters, which certificates were subsequently revoked, and a new certificate was issued on October 24, 1971. Since the initial certificate was issued, the Owner's efforts toward a final solution to the pollution abatement problem in State waters below Crozet had been sporadic at best. Such progress as had been made had come only as a result of intensive prodding by the staff, the Board and its Special Legal Counsel. The Board, by Minute 25 of its November 20, 1968 meeting, directed its Special Legal Counsel to institute suit against the Owner so that the pollution abatement problem might finally be solved. Suit was filed on March 14, 1969, as reported in Minute 35 of the Board's meeting on March 19, 1969, and a temporary injunction was entered by the Judge of the Circuit Court of Albemarle County against the Owner on September 25, 1969. This injunction was dissolved on July 9, 1971, after finding that there was not then a violation of the Owner's certificate and that Owner's improved treatment system gave assurance that no such violation would occur in the future.

State Water Control Board Memo: A Summary of Enforcement Actions, August 3, 1971.

The Board has also issued Special Orders pursuant to section 62.1-44.15(8) to the following Owners during the past three years: Anchor Red Ash Coal Corp., Atlantic Creosoting Co., Inc., Bates Manufacturing Co., Inc., Blue Ridge Poultry & Egg Co., Inc., Town of Clifton Forge; Town of Chatham; Eads Manufacturing Co., Flat Gap Mining Co., Fredericksburg Sand & Gravel; Graninger Honey Dipper Service; Horn Harbor Nursing Home; H. E. Kelly & Co., Inc., Knox Creek Coal Co., Mathews County; Martin Processing Co., Inc., Nansemond County; Nansemond Utility Co., Inc., Norfolk Oil Transit, Inc., Town of Onancock; H. H. Perry Canning Co., City of Richmond; Smithfield Ham & Products Co., Inc., Town of Urbanna; and Weaver Fertilizer Co.

194. VA. CODE ANN. § 62.1-44.15(8)(a)(ii) (Cum. Supp. 1971)

195. VA. CODE ANN. § 62.1-44.15(8)(a)(iii) (Cum. Supp. 1971)

196. VA. CODE ANN. § 62.1-44.15(8)(a)(iv) (Cum. Supp. 1971).

197. VA. CODE ANN. § 62.1-44.16(2), .19(5) (Cum. Supp. 1971).

198. VA. CODE ANN. § 62.1-44.15(8)(a)(v) (Cum. Supp. 1971).

199. *Id.*

merits, must be followed.[200] In emergency situations, as where an owner is grossly endangering public health, safety or welfare, or health of animals, fish or aquatic life, the Board may dispense with the procedural requirements of notice and a hearing, and issue an emergency special order.[201]

Supporting the Board's authority to issue orders are provisions which make it unlawful for any owner (1) to fail to comply with any final special order of the Board, (2) to discharge sewage, industrial waste or other waste in violation of any condition contained in a certificate issued by the Board, and (3) to refuse to provide information required by the Board.[202]

It is interesting to note that the changes in the definition of "pollution" were not carried over to this section of the law[203] Thus it is not "unlawful" to alter deleteriously the physical, chemical, or biological properties of water unless such alteration is also a discharge of sewage, industrial waste, or other waste.

Perhaps violations which fall outside the purview of this section are subsumed under the next section of the law which provides for fines of $100 to $5,000 for each violation of *any* provision of the Water Control Law by an owner.[204]

In addition to violation of "any provision" an owner is subject to the same penalties for "failing, neglecting or refusing to comply with any special final order of the Board, or of court, lawfully issued. . . ." [205]

Finally, within the section providing penalties: "[E]ach day of a continued violation after conviction shall constitute a separate offense and shall subject the system, business, or establishment in violation of [the Water Control Law] to abatement as a nuisance." [206]

In addition to its own power to issue special orders and certificates,

200. VA. CODE ANN. § 62.1-44.15(8)(b) (Cum. Supp. 1971). *See also* VA. CODE ANN. § 62.1-44.12, .26-.28 (Cum. Supp. 1971).

201. VA. CODE ANN. § 62.1-44.15(8)(a) (Cum. Supp. 1971). In recent years six Emergency Special Orders have been issued. For example, after Health Department officials discovered that Holland Utilities, Inc. had been discharging raw sewage into oyster growing areas of the Lynnhaven River, the owner was issued an Emergency Special Order on July 7, 1971, directing him to cease and desist such pollution immediately and to make acceptable improvements. Minute 3 of the Water Control Board meeting, July 26, 1971.

202. VA. CODE ANN. § 62.1-44.31 (Cum. Supp. 1971).

203. This apparent loophole would perhaps allow violations of certificates which, for example, cause thermal pollution, or which fail to meet stream flow requirements.

204. VA. CODE ANN. § 62.1-44.32 (Cum. Supp. 1971).

205. *Id.*

206. *Id.*

and the relatively severe penalties for their violation, the Board has the authority to institute judicial proceedings to compel compliance.[207] With the addition of this provision the Board has the option to issue its own special orders or to obtain an injunction, mandamus, or other appropriate judicial remedy to ensure compliance.[208]

In practice, these two enforcement powers are invoked only when other techniques such as negotiation and pressure fail.[209] They have, however, been employed increasingly in the last two years.[210] This is not surprising considering growing pressures from the federal government, local citizens, and public officials who are aware of the public's concern for environmental quality

Limitations on the Board's Authority

In addition to the jurisdictional limitations, the procedural requirements[211] and the provisions providing for appeal and judicial review[212] which have been noted earlier, there are numerous other limitations upon the exercise of the Board's enforcement powers.

1. *Economic and Manpower Limitations*

Of greatest importance to effective enforcement are the financial and human resources available to the Board to execute its monitoring programs. In response to this problem, the Board has requested over $130,000 per year in order to increase its monitoring and enforcement staff by 12 persons, and over $350,000 for additional equipment for field and laboratory work during fiscal year 1973-1974.[213]

A second problem area is the financing available to localities to upgrade inadequate treatment facilities. The Board's authority to compel municipalities to improve their sewage treatment works is conditioned

207. VA. CODE ANN. § 62.1-44.23 (Cum. Supp. 1971). For examples showing how this authority has been exercised see quoted material in note 193 *supra*, and note 243 *infra*.

208. *Id.* Court action may be instituted against owners who violate, neglect, or refuse to obey any rule, regulation, order, water quality standard, or any provision of any certificate issued by the Board.

209. *See, e.g.*, quoted material in note 193 *supra*.

210. *See, e.g.*, note 193 *supra*.

211. *See* notes 126-30 *supra*.

212. *See* notes 131 & 132 *supra*.

213. 1971 Budget Request, *supra* note 104. *See also* PRELIMINARY REPORT OF THE GOVERNOR'S COUNCIL ON THE ENVIRONMENT 32, 34 (1971) [hereinafter cited as 1971 ENVIRONMENT REPORT].

upon the availability of funds. The problem of local funding will be considered in detail below.[214]

A third situation in which economic considerations limit the Board's enforcement authority arises when the cost of treatment facilities would severely impair the livelihood of an industry or the neighboring community. As a matter of policy, the Board is constrained not to require industries to take steps which would result in economic disaster, such as the shutdown of a plant.[215]

Thus the Board cannot enforce the law exhaustively where there are overriding economic considerations.

2. *Technological Limitations*

The Board is also restrained from full enforcement by various technological limitations. Certain effluents cannot be adequately detected or measured by existing instruments.[216] Furthermore, some industries have been unable to develop the technology to neutralize certain types of effluents. This is notably troublesome to the pulp and paper manufacturers where government and industry have been unable to find solutions to this problem.[217]

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214. Notes 230-32 *infra* and accompanying text.

215. Notes 220-25 *infra* and accompanying text. In one instance an industrial plant did shut down, allegedly, because of its inability to meet stream standards. The Olin Mathison plant in Saltville, Virginia closed in 1970. It is not clear, however, that the closing was entirely because of the water quality standards. The Water Control Board appears to have taken extraordinary steps to accommodate the Company and to prevent the closing. Thus enforcement of the Water Control Law cannot be said to have caused the shut-down.

216. Presentation prepared by the Executive Secretary of the Water Control Board for the 42nd Annual Conference of the Water Pollution Control Federation, October 8, 1969, Dallas, Texas [hereinafter cited as Water Pollution Presentation].

217. As an example: in 1971, Westvaco Corporation in Covington, Virginia, was unable to meet certain state standards. Reacting to this problem, the Water Control Board concluded that:

> The major problem at this plant is color removal. There are at present several Federally financed projects for color removal from pulp wastes as well as several privately financed projects, but results are not yet available.
>
> The Corporation agrees that color removal is necessary and [treatment facilities] will be installed as soon as technologically possible.

Water Control Board Memo, January 14, 1971, on file at the Water Control Board office, Richmond, Virginia. The Board thus allowed Westvaco to continue to contravene state standards but directed it to "[e]xplore all means to reduce the time for completion of color removal facilities to an absolute minimum; i.e., significantly before 1978." Certified letter from the Executive Secretary of the Water Control Board to the Mill Manager of Westvaco Corporation, Covington, Virginia, April 8, 1971, on file at the Water Control Board office, Richmond, Virginia.

3. *Political Limitations—State Policy*

The power of the Board to enforce and administer the law is inextricably bound to state policy Certainly the state's intentions, as expressed by the legislature or the governor, concerning administration of the law can be effective in limiting the Board's authority to exercise its enforcement powers. As will be seen below, the General Assembly expressly curtailed the Board's ability to enforce the law in certain areas.[218] But even without express limitations, legislative and executive intentions can influence enforcement.

STATE POLICY

The policy of Virginia and the purpose of the Water Control Law is to

> (1) protect existing high quality State waters and restore all other State waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them, (2) safeguard the clean waters of the State from pollution, (3) prevent any increase in pollution, and (4) reduce existing pollution, in order to provide for the health, safety, and welfare of the citizens of the Commonwealth.[219]

This policy statement enunciates two basic concerns: the abatement of existing pollution and the prevention of future pollution. However, it does not answer the difficult questions of degree—such as how rapidly the state will restore polluted waters; to what extent Virginia will protect existing high-quality waters; who should prevail when the policies favoring economic development conflict with the policy of the Water Control Law; and how the law is to be administered in special areas such as planning. It is to these questions that the policy portion of this note will be directed.

Abatement of Existing Pollution—Industry

The question of "how fast" and to "what degree" pollution is to be abated, and the conflicts between the policies of the Water Control Law and economic and industrial development are not completely

218. Notes 230-31 *infra* and accompanying text.
219. VA. CODE ANN. § 62.1-44.2 (Cum. Supp. 1971).

resolved by the Code. Hence it becomes necessary to examine judicial interpretation of pertinent provisions.

Two years after the Water Control Law was enacted in 1946, the Supreme Court of Appeals of Virginia resolved a conflict between the Water Control Law and the laws designed to protect fish. In *American Cyanamid Co. v. Commonwealth*,[220] the Commission of Game and Inland Fisheries brought suit against American Cyanamid for discharging sulfuric acid and other wastes into Piney River in violation of the Fish Law.[221] The Water Control Board had previously issued a certificate to American Cyanamid allowing them to continue to discharge their industrial waste.[222]

The court determined that the Water Control Law was intended to supplant the authority of the Commissioner of Game and Inland Fisheries where, as in this case, the provisions of the two statutes were irreconcilable.[223]

More important to this discussion is the illuminating statement of the court regarding the policy of the Water Control Law Quoting at length from the report of the Virginia Advisory Legislative Council, the court observed:

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220. 187 Va. 831, 48 S.E.2d 279 (1948).

221. VA. CODE § 3305(43) (1942) provided in pertinent part that "[i]t shall be unlawful to knowingly cast any noxious substance or matter into any water course of this State by which fish therein or fish spawn may be destroyed, " *quoted in* American Cyanamid Co. v. Commonwealth, 187 Va. at 835 n.1, 48 S.E. at 281 n.1. This section was later reconciled with the Water Control Law. *See* VA. CODE ANN. § 62.1-194 (Cum. Supp. 1971); § 62.1-194.1 (Repl. Vol. 1968).

222. 187 Va. at 840, 48 S.E.2d at 284. The pertinent provision of the 1946 Water Control Law provided that:

> Upon request of the Board any owner who on the date this law becomes effective is discharging or permitting to be discharged industrial wastes into any waters of the State shall within twelve months after such request apply to the Board for a certificate to continue discharging waste into said waters. The Board shall issue such certificate for an indefinite period. The owner may be required by the Board, from time to time, to adopt measures for the reduction of said pollution, and to furnish pertinent information with regard to the progress he has made in reducing same. The Board may revoke the certificate in case of a refusal to comply with all such reasonable and proper requirements and may issue a special order after a reasonable notice and a hearing.

VA. CODE § 1514-17 (Supp. 1946), *quoted* in American Cyanamid v. Commonwealth, 187 Va. at 836-38 n.2, 48 S.E.2d at 282-83 n.2. This section was repealed in 1970 and replaced by VA. CODE ANN. § 62.1-44.16(2)(a). *See* note 227 *infra* and accompanying text.

223. 187 Va. at 843, 48 S.E.2d at 285-86. *See* note 172 *supra* and accompanying text.

> The history of the Water Control Law and the terms of that law leave little room for doubt or speculation as to how its purposes are to be attained. The end desired is to keep the clean waters clean and to reduce the pollution in the unclean waters. Some of this pollution comes from industrial waste, discharged by industries invited into the State and furnishing employment to some of its people. The problem is to be dealt with so as to give fair treatment to the industries, to its employees and to the public. That requires a measuring and balancing of the interests involved. Some waters should be kept pure. A measure of pollution in others is necessary Not all pollution can be abruptly stopped. On the agreed facts here, for example, this industry would have to shut down if immediately required to cease discharging its acid waste into the river. The aesthetic and recreational features involved in the pollution problem are important, but the opportunity to make a living may be even more so.[224]

Thus, the court enabled existing industrial polluters to adjust and control their operations without severe dislocation.[225] In this regard the court noted that American Cyanamid "and other companies with the same problems of disposal [had] spent much time and money in an effort to discover a practical method for the recovery of this acid." [226]

The law from 1946 until 1970 permitted all owners to obtain certificates to continue their existing pollution. The Code instructed the Board to require the owner "from time to time, to adopt measures for improving the quality of State waters, and to furnish pertinent information with regard to the progress he has made." [227]

A relevant change in the 1970 revision states that when an owner operating under a certificate fails to meet new water quality standards[228] or requirements of the law, he must provide appropriate facilities within a reasonable time to meet such new requirements, provided that such facilities are reasonable and practical.[229] Comparison of the pre-1970 Code statement and *American Cyanamid* with the new provision evidences a change in policy But the balancing approach is still extant. Code language closely resembles the pro-industry policies espoused in *American Cyanamid.*

224. *Id.* at 839-40, 48 S.E.2d at 284.

225. *Id.* at 836-37, 48 S.E.2d at 282-83.

226. *Id.* at 834, 48 S.E.2d at 281.

227. VA. CODE ANN. § 62.1-28 (Repl. Vol. 1967). The 1946 version of this section (which is essentially the same) is quoted in note 222 *supra.*

228. *See* notes 247-51 *infra* and accompanying text regarding water quality standards.

229. VA. CODE ANN. § 62.1-44.16(2)(a) (Cum. Supp. 1971)

Abatement of Existing Pollution—Municipalities

Between 1946 and 1970, the Board approached municipalities with the same self-restraint which it exercised in dealing with industry Cities and towns, however, were even less able to make effective progress because of lack of funds, as well as lack of political resolve to meet their responsibilities. The Board readily accepted this condition until 1970, when the size of the Board was increased from five to seven members. The new composition of the Board began to take a stronger stand, ordering cities with substandard treatment plants to initiate abatement programs.

In the meantime, financial assistance through state and federal construction grants was extended to certain communities. Faced with the possibility of an order to upgrade their treatment plants, localities not receiving such grants lobbied for restraining action.[230] During the 1971 extra session, the General Assembly passed emergency legislation prohibiting the Board from ordering improvement of municipal treatment plants "unless the Board shall have previously committed itself to provide financial assistance from federal and State funds." [231] Fortunately, the restrictive effect of this legislation has been somewhat mitigated by sizable federal-state matching grants to cover the expenses of upgrading facilities in seriously affected areas, but the final solution is not at hand.[232]

230. Richmond News Leader, March 11, 1971, at 10, col. 1.

231. VA. CODE ANN. § 62.1-44.15.1 (Cum. Supp. 1971). The passage of this legislation should not be necessarily interpreted as a change in policy It was, rather, a reaction to the availability of funds to certain communities and a desire on the part of the legislature to ensure that communities which did not receive grants were not treated unfairly The Board, in exercising its discretion would probably have achieved the same result. But, the legislature simply was not willing to leave this discretionary decision in the hands of the Board. (Letter from the Executive Secretary of the Water Control Board to Board Members, February 18, 1971; Letter from the Chairman of the Appropriations Committee, House of Delegates, to Members of the Committee, February 17, 1971). *See* note 243 *infra* and accompanying text for examples of how this limitation has been successfully avoided.

232. *See* 1971 ENVIRONMENT REPORT, *supra* note 213, at 26. The availability of these grants may have been a deterrent to the abatement program rather than a boon. Prior to the time funds were granted to some communities, most others were willing to come up with their own financing. However, once a limited amount of assistance was made available to selected areas—there not being enough for all—the communities which did not receive assistance were no longer willing to shoulder the burden alone. Richmond News Leader, March 11, 1971, at 10, col. 1. If this is true, one solution to the present predicament over funds would be to spread the available state-federal funds to more projects and distribute more of the cost to the localities. Presently, of the projects to be funded by matching state-federal funds, 80 percent of the cost is borne

In addition to the Virginia General Assembly, the federal government has played a leading role in the formulation of Virginia's water control policy concerning the abatement of existing pollution. The Water Quality Act of 1965[233] forced higher standards upon the states, requiring them to eliminate all pollution in interstate streams where it was technically possible to do so. Under this pressure from the federal government, in 1970 Virginia instituted several new policies designed to accelerate the attack upon the pollution problem.

Preservation of High Quality Waters

The 1970 General Assembly enacted a new provision, known as the "non-degradation policy" which states that:

> Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at high quality; provided that the Board has the power to authorize any project or development, which would constitute a new or an increased discharge of effluent to high quality water, when it has been affirmatively demonstrated that a change is justifiable to provide necessary economic or social development; and provided, further, that the necessary degree of waste treatment to maintain high water quality will be required where physically and economically feasible. Present and anticipated use of such waters will be preserved and protected.[234]

Construing this provision, the Executive Secretary of the Water Control Board explained:

> Practically, this means that new industry must first treat the wastes to a sufficient-high degree so there will be a negligible lowering of the quality of the stream. What constitutes a "negligible" lowering of quality will have to be determined in each case.[235]

The 1970 provision also authorizes the Board to make exceptions to this policy where justified to provide necessary economic or social

by the grant (55 percent federal, 25 percent state) and 20 percent local. 1971 ENVIRONMENT REPORT, *supra* note 213, at 26; 33 U.S.C. § 1156 (1970).

233. 33 U.S.C. § 1160 (1970). *See also* Water Pollution Presentation, *supra* note 216.

234. VA. CODE ANN. § 62.1-44.4(2) (Cum. Supp. 1971).

235. Presentation by the Executive Secretary, State Water Control Board, at the Industrial Development Seminar, March 16, 1970, at 3, on file at the Water Control Board office, Richmond, Virginia [hereinafter cited as 1970 Industrial Development Seminar].

development. Noting the difficulty of definition, the Executive Secretary of the Board suggested an example:

> A hypothetical situation might involve a proposed industry having a large volume of difficult-to-treat wastes wanting to locate in an economically-depressed area on a small presently-clean stream. It is fairly obvious that the Board would probably have to hold a hearing regarding such a situation to bring out all pertinent facts it needs to make a decision.[236]

In reality the "new" non-degradation policy appears to be merely a 1970 codification of the 1946 balancing approach, and its effectiveness will depend upon the predilections of future Board members who must weigh the non-degradation policy against economic and social considerations.[237]

Degree of Waste Treatment

In 1970 the legislature announced another clean-up policy supplementing its position on non-degradation. Adopting the federal standards[238] regarding waste treatment, the state, in authorizing the Board to establish treatment requirements, provided that "no treatment will be less than secondary[239] or its equivalent, unless the owner can demonstrate that a lesser degree of treatment is consistent with the purposes of this chapter." [240] It should be noted that this is a minimum requirement; a higher degree of treatment may be necessary to satisfy the non-degradation policy in some situations.[241]

In applying the minimum requirement of secondary treatment for waste treatment plants, the Water Control Board has taken an obdurate stand in regard to some municipal treatment plants. Exercising its power to establish requirements for the treatment of wastes, the Board

236. *Id.*

237. *See* notes 224-29 *supra* and accompanying text.

238. *See* 1970 Industrial Development Seminar, *supra* note 235, at 3.

239. Secondary treatment is defined as "the second step in most waste treatment systems in which bacteria consume the organic parts of the wastes. It is accomplished by bringing the sewage and bacteria together in trickling filters or in the activated sludge process."

In comparison, primary treatment "removes the material that floats or will settle in sewage. It is accomplished by using screens to catch the floating objects and tanks for the heavy matter to settle in." DEPT. OF INTERIOR, A PRIMER ON WASTE WATER TREATMENT 24-25 (1969).

240. VA. CODE ANN. § 62.1-44.15(14) (Cum. Supp. 1971).

241. 1970 Industrial Development Seminar, *supra* note 235, at 4.

frequently has placed moratoria on building construction projects where cities have been slow to develop programs for pollution abatement. The requirement of the Board states that any owner causing pollution because of inadequately treated sewage and not actively pursuing an approved pollution abatement program

> shall not build a new sewer or sewers, make connection to an existing sewer or sewers, or make extensions to an existing sewer or sewers unless such owner applies for and receives the express authorization of the State Water Control Board.[242]

The practical effect of this requirement is the cessation of construction of any buildings which require sewer connections—apartment buildings, homes, or industrial establishments. This authority provides a powerful incentive for communities to make plans and to develop adequate facilities for treatment, and it has withstood a judicial test of its validity.[243] The moratorium is also a means of circumventing the requirement that financial assistance be made available before upgrade orders are issued.[244]

In addition to the Board's requirement regarding construction moratoria, it has promulgated several other important policy statements. Closely related to its moratorium policy is this recent statement:

> When the average flow influent to a sewage treatment works for any consecutive three-month period reaches 95% of the State Water Control Board approved design capacity, the jurisdictions using this plant shall terminate the issuance of permits which allow start of construction on projects in the affected area and shall submit a plant expansion program to the Board for its review and approval before granting any additional such permits.[245]

A second policy statement in this regard attempts to assure that a solution is provided before the moratorium stage is reached by re-

242. State Water Control Board Requirement No. 1, effective July 7, 1961.

243. The requirement was successfully invoked against: (1) Fairfax County. Minute 1 of the Meeting of the Water Control Board, June 3, 1970. *See also* Commonwealth v. Board of Supervisors, Ch. No. 31671 (Circuit Court of Fairfax County, filed 28 July 1970); (2) The City of Roanoke. Water Control Board Hearing of July 15, 1971, *appeal dismissed*, City of Roanoke v. State Water Control Board, Law No. 1446 (Circuit Court of City of Roanoke, filed July 28, 1971); (3) The City of Harrisonburg, 25 June 1971 (information obtained from Water Control Board, Area III Representative, 20 September 1971).

244. *See* notes 230-31 *supra* and accompanying text.

245. State Water Control Board—Policy for Sewage Treatment Plant Loadings, effective June 23, 1971.

quiring that an owner must begin upgrading his facilities whenever the average flow influent reaches 80 percent of the approved design capacity [246]

In summary, the position of the Board regarding the degree to which wastes must be treated appears to be forceful, both in effectuating the legislative requirement for secondary treatment, and in enforcing its own policy regarding inadequate or overloaded treatment plants.

Stream Quality Standards

In addition to requiring the elimination of pollution in interstate streams, the Water Quality Act of 1965 required each state to adopt satisfactory water quality standards and to implement plans by June 30, 1967 [247] The Act further provided that the Secretary of the Interior would establish standards for states which failed to meet the requirements.[248]

Although Virginia's reaction was less than enthusiastic, the Water Control Board attempted to draft standards and implementation plans in 1967 [249] After considerable negotiation with the Federal Water Pollution Control Agency (FWPCA), state plans received partial approval in 1969. In November of that year, the Secretary of the Interior initiated action to impose federal standards on the state because of glacial progress in resolving differences between the Board and the FWPCA. Faced with the threat of federal intervention, the Board agreed to adopt the stricter standards advocated by the FWPCA.[250] Water Quality Standards for Virginia, finally adopted in 1970, are now in use as a guide to measure the level of pollution acceptable to the state, and require compliance as soon as reasonably possible.[251]

Summarizing the discussion of state policy regarding how rapidly and to what extent pollution is to be abated, it appears that: (1) existing industrial and municipal pollution is to be abated as quickly as possible, within technical and economic limitations; (2) existing high quality waters may only be negligibly degraded unless there are overriding

246. *Id.*

247. 33 U.S.C. § 1160(c) (1970).

248. *Id.*

249. Water Pollution Presentation, *supra* note 216; 1970 Industrial Development Seminar, *supra* note 235.

250. *Id.*

251. 18 C.F.R. § 620.10 (1971). *See also* VA. CODE ANN. §§ 62.1-44.16(2)(a), .19(5) (Cum. Supp. 1971). *See* text accompanying notes 227-29 *supra* concerning the policy of the State in requiring compliance with these standards.

economic and social considerations; (3) waste treatment will be no less than secondary except where reduced treatment is consistent with the purpose of the Water Control Law; and (4) stream quality standards established in 1970 are to be met as quickly as possible, within economic and technical limitations.

Regional Planning

The state's experience with pollution in Tidewater and other areas has demonstrated the futility of local solutions to regional problems and the concomitant need to plan for future expansion. A significant provision was enacted in 1970, giving the Water Control Board the authority

> [t]o establish policies and programs for effective area-wide or basin-wide water quality control and management. The Board may develop comprehensive pollution abatement and water quality control plans on an area-wide or basin-wide basis. In conjunction with this, the Board, when considering proposals for waste treatment facilities, is to consider the feasibility of combined or joint treatment facilities and is to ensure that the approval of waste treatment facilities is in accordance with the water quality management and pollution control plan in the watershed or basin as a whole. In making such determinations, the Board is to seek the advice of local, regional, or State planning authorities.[252]

This provision allows the Board to prevent the construction of overlapping and uncoordinated facilities, and to compel regional planning to ensure the compatibility of contemplated multiple uses of a particular stream. Thus the Board can prevent the construction of a sewage treatment plant on a stream which is also contemplated as a future source of water supply By withholding federal-state funds until receipt of regional plans, the Board is able to ensure effective realization of this policy.[253]

Regional planning is also a subject of importance to the Federal

252. VA. CODE ANN. § 62.1-44.15(13) (Cum. Supp. 1971). For further information regarding State and local planning see VA. CODE ANN. §§ 15.1-427 to -457; Virginia Area Development Act of 1968, VA. CODE ANN. §§ 15.1-1400 to -1452 (Cum. Supp. 1971); VA. CODE ANN. § 2.1-63.5 (Cum. Supp. 1971). For commentary on State and local planning see S. MAKIELSKI, LOCAL PLANNING IN VIRGINIA (1969).

253. *See* VA. CODE ANN. § 62.1-44.15(12) (Cum. Supp. 1971); 1970 Industrial Development Seminar, *supra* note 235, at 5; State Water Control Board Regulation No. 3, effective, August 17, 1956.

Environmental Protection Agency which has set a July 1, 1973 deadline for the completion of river basin water quality management plans.[254] Compliance with this deadline is prerequisite to the receipt of federal construction grants.[255] To meet this deadline, the Water Control Board intends to employ the 22 Planning District Commissions to develop interim plans for their respective districts.[256]

State Planning

In addition to requiring planning at the local and regional levels, the Board has recently embarked upon a planning program of its own. The Board has formulated a plan and policy for only one area of the state—the Occoquon Watershed. Located in the northern area of Virginia, the Occoquon Watershed has suffered the effect of the urbanization of the Washington, D.C. metropolitan area. As in the earlier situation of Hampton Roads, described above, the political subdivisions are in competition for use of the streams in the watershed for water supply and for sewage disposal. The Water Control Board, in an effort to reconcile these incompatible needs, has prepared a broad, technical policy statement to guide future development of the area, and to relieve existing problems. Generally, the Board's position is that Virginia should construct a highly efficient waste treatment facility rather than transport the sewage into the over-polluted Potomac River or curtail further development of the area. Such a plant, the Board feels, also should permit the recycling of waste discharges for water supply purposes.[257]

Responding to this problem on a state-wide basis, the Governor's Council on the Environment commented that:

> The projected rise in the volume of sewage and pollutants together with the growing scarcity of water, suggest that future needs will be for processes that will permit recycling of what is now termed "waste water." A lack of adequate research and long term testing now prevents public health authorities from sanctioning the recycling of a sewage effluent to public water supplies,

254. 1971 ENVIRONMENT REPORT, *supra* note 213, at 28.

255. 33 U.S.C. § 1153(c)(2) (1970); 18 C.F.R. §§ 601.32 to .75 (1971).

256. 1971 ENVIRONMENT REPORT, *supra* note 213, at 28.

257. STATE WATER CONTROL BOARD, ADOPTION OF A POLICY FOR WASTE TREATMENT AND WATER QUALITY MANAGEMENT IN THE OCCOQUAN WATERSHED (revised, July 28, 1971). Regarding a similar solution to the problem at Lake Tahoe see Ayer, *Water Quality Control at Lake Tahoe: Dissertation on Grasshopper Soup*, 58 CALIF. L. REV. 1273 (1970).

> regardless of the extent of treatment given the effluent. But such recycling remains a hope for the future.[258]

Whatever the relative merits of such a policy or the practicability of extending it to other regions of the state, it is evident that planning is necessary at the state level, and perhaps even on an interstate level in order to meet the needs of the future.

Problem Areas and Loopholes

There remain several problem areas which have not been previously discussed. Some of the more critical problems deserve at least brief comment.[259]

Sedimentation and Erosion

As noted above,[260] sedimentation and erosion are troublesome problems in Virginia. Erosion is the wearing away of soil by natural processes, and is accelerated by man's activities, resulting in the soil's eventual deposit into streams and rivers. Sedimentation is the accretion and settling of soil and other matter downstream or in lake beds. Each produces an increase of suspended solids in the water and the eventual filling of lakes and stream beds.[261] Although the Water Control Board has jurisdiction over pollution caused by sedimentation,[262] the technical expertise required to handle the problem rests in the Soil and Water Conservation Commission which monitors the activities of local Soil and Water Conservation Districts.[263] Unfortunately, the formation of local districts and the development of land use practices are not mandatory Only six counties have any erosion control ordinances,[264] and

258. 1971 Environment Report, *supra* note 213, at 26-27

259. Representative of water quality problems which are not specifically mentioned in this note and problems which must be faced in Virginia and elsewhere are: water pollution by State facilities, agricultural wastes, channelization, acid drainage, and black water discharges from mines, eutrophication, phosphate detergents, and disposal of wastes from water treatment plants. For a discussion of these and other problems see Water Pollution Presentation, *supra* note 216; 1971 Environment Report, *supra* note 213; Sutherland, *Treatment Plant Waste Disposal in Virginia*, 61 J. Am. Water Works Ass'n. 186 (1969).

260. Notes 142-44 *supra* and accompanying text.

261. 1971 Environment Report, *supra* note 213, at 33.

262. Notes 142-44 *supra* and accompanying text.

263. 1971 Environment Report, *supra* note 213, at 33. *See also* Va. Code Ann. §§ 21-1 *et seq.* (Repl. Vol. 1960, *as amended* Cum. Supp. 1971).

264. 1971 Environment Report, *supra* note 213, at 33.

although there are 34 Soil and Water Conservation Districts in Virginia,[265] their current activities are not adequate to solve the problem. The Governor's Council on the Environment has recommended stringent legislation, which would: (1) require all local governments to adopt erosion control ordinances; (2) provide for study and research programs; (3) accelerate educational programs; (4) direct the Highway Department to evaluate the effectiveness of its activities in order to reduce erosion and sedimentation on highway construction projects; and (5) require that control measures be taken in conjunction with all state-federal projects.[266] Hopefully these recommendations will receive favorable consideration during the next session of the General Assembly

Urban Runoff and Storm Sewers

A related problem is runoff from highly developed urban areas following rainfall, which carries "heavy organic, bacteriological and suspended solids" into state waters.[267] This problem is especially prevalent in localities with combined storm and sanitary sewers because the runoff is combined with normal sanitary sewage before entering the treatment plant.[268] Not only does the extreme load of runoff pollute

265. 1969-70 REPORT OF THE SECRETARY OF THE COMMONWEALTH 116-23.

266. 1971 ENVIRONMENT REPORT, *supra* note 213, at 34-35.

267. *Id.* at 29. The growth of this problem was noted in an unusually strong-worded policy statement in the revised Soil and Water Conservation Law, which subjected urban areas, in addition to agricultural land, to its jurisdiction. VA. CODE ANN. § 21-1 (Repl. Vol. 1971).

268. This problem is especially acute in older cities, such as Richmond, where the Water Control Board has apparently been unsuccessful in solving the problem. Beginning on March 27, 1968 the City was directed by the Board "to develop and implement a definite program of planning, financing and construction of facilities to dispose of stormwater runoff so that pollution of the James River from that source could be eliminated." (State Water Control Memo: "A Summary of Enforcement Actions," August 3, 1971). After a late and "insufficient" report was received on August 12, 1970, the Board issued a Special Order requiring the City to provide a report within 90 days. *Id.* The Special Order was issued on November 25, 1970, and was immediately appealed by the City Public hearings and negotiation between the Board and the City ensued, and on January 26, after the Board decided that the Special Order had been satisfied, a motion to dismiss was filed, and was granted without prejudice on February 2, 1971. The Board, however, also decided that the hearing would be continued indefinitely, and that the City would have to submit plans detailing the City's progress. *Id.* The City's progress was evidently not considered adequate by the Counties of Henrico (Regular meeting of the Board of County Supervisors of Henrico Co., July 14, 1971), and Chesterfield (Regular meeting of the Board of Supervisors of Chesterfield County, July 14, 1971), and the Conservation Council of Virginia, Inc., all three of which passed resolutions asking either the City of Richmond, the Water Control Board, and the Environ-

state waters, but the increased volume of waste often overloads the plant and causes a great quantity of untreated sewage to be expelled into the receiving stream or river.[269] A second problem arises where ordinary sanitary sewers, those not combined with storm sewers, become overloaded with grit and sediment, thus leading to a breakdown of the treatment operation. This results in a discharge of raw sewage directly into the receiving water.[270]

Urban runoff and related problem areas clearly require intensive monitoring and enforcement. The Board has jurisdiction over these matters and is studying them, but it has not taken decisive action to ensure a viable solution.

Pollution from Boats and Ships

The problem of "marine wastes" has three facets. First, anchored in the harbors of Hampton Roads is the equivalent of a city of 10,000 to 25,000 people. Raw sewage discharged from naval and commercial ships "which are generally located in proximity to recreational waters, beaches, and shellfish beds" vitiates the efforts of state agencies to con-

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mental Protection Agency for assistance. The resolution of Chesterfield County stated:

> WHEREAS, the James River as it passe[s] by and through the County of Chesterfield, Virginia, is grossly polluted; and, WHEREAS, this pollution is caused primarily by the municipal wastes and sewerage of the City of Richmond; and, WHEREAS, the County of Chesterfield is completing by December 1, 1971, a $6,000,000 program which will entirely abate the water pollution attributable to Chesterfield; and, WHEREAS, the City of Richmond has repeatedly been ordered by the Virginia State Water Control Board to adopt a plan and implementation schedule to abate this pollution of the James River; and, WHEREAS, even after these repeated orders there is still no comprehensive plan or schedule which would reasonably be expected to attain the quality of water in the James River by the Federal Quality Water Act; and, WHEREAS, this pollution of the James River presents a threat to the health and welfare of the citizens of the County of Chesterfield and prevents their legal and beneficial use of the natural waters of the State, NOW, THEREFORE, BE IT RESOLVED, by this Board of Supervisors of Chesterfield County, Virginia, that it respectfully requests the Council of the City of Richmond to take immediate steps to attain the standards set for the James River at the earliest possible date.

269. 1971 ENVIRONMENT REPORT, *supra* note 213, at 29-30.

270. On August 27 and 28, 1971 an estimated 11 to 12 million gallons of raw sewage was dumped into the Chesapeake Bay. Infiltration of sand and grit from runoff caused by the heavy rainfall of tropical storm Doria combined with excessive flow from backed-up pumping stations to clog and eventually close Hampton Roads Sanitation District's Chesapeake-Elizabeth sewage treatment plant. As a result, beaches around Virginia Beach and Norfolk were closed for seven days. Water Control Board Meeting, September 20, 1971 (presentation by L. S. McBride).

trol the problem of shore-based pollution.[271] The boats and vessels are expressly exempt from the jurisdiction of the Hampton Roads Sanitation District Commission[272] and the Water Control Board has taken no action, although it has been granted authority to regulate such discharges.[273] The Board, however, is conducting a study of the problem and the Navy has instituted a program to reduce pollution from its ships.[274]

The second problem of boat pollution emanates from pleasure boats and other small craft, where again the Water Control Board has not taken decisive action. The Board

> is empowered and directed to adopt and promulgate all necessary rules and regulations for the purpose of controlling the discharges of sewage and other wastes from both documented and undocumented boats and vessels on all navigable and non-navigable waters within the State.[275]

Violation of this and similar regulations is a misdemeanor, and every law enforcement officer of the state and its subdivisions has been granted enforcement authority.[276] Although the Board planned to formulate regulations in 1970, its action was "deferred because of the adverse comments of boaters and State agencies." [277]

Noting that the State of Michigan[278] has apparently successful regulations which have been operational for three years and that conversely, the State of New York[279] has failed in its attempt to regulate boat pollution, the Governor's Council on the Environment recommended that the Water Control Board form a "blue-ribbon" committee to confer with officials in Michigan and New York in the hope of discovering a viable solution for the problem in Virginia.[280]

A third problem of marine wastes is the particular susceptibility of Virginia to oil spills from the high volume of shipping in the

271. Letter from the Hampton Roads Sanitation Commission General Manager to the Secretary of the Interior, September 26, 1967
272. Virginia Acts of Assembly 1960, ch. 66 § 42.
273. VA. CODE ANN. § 62.1-44.33 (Cum. Supp. 1971).
274. 1971 ENVIRONMENT REPORT, *supra* note 213, at 44.
275. VA. CODE ANN. § 62.1-44.33 (Cum. Supp. 1971).
276. *Id.*
277. 1971 ENVIRONMENT REPORT, *supra* note 213, at 44-45.
278. MICH. COMP. LAWS §§ 323.331 to .342 (Cum. Supp. 1971).
279. N.Y. NAV. LAW § 33-c (McKinney Supp. 1970-71).
280. 1971 ENVIRONMENT REPORT, *supra* note 213, at 45.

Chesapeake Bay [281] In 1970, the General Assembly prohibited the discharge of petroleum products into the navigable waters of the state[282] and issued guidelines requiring owners who violate the provision to abate any pollution caused by such oil spills.[283] More significantly, the legislature provided that:

> In the event any such discharge occurs, and it cannot be determined immediately what vessel or vessels were responsible therefor, the State Water Control Board may, with the consent of the Governor, take such action as is necessary to abate such pollution, including the engagement of contractors or other persons competent to eliminate the pollution. The cost of such abatement shall be collectible from the person causing or permitting such discharge, if his identity can be determined. If it is not possible to determine the identity of such person, the cost of the abatement of such pollution shall be paid from the general fund of the State treasury [284]

Unfortunately the Board has not formulated an effective emergency clean-up plan and this provision of the law has not been funded.[285] In response to these problems, the Governor's Council on the Environment made four specific recommendations which deserve legislative consideration: (1) that the General Assembly fund the emergency clean-up program; (2) that it approve the Board's request for additional manpower to combat oil spills; (3) that the Board be empowered to make contingency plans and draw up guidelines for the clean-up; and (4) that further research in the area be undertaken.[286]

Wetlands

The Governor's Council on the Environment has accurately depicted the wetlands problem as follows:

> Ninety-five percent of Virginia's important seafood industry is in some way dependent upon the 332,000 acres included in the State's coastal wetlands. Approximately ninety percent of this amount of land, representing 5,422 acres of Virginia's shoreline,

281. *Id.* at 41.
282. VA. CODE ANN. § 62.1-44.34(a) (Cum. Supp. 1971).
283. VA. CODE ANN. § 62.1-44.34(b) (Cum. Supp. 1971).
284. VA. CODE ANN. § 62.1-44.34(c) (Cum. Supp. 1971).
285. 1971 ENVIRONMENT REPORT, *supra* note 213, at 41.
286. *Id.* at 42.

> is privately owned. Each year hundreds of acres of marsh and other wetlands are drained, dredged and filled in or built upon for commercial or other purposes. The State should seek to protect and preserve these vitally important areas for the future benefit of the Commonwealth. Only by taking immediate action can the State prevent a further irreversible destruction of the food web and conversion of marine water to barren wastelands as far as fish, oysters, crab and waterfowl are concerned.[287]

Presently Virginia is the only state on the Atlantic Coast without some form of statutory authority to protect this vital resource. A nine-member commission has been appointed by the Governor to study the problem and was to have reported its recommendations by December 1, 1971. Timely and effective legislation from the 1972 General Assembly designed to protect this vital resource is essential; furthermore, control over the wetlands should be vested in the state, rather than local governments. The history of the pollution problems in Virginia offers persuasive proof of the inability of localities to accomplish the necessary unified effort and solution.

Interstate Compacts

The history of Virginia's struggle to control pollution discloses a trend toward the regional solution of problems not soluble on a local level. The state has also recognized the wisdom of planning for future expansion on a watershed or riverbasin basis. Projecting this line of reasoning, since stream pollution does not respect artificial political borders, it is apparent that some form of multi-state cooperation is essential to the effective control of pollution in interstate waters.[288]

In 1970, Virginia initiated action toward a joint solution to this interstate problem by adopting the Potomac River Basin Compact.[289] The Compact would provide firm control against pollution on a cooperative basis through a special commission composed of representa-

287. *Id.* at 81. For a detailed report on the Wetlands problem see M. WASS & T. WRIGHT, COASTAL WETLANDS OF VIRGINIA (1969); MD. STATE PLANNING DEPT., WETLANDS IN MARYLAND (1970).

288. The Virginia Water Control Board is currently taking steps to bring court action against communities in Maryland to force them "to pay for reducing the massive amounts of sewage pollutants that are fouling the [Potomac] river." Washington Post, Aug. 15, 1971, at E1, col. 9; Richmond Times Dispatch, Aug. 16, 1971, at 1, col. 2. For further information regarding interstate problems see the material cited at notes 100-01 *supra.*

289. VA. CODE ANN. §§ 62.1-69.1 *et seq.* (Cum. Supp. 1971).

tives from all signatory states as well as the federal government. At the time of this writing, only Virginia and Maryland[290] have entered the Compact. Pennsylvania, West Virginia, and Congress, on behalf of the District of Columbia, have not acted on the proposal.[291] These legislatures should consider the possibility of such cooperative action in their next legislative sessions.

Conclusion

Virginia traditionally has favored development and exploitation of her natural resources to the fullest. This policy continues, but recent years have manifested a countervailing desire to manage, regulate, and control the use of her resources, and to protect them from the sometimes destructive hand of man. Toward this end, the Water Control Law is reasonably effective. The Water Control Board's powers are adequate, its jurisdictional authority is broad (with few exceptions), its surveillance and enforcement techniques are progressing, and its resolve to achieve the purposes of the law is becoming stronger.

A fundamental limitation on the potential effectiveness of the Water Control Law is the scarcity of economic and technological resources. However, the most severe constraint appears to be the approach which both the Board and the legislature have taken under the guise of public policy Today that approach can best be described in terms of what the Board and other public officials consider to be "reasonableness"—a balance between leniency in enforcing the law where the needs for a healthy economic environment is concerned, and forcefulness in administering it where the interests of a healthy physical environment are involved. Until quite recently, the balance has been decidedly in favor of "economic" and "social" considerations, but the balance appears to be shifting slowly This is particularly true where new development is concerned. It is clear that Virginia no longer is willing to allow the introduction of new water-using industry or the growth of new urban areas unless such development also provides for adequate measures to protect against pollution.

However, in cleaning up its existing pollution, the balancing ap-

290. Md. Ann. Code art. 96A, § 111 *et seq.* (Cum. Supp. 1971).

291. The Compact will become effective thirty days after its enactment by the legislatures of Maryland, Pennsylvania, Virginia and West Virginia, and by the Congress on behalf of the United States and the District of Columbia. Potomac River Basin Compact § 15.21 [codified at Va. Code Ann. § 62.1-69.1 (Cum. Supp. 1971)].

proach leaves room for criticism. "Reasonableness," including the "equities of each case," appears to be the only valid standard for deciding how quickly owners must upgrade their treatment systems. However, what was reasonable in 1946 is not acceptable for 1972. With 25 years notice of the impending necessity for action, there is no reason, except technological or economic impossibility, to allow a procrastinating owner to continue to defile the rivers and lakes of the state. Continued leniency is not fair to those who have made good faith sacrifices to upgrade their own facilities. Additionally, such leniency is not fair to other users of the water, who must continue to carry the burden caused by pollution.

Why should downstream users be forced to install costly treatment plants for their water supply and also treat their own wastes so that others can reasonably use the water, while an upstream community continues to foul the water? Why should public beaches be closed and recreational enterprises lose their profits because a community is not willing to upgrade its treatment plants? And why should one industry which has spent a great deal of time and money in cleaning up its effluents now be required to share the tax burden for construction grants to upgrade recalcitrant enterprises not willing to fulfill their own responsibilities? Clearly, "reasonableness" in 1972 requires a consideration of the problems of users who continue to ignore the law, but it also requires fairness in dealing with other users who must go to extra expense or be deterred from using contaminated water because treatment is too costly or impractical.

The Water Control Board has a clear mandate from the people of Virginia, and a responsibility to exercise its authority in this area. Similarly, the legislature has a responsibility to provide the legal and financial tools necessary for the Board to function properly

The relatively minor problems of agency fragmentation and jurisdictional overlapping should be resolved by the next session of the General Assembly But more critically, the legislature and the Water Control Board must properly interpret and accommodate the needs and desires of all of the people of Virginia.

The Board and the Assembly are more than administrators and law makers. They are, in addition, the trustee, the manager, and the conservator of the state's water resources. The beneficiaries of this trust are, of course, the people of Virginia. They deserve no less than an assurance that the waters upon which they are dependent for so many pur-

poses will not continue to be unusable because of the myopic perverseness of a relatively small number of manufacturers and municipalities who are "not willing themselves to promote soe publique a good." [292]

WOODROW TURNER JR.

292. 2 HENINGS STATUTES AT LARGE 260 (1667) (Quoted in part at note 3 *supra*).

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