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VIRGINIA NATURAL RESOURCES LAW AND THE NEW VIRGINIA WETLANDS ACT

DENIS J. BRION*

When the Virginia General Assembly enacted a wetlands protection statute at its 1972 Session, Virginia became one of the last East Coast states to enact laws protecting its valuable wetlands resources. However, unlike its sister states, Virginia has chosen to place the primary authority and initiative for wetlands protection not in a state-level agency created for the purpose, but in its localities: cities, counties and towns.

The Virginia Wetlands Act enables each Virginia locality containing defined wetlands to set up a local wetlands zoning board whose duty is to pass on all uses, with limited exceptions, of local wetlands. A decision-making framework is imposed on these boards which requires them to consider a broad range of the effects of wetlands alteration. Although local board decisions are reviewable by a central state marine resources agency and by the courts, the thrust of the Act is to place the initiative for wetlands protection on the Virginia localities.

The Wetlands Act, like any new piece of major legislation, must be interpreted in the context of the existing law including, because the Act regulates private property, the complex issues of the Fifth Amendment taking problem. It also must be interpreted with due consideration of the legislative intent regarding both the details of the Act itself and the problem of dovetailing the Act with the existing law and political climate in Virginia. At the same time, the strong and well-developed common law of Virginia and the new provisions of the Virginia Constitution, for which there is as yet no judicial interpretation, are significant enough to merit attention not only for the context they provide for the Wetlands Act but also for their potential as an independent legal tool for wetlands regulation.

At the outset, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states. At the same time, the General Assembly, by placing the initiative in the localities, has created a decision-making process which has the potential to foster decisions significantly different in emphasis and impact from the wetlands use decisions of most other Atlantic Coast states.

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time, because a relatively complex decision-making framework has been provided, the interpretation of the statutory standards and of the functions of the system can involve uncertainty and misunderstanding, especially in the hands of the newly-constituted and therefore inexpert administrative bodies charged with carrying out the provisions of the Act.

It is the purpose of this essay to describe Virginia's constitutional and common-law framework, to assess the legislative intent underlying the new Wetlands Act, and to analyze the decision-making process and its potential for achieving the legislative intent.

I. Virginia's Constitutional and Statutory Law of Natural Resources

Virginia's constitutional, common, and statutory law not only form an important underpinning for the interpretation of the new Wetlands Act, but also, under the impact of a long-standing common law trust doctrine and a new Constitution containing a conservation article, have the potential to be used as an independent tool to achieve a significant measure of environmental protection of the wetlands.

a. Just Compensation Doctrine

Natural resources law has been changing. The ecological disasters that have resulted from indiscriminate application of man's technological prowess and the increased scientific knowledge about the value of ecological processes have resulted in increased political pressure for their protection. This pressure is manifested in a large amount of legislation at all levels of government and a flood of litigation in a wide variety of forums. The most successful efforts have been at the federal level, and this threatens to take away initiative from the states in achieving environmental protection. Federal courts have readily applied the policy dictates of recent federal legislation, thereby enlarging the concept of standing to question the decisions of government and enforcing the mandate of Congress that the agencies of the federal government must comprehensively assess and mitigate the environmental impact of their actions. The latest

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2 The first several versions of the Federal Water Pollution Control Act, 33 U.S.C. §§ 1151-1175 (1970), beginning with its initial version in 1948 (Act of June 30, 1948, ch. 758, § 1, 70 Stat. 507) emphasized a Congressional policy to leave the initiative in achieving water quality with the states, with the federal role one of advice and support. See 33 U.S.C. § 466 (Supp. IV 1965-68), now 33 U.S.C. § 1151(b) (1970). But the latest amendments will insure that the federal government will now exercise the primary role through its power to establish strict pollution standards. S.2770, 92d Cong., 2d Sess. (1972).


5 E.g., Udall v. FPC, 387 U.S. 428 (1967); Calvert Cliffs Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971); Scenic Hudson Preservation Conf. v. FPC, 354 F.2d
decisions of the United States Supreme Court take a long step toward creating a federal environmental law, broad in substantive content.6

By 1971, most of the Atlantic Coast states had enacted laws specifically protecting wetlands.7 But state efforts have not had the innovative character of recent federal law. In New England, these new statutes have run afoul of state constitutional doctrines protecting the right of private property from uncompensated takings. The supreme courts of Maine8 and Massachusetts9 have applied the hoary diminution of value doctrine and found that a denial by a state administrative agency of a permit application for wetlands alteration involved the uncompensated taking of private property. In both states, the courts specifically found that the permit denial unquestionably was taken in the public interest and that the natural values thereby protected were of great importance to all members of the public. They also found that wetlands can have extraordinarily high commercial value but that they have almost no commercially valuable use that does not also destroy their natural values.10 Hence, effective ecological protection of private wetlands means an almost complete prohibition of highly profitable use. The Maine and Massachusetts courts were unwilling to concentrate such great opportunity loss on relatively few private individuals in order to advance the welfare of the entire public.11


7See note 2 supra.


10This may have been a faulty finding. See Halperin, supra note 8, at 125; Wilkes, supra note 8, at 157. For uses of a saltmarsh which do not damage its natural values, see Wilkes, supra note 8, at 152. Although these uses are, individually, admittedly "low rent," they may be sufficient to preclude a finding of a taking by preclusion of economic use. For such a view, see Southern Ry. v. Richmond, 205 Va. 699, 139 S.E.2d 82 (1964), discussed at note 176 infra.

11In State v. Johnson, the court stated:

As distinguished from conventional zoning for town protection, the area of Wetlands representing "a valuable natural resource of the State," of which appellants' holdings are but a minute part, is of state-wide con-
The diminution of value doctrine has been much criticized in the literature both because it leads to inconsistent and sometimes outrageous results and also because it does not focus on the fundamental economic question of efficiency. This doctrine has been an important stumbling block to the effective protection of wetlands, since the cost of purchasing wetlands is more than state and local budgets can bear.

cern. The benefits from its preservation extend beyond town limits and are state-wide. The costs of its preservation should be publicly borne. To leave appellants with commercially valueless land in upholding the restriction imposed, is to charge them with more than their just share of the cost of this state-wide conservation program, granting fully its commendable purpose. In the phrasing of [State v. Robb, 100 Me. 180, 60 A. 874 (1905)] their compensation by sharing in the benefits which this restriction is intended to secure is so disproprionate to their deprivation of reasonable use that such exercise of the State's police power is unreasonable.

State v. Johnson, 265 A.2d 711, 716 (Me. 1970). The court may well have cast the issue in a faulty way. See the discussion at note 22 and accompanying text infra.

For instance, in Michelman, Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law, 80 HARV. L. REV. 1165 (1967) (hereinafter cited as Michelman), it is pointed out that the courts have not satisfactorily articulated the measure of the diminution, so that it is not clear whether the purpose of the test is to discover what fraction of the aggrieved party's total wealth is affected, or of some particular part of his property. Additionally, the problem of property being divisible has not been well handled; that is, if, for instance, the riparian right of a parcel is affected by the regulation, and its value is 20% of the total value of the parcel, is the diminution 20%, or, since the riparian right can be severed, is the diminution 100%? Michelman at 1190-93. For the views of an economist see Coase, The Problem of Social Cost, 3 J. Law & Econ. 1 (1960) (hereinafter cited as Coase), in which the author argues for the proposition that the traditional judicial imposition of liability does not, in theory, affect how mutually injurious activities will be reconciled by the respective property owners; under perfect market conditions, and in the absence of transactional costs, the most efficient arrangement economically will be reached regardless which owner is burdened with legal liability. Since there are always transactional costs preventing an unbiased outcome (e.g., a single "polluting" landowner "harming" a large number of other landowners who, because of their numbers and because each sustains such a small injury that they do not effectively combine), the function of the courts, in Coase's view, is in essence to take a shortcut to the proper result. That is to say that the court is to step in and decide how the problem should be resolved in terms of economic efficiency—what solution yields the greatest benefit to society—and by imposing that solution avoid transactional costs. Economic efficiency is approved in Calabresi and Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089, 1093-98 (1972); Coase, supra, at 2, 15; Michelman, supra at 1173-77; and Sax, Takings, Private Property and Public Rights, 81 YALE L.J. 149, 158 (1971). For a view, opposite to that of Coase, that in the absence of transactional costs the economic optimum will not always be reached, depending on the initial distribution of wealth between (or among) the parties, see E. Mishan, The Costs of Economic Growth 60-63 (1967); Calabresi and Melamed, supra, at 1095-96. And regardless of initial distribution and transactional costs, the outcome will be determined by the legal structure (whether permissive or restrictive of externalities). Misham, Pareto Optimality and the Law, 19 Ox. ECON. PAPERS 255, 276-78 (1967). For a discussion of whether the goal of economic efficiency is appropriate, see note 165 infra.
One of the several judicial approaches to the handling of uncompensated takings, the doctrine is applied by the courts to require compensation when the diminution in property value caused by a governmental action is large in comparison to the total value of the property regulated and the prohibited use is one that is useful to society. This doctrine operates in the same way but with the opposite effect as the nuisance concept which permits courts to deny compensation in instances of restrictive land use regulation when the activity restricted is found to be societally disuseful. In such cases, regulation is called the exercise of the police power, and the courts will not find that private rights have been taken since a landowner does not have the right to create a nuisance. The distinction between useful activities and those which are not is fundamentally important to this traditional judicial theory, but it is difficult to articulate in practice.

Whatever the difficulties involved, the current legal doctrines are an

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13Michelman notes four approaches: physical invasion, diminution of value, balancing social gains against private losses, and private fault and public benefit, each used in certain types of fact situation. Michelman, supra note 12, at 1183-1201.

14The classic case is Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922), discussed in Michelman, supra note 12 at 1190, n.3, in which a statutory restriction on the mining of coal underneath residential property in order to prevent subsidence was held to be a taking of the property rights of the coal company in the unmined coal. The court looked on the mineral rights to the coal as severable, and stated that this particular right was completely diminished. Justice Brandeis noted in dissent that any particular right in land may be severable, but to focus only on the particular rights regulated would mean that every case of regulation involves a complete diminution. Thus, according to Brandeis, the correct measure would be the value of the whole property. 260 U.S. at 419.

15The classic case which, when compared with Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922), illustrates the problems encountered in the application of these doctrines is Hadacheck v. Sebastian, 239 U.S. 394 (1915), discussed in Michelman, supra note 12, at 1198. In Hadacheck, the owner of a brickyard was regulated out of the only business to which his land could be put economically because the smoke and noise were injurious to surrounding residences, despite the fact that the brickyard has originally been built in an undeveloped area and the city had grown out to surround it in later years.

16In Sax, Takings and the Police Power, 74 Yale L.J. 36 (1964), a distinction was made between activities of government which arbitrate between two private parties, usually a case involving externalities (compensation not required) and activities of government which involve a public enterprise designed to advance the public good (compensation required). This distinction has been criticized in part because of the significant grey zone between the two types of activity. Michelman, supra note 12, at 1197. Sax has since modified his position. See Sax, Takings, Private Property and Public Rights, 81 Yale L.J. 149, 150-51 (1971). But it is submitted that the quintessential function of the judicial system is "line drawing" between constantly conflicting legal rules, each with its own compelling rationale but each operable in an absolute sense only in an ideal world.

17The alternatives offered by Calabresi, Coase, Michelman and Sax have their own difficulties. These alternatives are based on two premises. First, each conflict situation is looked on as being essentially reciprocal (the factory owner threatens nearby residents with harm if his chimney emits smoke; the nearby residents threaten the factory owner with harm
attempt to approach governmental interference with private property and to identify those private exercises of the property right which are societally acceptable and therefore worthy of compensation. If the legal dispute involves an injury to a third party, the courts will, if they find that externalities\(^8\) are involved, usually deny compensation unless the private activity is especially valuable to the general public.\(^9\) If the legal dispute involves the preclusion of the exercise of a property right and no externalities are involved, the courts will usually require compensation.\(^{10}\) (While

\[^{18}\] For the purposes herein, externality is defined as an unintended or incidental by-product of some otherwise legitimate activity which directly influences the utility or output of another. See Mishan, *The Postwar Literature on Externalities: An Interpretative Essay*, 9 J. Econ. Lit. 1, 2 (1971). That this definition is hardly satisfactory in a judicial sense, see the confusing airport noise cases, e.g., Griggs v. Allegheny County, 369 U.S. 84 (1962); United States v. Causby, 328 U.S. 256 (1946); Kirk v. United States, 451 F.2d 690 (10th Cir. 1971); Batten v. United States, 306 F.2d 580 (10th Cir. 1962), cert. denied, 371 U.S. 955 (1963); Leavell v. United States, 234 F. Supp. 734 (E.D.S.C. 1964); Thornburg v. Port of Portland, 233 Ore. 178, 376 P.2d 100 (1962).

\[^{19}\] Interestingly enough, Coase, in his highly influential article, cited several English common law cases, all involving neighboring landowners disputes over damage to property, and criticized the cases in terms of the economic analysis which the judges did, or did not, incorporate into their decisions. Of the eight cases cited, six involved the "emanation" of something (smoke, noise, vibrations by machinery, etc.) by one property owner across his property boundary causing damage to a neighbor. In five of these cases, the emanation was abated; the sixth involved rabbits and was decided under the rather specialized *ferae naturae* doctrine. In the other two cases, the court found that, conceptually, nothing crossed the boundary from the defendant's land, and the plaintiff was denied relief. See Coase, *supra* note 12, at 8-39, and the cases cited at notes 7, 10-12, 19, 26, 50 and 56. The American cases are not inconsistent with this rationale. See, e.g., Miller v. Schoene, 276 U.S. 272 (1928); Hadacheck v. Sebastian, 239 U.S. 394 (1915); Andrews v. Board of Supervisors, 200 Va. 637, 107 S.E.2d 445 (1959).

\[^{20}\] This is the classic eminent domain situation, wherein government takes over the use of private property in order to establish a use (e.g., a road, a utility plant, a school) which will advance the public interest.
this simplistic summation is not intended to be in any way a rationalization of the real property compensation cases, it is intended to show that the courts tend to be more concerned about landowners harming others by the use of their property than they are about highly refined theories built on economic welfare, abstract notions of fairness, or efficiency.)

Thus, judicial doctrine looks at two major factors in deciding whether compensation is to be allowed: first, whether there are externalities involved, and second, to what degree the private use with which the government is interfering is important to society. A criticism of the type of thinking represented by state courts in State v. Johnson and Commissioner of Natural Resources v. Volpe need not necessarily reject the main body of compensation law. Rather, what may be more open to question are the unstated assumptions which the courts seem to make about these two factors.

As to the first factor, the rationale underlying the wetlands decisions looks on wetlands protection as a positive governmental action, such as the building of a road or a school, taken in order to advance the general public good. But wetlands protection is not necessarily a positive action of government. Rather it is the curtailment by government of private activities which do harm to others; in the wetlands case, damage to natural wetlands factors in one small area can have wide ranging effects as the impact is transmitted through the natural ecological webs. Thus, ecological protection can be looked on as the abatement of externalities.

As to the second factor, what has served as a starting point in judicial

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21 Although the courts do not necessarily follow the analytical framework that Michelman advances, Michelman does admit that they achieve the fair results that he prefers to the extent that their inherent limitations in making factual inquiries permit. Michelman, supra note 12, at 1245-1256.

22 [c]ompensation [to the wetlands owner] by sharing in the benefits which this restriction is intended to secure is so disproportionate to their deprivation of reasonable use that such exercise of the State’s police power is unreasonable.

State v. Johnson, 265 A.2d 711, 716 (Me. 1970) (emphasis added). In the Massachusetts case, the court spoke of the developer’s proposed use thus in its formulation of the issue:

Whether there is a reasonable interference with a landowner’s rights undertaken in the exercise of the police power for the public benefit or a deprivation of private property without compensation often depends upon the facts of the particular case.

Commissioner of Natural Resources v. Volpe, 349 Mass. 104, 206 N.E.2d 666, 669 (1965) (emphasis added). In neither of these decisions did the court discuss the reasonableness of the proposed land use; both decisions proceeded from the unstated assumption that filling the marshes was a reasonable use of private property.

23 That is, it is not what Sax has characterized as an enterprise activity of government, competing for resource use, which can involve a taking requiring compensation. See Sax, Takings, Private Property and Public Rights, 81 YALE L.J. 149, 150-51 (1971); Sax, Takings and the Police Power, 74 YALE L.J. 36 (1964).
reasoning is that activities which have a tendency to develop natural resources or to put resources to a higher economic use are per se "good" and to be encouraged.\textsuperscript{24} This assumption has been an important delaying factor not only in the spotty success that environmental legislation has enjoyed\textsuperscript{25} but also in the bumpy process that has been the historical experience in accommodating any new concept into the law.\textsuperscript{26} The roots of this assumption are not hard to discover. The history of Anglo-American common law goes back at least to the Anglo-Saxon period during which many of the basic concepts of our social structure were

\textsuperscript{24}For instance, in Pennsylvania Coal Co. v. Mahon, the court went no further than to state that "[w]hat makes the right to mine coal valuable is that it can be exercised with profit." 260 U.S. at 414. The implication is that the exercise of property rights in order to realize a profit is of itself in the public interest. But is an activity so highly in the social interest if it involves not only the threat of subsidence, but also of black lung, a high rate of industrial accidents, operations which result in ugly slag heaps and water pollution of nearby streams through acidulation, and a product which in use causes air pollution? On the other hand, does not society want to encourage industrial developers to do what the brickyard owner did in Hadacheck v. Sebastian, 239 U.S. 394 (1915)—locate his enterprise in an area where urban amenities are not involved? For a critical discussion of the assumption by economists, planners and political leaders that economic growth is the universal panacea, see E. Mishan, The Costs of Economic Growth (1967). But see the discussion at note 19 and accompanying text supra. What the court may have been saying is that in 1922, coal mining in Pennsylvania was an industry of such great importance to the general welfare of the people of the state that restrictions on this industry had to be discouraged.

\textsuperscript{25}In State v. Johnson, 265 A.2d 711 (Me. 1970), the court assumed without discussing the point that the filling of ecologically valuable wetlands for residential construction was a "reasonable" use of the land, 265 A.2d at 716, as did the court in Commissioner of Natural Resources v. Volpe, 349 Mass. 104, 206 N.E.2d 666, at 671. See also American Cyanamid Co. v. Commonwealth, 187 Va. 831, 48 S.E.2d 279 (1948), in which the court construed the public interest criterion of the then newly enacted Virginia State Water Control Law to be economic in nature:

The aesthetic and recreational features involved in the pollution problem are important, but the opportunity to make a living may be even more so.

187 Va. at 839-40, 48 S.E.2d at 284. On the basis of this determination, the court refused to enforce criminal provisions of the Game and Fish Act against an industry polluting a river since to do so would likely result in the closing of the plant and a loss of employment. The court, in stating that industrial activity was good, at least considered the question, and specifically based its conclusions on the language of the report of the legislative commission which, in recommending the Water Control Act, also recommended, for economic reasons, a policy of deference in enforcement to industry. Pollution Control and Abatement, H.D. Doc. 15, Va. Gen. Assem., 1946 Sess.

\textsuperscript{26}For instance, industrial accident law, from the classic cases of Priestly v. Fowler, 3 Mees. & Wels. 1 (Exch. 1837) and Farwell v. Boston & Worcester R.R., 4 Met. 49 (Mass. 1842) to the final adoption in most states of workman's compensation statutes, developed in the face of deep resistance. At the base of this resistance was a belief that "a merely private interest must yield to interests in industrial expansion." Note, Commonwealth v. Hunt, 32 COLUM. L. REV. 1128, 1153 (1932).
formed. See F. Maitland, Domeday Book and Beyond (Norton ed. 1966) (hereinafter referred to as Maitland).

28One of the most important motivations of William of Normandy to invade England was economic; England was largely underdeveloped and offered an extremely high potential for economic exploitation. Thus, both in the Anglo-Saxon period immediately preceding the Conquest and in the Anglo-Norman period immediately following, social structures were purposely devised to reward the entrepreneur. It was not until the mid-1500's that the initial clearing of the land was completed and England entered into a "post-frontier" phase. But the next phase of Anglo-American common law began early in the next century with the initial colonization of North America; after a pause of less than a century, the prime societal challenge was once again the development of wilderness. Thus, of some twelve hundred years of the history of Anglo-American common law, only about fifty did not take place under societal conditions demanding development and exploitation.

It is no surprise, then, that the law contains a strong "development ethic":

There must be progress, and if in its march private interests are
in the way they must yield to the good of the community. 32

But the courts are not necessarily locked into the assumptions underlying the Maine and Massachusetts decisions that damage to natural process does not involve an externality which is inimical to the public welfare and that development and economic growth under all circumstances are societally desirable. For example, the United States Supreme Court has greatly expanded the concept of what constitutes an injury; 33 implicit in this reasoning is the premise that the actions causing this expanded concept of injury are also retrainable through the legal process. Injury has been given a legal content which includes injury to the person, injury to property, and economic injury; 34 and injury to the person can include the offending of aesthetic sensibilities. 35 The Supreme Court has also left the door invitingly open for the Federal courts to fashion a “federal common law of nuisance” which discounts the benefits of resource development and economic growth if the result is air and water pollution. 36 A Maryland court, in a wetlands case, has concluded that development, while it is generally a societally useful activity and is to be encouraged, can also involve the destruction of important natural processes. In such circumstances, the presumption favoring development and economic growth disappears. 37

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32 Hadacheck v. Sebastian, 239 U.S. 394, 410 (1915). See also O. Holmes, The Common Law 77 (M. Howe ed. 1881); Coase, supra note 12, at n.18 and accompanying text. Henry Hart defines the “social problem” thus:

The fact—the entirely objective fact—seems to be that the pie—that is, the total of actually and potentially available satisfactions of human wants—is not static but dynamic. How to make the pie larger, not how to divide the existing pie, is the crux of the longrange and primarily significant problem.


36 See note 6 supra and the cases and materials cited therein.

37 Potomac Sand & Gravel Co. v. Mandel, No. 20,430 Equity (Cir. Ct. Anne Arundel County, Feb. 25, 1972), 3 E.R.C. 1723 (1972). The Anne Arundel Circuit Court approved the theory set forth in Commonwealth v. Tewksbury, 52 Mass. (1 Met.) 55 (1846) that a use of private property which in most circumstances is appropriate may be in some circumstances so inimical to the public welfare that it may be prohibited, without compensation, under the police powers:

But there are many cases where the things done in particular places, or under a particular state of facts, would be injurious, when, under a change of circumstances, the same would be quite harmless. . . . In such cases, we think, it is competent for the legislature to interpose, and by positive
The developing law of environmental protection and land use regulation is important to Virginia because the Virginia courts have adopted the diminution of value doctrine as an important facet of land use regulation. But Virginia common law has not unquestionably assumed that development and economic growth are synonymous with the public good. Virginia common law is distinguished by an innovative approach to zoning and a well-developed and flexible trust doctrine which potentially creates significant legal protection for Virginia's shore related natural resources. Virginia also possesses a growing body of statutory law dealing with pollution control and protection of natural resources. Most importantly, the new Virginia constitution, which went into effect on July 1, 1971, contains an environmental clause of potentially far-reaching impact.

b. Public Trust Doctrine and the New Virginia Constitution

Article XI of the new Constitution sets out environmental protection as a basic ingredient to the public welfare criterion which guides all action of state and local government: enactment to prohibit a use of property which would be injurious to the public, under particular circumstances, leaving the use of similar property unlimited, where the obvious considerations of public good do not require the restraint. This is undoubtedly a high power, and is to be exercised with the strictest circumspection, and with the most sacred regard to the right of private property, and only in cases amounting to an obvious public exigency.

52 Mass. (11 Met.) 57-8.


See citations at notes 93-98 and accompanying text infra.

For a thorough discussion of Article XI as a statement of public policy acting as a self-executing restraint on the government, its courts, and its agencies, see Howard, The State Constitution and the Environment, 58 Va. L. Rev. 193 (1972) (hereinafter cited as Howard). The courts hold the localities to a criterion of public welfare in their actions; the standard of judicial review for the legislative acts of a Virginia locality is that it must not be unreasonable and arbitrary, bearing no reasonable or substantial relation to the public health, safety, morals or general welfare as expressed by the standards set out in the enabling act of the Virginia General Assembly. Board of Supervisors v. Carper, 200 Va. 653, 107 S.E.2d 390, 391 (1959). An ordinance must be the reasonable exercise of the power conferred by the General Assembly. Ashland
To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment and general welfare of the people of the Commonwealth.\textsuperscript{43}

Although the words "public trust" do not appear in Article XI, the legislative history of the article suggests that it was the intent of the legislature that Article XI constitute a declaration of the public trust.\textsuperscript{44} This point is important because of the judicially fashioned and comprehensively stated trust doctrine which Virginia has long possessed.\textsuperscript{45} The public trust concept has been an explicit part of Virginia judicial doctrine since the latter part of the eighteenth century. As early as 1798, the Supreme Court of Appeals held that the bed of a navigable body of water was the property of the state and could not be granted to a private individual;\textsuperscript{46} the public interest in navigation was superior.\textsuperscript{47}

The definitive statement of the trust doctrine in Virginia was set out

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\footnotesize v. Coleman, 19 Va. L. Reg. 427, n.5 (1932). If Article XI is part of the public policy of the Commonwealth, then it presumably is part of the content of the public welfare criterion imposed on the localities. As to the operation of the public policy as expressed by Article XI on state level agencies, the Attorney General concluded that this policy operates on the State Water Control Board in its evaluation of proposed uses of the historic Kanawha Canal at Richmond; thus

\begin{quote}
\textit{consideration of "water quality" cannot be so restricted as to preclude matters pertaining to reasonable and beneficial public uses of State waters, including the conservation, utilization and development of the Canal as an historical site.}
\end{quote}

Letter from Attorney General Miller to State Water Control Board Executive Secretary Paessler, January 11, 1972.
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\footnotesize \textsuperscript{42}VA. CONST. art. XI, § 1.

\footnotesize \textsuperscript{43}See Howard, supra note 42, at 209.

\footnotesize \textsuperscript{44}\textit{Discussed in} Howard, supra note 42, at 218-24; Pearson, Environmental Rights and Virginia's Public Trust Doctrine, May 18, 1970 (unpublished manuscript in University of Virginia Law School Library) (hereinafter cited as Pearson), which contains an exhaustive discussion of the major Virginia cases on public trust and evaluates whether the doctrine is capable of being developed to include protection of the environment as an incident of the \textit{jus publicum}. The illustrative applications of the trust doctrine herein are taken from Pearson.


\footnotesize \textsuperscript{46}Meade v. Haynes, 24 Va. (3 Rand.) 33, 36 (1824).
The case involved an action brought by the Virginia Attorney General against the city of Newport News which was, under the aegis of an Act of the General Assembly, discharging untreated sewage into Hampton Roads and was planning to install another sewer line to increase the discharge. The Attorney General characterized the discharge as a public nuisance because of the damage being done to oyster beds and finfishing areas, including "natural oyster beds, rocks and shoals."\(^4\)

The court cast the issue in terms of the duty of the legislature and of the limitations on its powers:

\[
\text{The real question . . . . is Has the State Legislature the power to take away, destroy or substantially impair the use by the people of the tidal waters or their bottoms for the purpose [sewage disposal] under consideration?}\(^5\)\]

The court concluded that the "use of tidal waters for discharge into them of sewage was a proper public use."\(^5\)\(^1\) In so concluding, the court stated:

The legislature may not by the transfer, in whole or in part, of the proprietary rights of the State in its lands and waters relinquish, surrender, alienate, destroy, or substantially impair the exercise of the \textit{jus publicum}. Or, to state it differently, the legislature may not make a grant of a proprietary right in or authorize, or permit the use of, the public domain, including the tidal waters and their bottoms, except subject to the \textit{jus publicum}.\(^5\)\(^2\)

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\(^{41}\) Va. 521, 164 S.E. 689 (1932).
\(^{42}\) Va. at 527-29, 164 S.E. at 690.
\(^{43}\) Va. at 544, 164 S.E. at 696.
\(^{44}\) Va. at 554, 164 S.E. at 699.
\(^{51}\) Va. at 547, 164 S.E. at 697. The trust doctrine is based on the old English common law concept which recognized two aspects of ownership vested in the King: \textit{jus privatum}, which described lands over which he had personal proprietary rights and of which he could dispose at will; and \textit{jus publicum}, which described lands, including the tidelands, which he held for the benefit of all the subjects and which could not be alienated to a private individual. The benefit for which the tidelands were held was the common right of navigation and fishery. See Rice, \textit{Estuarine Land of North Carolina: Legal Aspect of Ownership, Use and Control}, 46 N.C.L. REV. 779, 781-85 (1968); Sax, \textit{The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention}, 68 MICH. L. REV. 471, 475-78 (1970). The \textit{jus privatum} as used in Rice and Sax seems to have had its origin in the vesting by William of Normandy of ownership of all the lands of England in himself. See F. MAITLAND, DOMESDAY BOOK AND BEYOND 151-52 (Norton ed. 1966). The landmark statement of American public trust law, \textit{Illinois Cent. R.R. v. Illinois}, 146 U.S. 387 (1892), is also primarily oriented toward a special treatment of shore areas, and operates as a limitation of the power of the legislature. The legislature may not yield control over these areas to private interests so that the uses of the public are impaired. \textit{Illinois Central} is discussed in Sax, \textit{supra} at 489, and in Pearson, \textit{supra} note 45, at 5-6.
The court thus found that the use by the people of the tidal waters for sewage disposal was an exercise of the *jus publicum*. In so doing, the court reaffirmed the central core of the trust doctrine: the state may not permit a private use of the *jus publicum*—the lands and waters to which it has title—if such use would be inconsistent with the exercise of the *jus publicum*—the inalienable right of the public to use those lands and waters.\(^5\)

The court established two important principles regarding the substantive content of the *jus publicum*. First, it embodies those public interests which are constitutionally established or have constitutional statute:

The *jus publicum* and all rights of the people, which are by their nature inherent or inseparable incidents thereof, are incidents of the sovereignty of the state. Therefore, by reason of the object and purposes for which it was ordained, the Constitution impliedly denies to the Legislature the power to relinquish, surrender, or destroy, or substantially impair the *jus publicum*.\(^5\)

The court did not find that any explicitly constituted incidents of the *jus publicum* were in issue. But it did find that the discharge of sewage to the tidal waters of the state was a public use of impliedly constitutional stature and therefore an incident of the *jus publicum*. Furthermore, the court gave a significant example of what it considered to be an explicitly constitutional incident in stating that the right to navigation was part of the *jus publicum* because of its relationship to the constitutional concept of liberty contained in the Virginia Declaration of Rights.\(^5\)

The second important principle regarding the substantive content of the trust doctrine is the changing nature of that content:

What is for the benefit of the people is committed to its [the legislature's] discretion free from the control or dictation of the executive or the judicial department of the government.\(^5\)

This language affirmed previous decisions\(^5\) that the substantive content of the *jus publicum* is circumstantial and can change as societal values...
and societal circumstances change.\textsuperscript{38}

At various times, the protected uses of the public domain have included navigation,\textsuperscript{59} fishery,\textsuperscript{60} establishment of mill dams,\textsuperscript{61} bathing,\textsuperscript{62} and disposal of sewage.\textsuperscript{63} An excellent example of the operation of the circumstantial nature of the \textit{jus publicum} is contained in the earlier case of \textit{Taylor v. Commonwealth}.\textsuperscript{64} There it was held that the use of the tidal waters by the people as a common for the taking and cultivation of fish was a currently valuable public use of the \textit{jus publicum}. \textit{Taylor} involved a dispute over a tidal bed leased as an oyster ground but actually used for the extraction of mineral waters from below the bed by means of an artesian well. The court indicated the flexible nature of the trust concept when it observed:

The property in dispute was originally leased by the state as an oyster planting ground. By chance, in the prosecution of that industry, mineral water was discovered far beneath the soil, which has proved of great value. There may be more valuable substances hidden in the soil; as to that, conjecture would be idle. But whatever that soil contains belongs to the state, and the state, and it alone, has the right to develop those hidden sources of wealth, if such there be, for the common benefit of all its citizens.\textsuperscript{65}

The Supreme Court of Appeals, by its decision in \textit{Commonwealth v. Newport News}, tied the trust doctrine closely to constitutional principles. Because the practical application of the trust doctrine is already developed, it is likely that the conservation article of the new constitution will exert its greatest judicial impact if it operates through the pre-existing framework of the trust doctrine.

There is a strong basis for the conservation article to be found a part of the \textit{jus publicum}. Besides its constitutional stature, its policy of pre-
serving the natural webs of life establishes a dependence of the public on the ecological processes which take place in the *jus privatum*. This dependence is a public use of the *jus privatum* which is at least as important as those uses which have already been protected by the trust doctrine. Finally, both Article XI and the trust doctrine are similar in their impact; they both act as a qualification on the powers and duties of the General Assembly. For these reasons, it will be assumed that Article XI is a new and important part of the *jus publicum*.64

Because the Virginia wetlands are not explicitly part of the *jus privatum*, what are the possible ways in which Article XI can act through the trust doctrine in order to achieve wetlands protection?

First, Article XI could mean that the *jus publicum* no longer operates solely as a limitation on the use by the state of the traditional *jus privatum*—the lands and waters of which the state has not divested itself. Instead, Article XI could be interpreted broadly to mean that the *jus publicum* now operates on all the lands and waters of the Commonwealth. This interpretation certainly was in the minds of at least some of the legislators during the Constitutional session of the Assembly.7

The court of *Commonwealth v. Newport News* equated the public right to navigation to the fundamental constitutional concept of the right to liberty. It is at most a logical extension to equate the policy of Article XI to the equally fundamental constitutional concept of the right to life. Thus, under this broad interpretation Article XI places a solemn duty on the Legislature to protect the public interest in those natural values which are set out in the Article. Because the wetlands possess unusual natural value, Article XI places the state under an active mandate to protect them from disruption. Wetlands regulation is therefore not a limitation on pre-existing private property rights potentially involving a taking; instead wetlands regulation is the mandatory protection of the *jus publicum*.

A second possible interpretation of the impact of Article XI takes a less expansive view of the lands and waters of the Commonwealth on which the *jus publicum* operates; rather it uses historical precedent to expand in a crucial way the usual scope given the *jus privatum*.

It is significant that the trust doctrine has rather consistently operated as a limitation on the powers of the General Assembly in order to insure that the access to and use of the *jus privatum* by the people in common is guaranteed. It is also significant that the definition of the *jus privatum* 64

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64Although there is the possibility that Article XI could be interpreted as not to be self-executing without implementing legislation by the General Assembly, this problem is unlikely to exist with the wetlands since the General Assembly has acted with regard to them. For a view that Article XI is self-executing see Howard, note 42 supra, at 207-09.

65See Howard note 42 and accompanying text supra. For an argument that the right to a salubrious environment is part of the right to life as a constitutional concept, see Note, *Toward a Constitutionally Protected Environment*, 56 Va. L. Rev. 458, 459-64 (1970).
has been indefinite, like the definition of the protected uses of the public. Although the *jus privatum* has often been described to include the beds under tidal and non-tidal navigable waters, it has also been described as including those lands which are under tidal waters. This implies that the *jus privatum* could extend as far as tidal waters extend, that is, up to the high water mark.

Indeed, for the first two centuries of the Commonwealth, the strip of land between low water and high water was part of the *jus privatum*; it was not until 1819 that the legislature granted this strip to the adjacent fastland owner. During this two-hundred year period "the people had the right in common to fish and hunt upon all ungranted lands," including the strip between high and low waters.

Although the Supreme Court of Appeals has interpreted the 1819 Act as passing title down to the low water mark, it is also possible that this grant passed as limited a right as have purported grants of the beds under navigable waters. The Supreme Court of Appeals had held that the King, the London Company and the state had the power to alienate the shore strip. But the fact remains that for two hundred years this pur-

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6See, e.g., Richardson v. United States, 100 F. 714, 717 (E.D. Va. 1900); Hampton v. Watson, 119 Va. 461, 122 S.E. 344 (1924); Morgan v. Commonwealth, 98 Va. 812, 35 S.E. 448 (1900). Under old English common law, the beds under navigable waters belonged to the King. In England, all navigable waters are also tidal. In the United States, many non-tidal rivers are also navigable. A judicial controversy ensued in American law over the question whether the state owned the beds under navigable, non-tidal waters. This question was resolved in Virginia in favor of state ownership. James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp., 138 Va. 461, 122 S.E. 344 (1924). See A. Embrey, Waters of the State 151, 159-60 (1931).


8This is important because the important wetlands are those between high and low water subject to, but not always covered by, the tide. See generally, J. Teal & M. Teal, Life and Death of the Salt Marsh (1969).

9Miller v. Commonwealth, 159 Va. 924, 929, 166 S.E. 557, 558 (1932). This case contains a very detailed account of the land grant system in colonial Virginia, the complex way in which land was settled and the resulting land use patterns later rationalized by the General Assembly. See also A. Embrey, Waters of the State 1-268 (1931).


13Miller v. Commonwealth, 159 Va. 924, 929, 166 S.E. 557, 558 (1932).
ported power was not exercised, except in rare cases,\textsuperscript{77} and the law at that
time presumed that grants and patents of land riparian to navigable
waters extended only down to the high water mark.\textsuperscript{78} Thus, the state acted
for many generations as if the shore strip was a part of the \textit{inalienable jus privatum}.

Further, the 1819 Act is ambiguous; it contains a proviso that it
should not

be construed to prohibit any person or persons from the right of
fishing, fowling and hunting on those shores of the Atlantic Ocean,
Chesapeake Bay, and the rivers and creeks thereof, within this
Commonwealth, which are now used as a common to all the good
people thereof.\textsuperscript{79}

Does this proviso refer only to those shorelands which have been used as
a common\textsuperscript{80} or to all the shorelands, all of which have been used as a
common? In the leading case on this question, \textit{Miller v. Commonwealth},
the Supreme Court of Appeals held that the first interpretation is the
correct one, but the factual basis on which the court relied is not wholly
convincing and the interpretation itself can be looked on as dictum.\textsuperscript{81}

It is entirely consistent with the traditional application of the public
doctrine to treat this shore strip as part of the \textit{jus privatum}. It is part of
the great tidewater areas of Virginia in which the trust has been focused;
the trust operates to protect public access to the values of these areas,
whether for navigation, fishery, removal of minerals, or disposal of se-

\textsuperscript{77}159 Va. at 931-33, 166 S.E. at 559.
\textsuperscript{78}159 Va. at 929, 166 S.E. at 558.
\textsuperscript{80}For a detailed historical discussion of the manner in which land was parcelled out
during Virginia's colonial period and of the historical connotations of the term "commons," see Miller v. Commonwealth, 159 Va. 924, 930-37, 941-47, 166 S.E. 557, 558-61, 563-65 (1932).
\textsuperscript{81}Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932). For a discussion of the factual basis of the decision see Note, State and Local Wetlands Regulation: The Problem of Taking without Just Compensation, 58 VA. L. REV. 876, 902-03, n. 103 (1972), which suggests that the second interpretation—one which holds that all of the shorelands were treated as a common in colonial times—is perhaps the more historically plausible. In any event, Miller v. Commonwealth upheld a conviction for trespass by a hunter on marsh between low and high water. But to conclude that A has enforceable rights in wetlands against B, a casual hunter using those wetlands, does not mean of itself that A has a complete bundle of rights in those wetlands against all the world. Riparian doctrine provides an analogy: A, a riparian owner along a non-navigable stream, has enforceable rights against B, a non-riparian owner using water from that stream. See Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921). But A's rights as to C, another riparian owner along that stream, are quite limited; Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700 (1942); R. MINOR, REAL PROPERTY § 55, at 76 (2d ed. 1928); as are his rights against all the world; e.g., VA. CODE ANN. §§ 62.1-44.2 to 44.34 (Cum. Supp. 1972); even though he has title to the stream bed. Crenshaw v. Slate River Co., 27 Va. (6 Rand.) 245 (1828).
An interpretation of the 1819 Act that gives a narrow reading to the proviso clause but which concludes it did no more than close out the access of the public to the shore strip for hunting and fishing is consistent with a shift in the trust doctrine as circumstances change. In this case, after two hundred years, the population had largely moved inland and now depended on agriculture and deepwater fishing for its sustenance rather than fishing and hunting along the shore. But the shore strip is still subject to the *jus publicum*. And, as in *Taylor v. Commonwealth,* new resources have been discovered—in this case, the wetlands ecological processes that have now been shown to be indispensable to Virginia's marine resources and thus have been given constitutional stature. The dependence of the public upon these ecological processes is a part of the *jus publicum* and the trust doctrine applies.

A third possible interpretation of the impact of Article XI is that it does form part of the *jus publicum* and therefore acts through the trust doctrine, but that the *jus privatum* is limited to the beds under tidal and non-tidal navigable waters. These areas have not been the subject of conflicting legislative pronouncements. They are, therefore, the subject of the most restricted possible reading of Article XI, one which treats its language "to protect [the commonwealth's] atmosphere, lands, and waters from pollution, impairment, or destruction" not generically but as referring only to those lands and waters to which the Commonwealth has title. This interpretation allows Article XI to act within the existing framework of Virginia nuisance law and establishes for ecological protection a constitutional priority in the duty of the government to abate nuisance.

Because of the intricate interrelationships of ecological chains, destruction of natural values in private wetlands has a direct and salient impact on state-owned lands. Article XI is a mandate to the state to abate nuisances consisting of the externalities associated with private wetlands development. There is no question of constitutional taking here; the only questions are of factual causation of injury and of standing.

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83This interpretation has the additional advantage that it reconciles rather than rejects *Miller v. Commonwealth.*
84102 Va. 759, 47 S.E. 875 (1904), discussed at notes 64-65 and accompanying text *supra.*
85"State owned lands" refers here to the beds under the waters below mean low water.
86Private shore property may not be used in such a way that navigation is disrupted below low water adjacent to that property. *Northern Pac. R.R. v. United States,* 104 F. 691 (8th Cir. 1900). In Virginia, the law of public nuisance is a part of the criminal law and thus only the state may bring an action. See *White v. King,* 32 Va. (5 Leigh) 726 (1835). Article XI speaks only of the policy of the Commonwealth, it does not set out specific duties. Section two of the Article sets out one way in which the policy of section one may
In sum, then, the public trust doctrine is susceptible to three different interpretations which provide constitutional protection to the wetlands. Each interpretation starts from the premise that the constitutional stature of environmental protection and the urgent needs of the public for a fit environment render the use of natural resources for their ecological values a part of the *jus publicum*. The first interpretation is forward looking; it operates through Article XI of the Constitution to place all wetlands, as part of the ecologically important natural resources of the Commonwealth, in the *jus privatum* and therefore to be protected as a public trust. The second interpretation looks back into Virginia history and revises the definition of what constitutes the *jus privatum* to include those wetlands situated below mean high water and above mean low water. The third does no more than treat Article XI as a specific mandate to the state to protect the lands to which it has title from direct injury arising from inappropriate land use practices.

**c. Just Compensation and The New Virginia Constitution**

Even a restricted view of Article XI, one that rejects the notion that Article XI expands the public trust, can operate to reverse the assumptions underlying the application of the diminution of value doctrine which treats all development as *per se* good. The courts tend to focus on one unique property of wetlands—that they can be practicably used either intensively (and therefore destructively to their natural values) or not at all. Courts have, thereby, turned the task of wetlands protection into a dilemma. Under this one-sided approach, courts tend to find that any wetlands regulation which effectively preserves natural values also tends to preclude commercial use and thus involves a taking. But the courts have not fully focused on another unique property of wetlands: they possess natural values of substantial direct benefit to society to a much greater degree than most fastlands, and their untrammeled development places a significant burden on the public just as regulation places a burden on the wetlands developer. Article XI elevates to a constitutional level the necessity for natural resource protection. It can, therefore, be interpreted that in the case of lands possessing unusual natural values, even if development of these lands and destruction of their natural values is not a public nuisance, then it is at least not the exercise of a private right to be implemented—by acts of the General Assembly. This has been interpreted to mean that the General Assembly may not enact legislation contrary to the policy of section one. See Howard, *supra* note 42, at 208, n. 64. But section one, by enunciating policy at the highest level, presumably determines what types of nuisance have the highest priority in the duty of the state to abate nuisance. A „nuisance“ approach to regulation of wetlands development was proposed in S. 56, Va. Gen. Assem., 1970 Sess., *discussed* at note 112 *infra*, but S. 56 was not adopted.
deserving of active constitutional protection. Thus, the Virginia Constitution potentially means that wetlands regulation does not involve a regulation of private property rights having the ingredients of a taking.

d. Virginia's Statutory Law of Land Use and Environmental Protection

Regardless of what the judicial interpretation of the new Constitution and of the trust doctrine might be, there is a fairly comprehensive and growing body of Virginia statutory law regarding land use regulation and environmental protection.

Land use policy, as contained in the Virginia zoning enabling act, sets out goals for land use regulation stated in terms of balancing urban growth with the preservation of amenities and compatible use. The Virginia courts have not hesitated to review the zoning actions of local government to insure that the impact of those actions comports with the statewide policies as stated in the enabling act; this is significant because local zoning actions are legislative in nature and presumably more immune to judicial review than administrative actions. The Supreme Court of Appeals has applied the diminution of value doctrine on the operation of the zoning statute. In the 1971 decision Boggs v. Board of Supervisors, the court ruled that private property could not be zoned in a manner inconsistent with the zoning of surrounding parcels if the effect of that zoning was to prohibit nearly all commercially valuable uses of that land. However, the Virginia Supreme Court has not applied this doctrine uncritically as, for instance, the Maine and Massachusetts courts have. The questioned zoning action in Boggs also conflicted with the uniformity policy of the enabling act. In an earlier case, Southern Ry. v. Richmond, a taking was also alleged, but the questioned zoning action in this case served to preserve the harmony of the surrounding area; the claim for compensation was denied despite a very substantial loss in property value. Thus, the distinctions which have been made by the Virginia court indicate that it will not necessarily treat statutory wetlands use regulation in the same way as the Massachusetts and Maine Supreme Courts.

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87 The Virginia General Assembly has acted by enacting the wetlands law. See discussion at note 66 supra.
92 205 Va. 699, 139 S.E.2d 82 (1964), discussed at note 155 infra.
In addition to its land use policy, Virginia statutory law also contains a growing body of enactments specifically designed to protect natural resources. This includes the acts relating to the Virginia Marine Resources Commission which were comprehensively revised and strengthened by the 1968 Session of the General Assembly. The policy of these acts is strongly protective of the commercial and recreational value of marine fisheries; the dependence of those fisheries on the wetlands gives the wetlands the derivative benefit of that policy. Virginia also has a strong water pollution control law, an air pollution control law, and a new strip mining law.

Thus, although many of the pertinent issues have not been dealt with as directly in point in the various pronouncements of the Supreme Court of Appeals, Virginia's constitutional law, common law, and statutory law provide a comprehensive framework in which a wetlands statute can operate. The ecological protection policy of such an act is certainly not in an inconsistent setting.

II. Legislative History of the 1972 Wetlands Act

The tortuous history of the Virginia wetlands protection statute began with House Joint Resolution 59 of the 1966 Session of the Assembly, which created the Virginia Marine Resources Study Commission. The purpose of the Commission was stated in the following terms:

The Commission shall make a comprehensive study of the marine resources of Virginia; evaluate the present methods of utilization thereof; determine whether proper conservation practices are being followed under existing law; make recommendations toward resolving conflicts between commercial and recreational uses of the marine resources of Virginia; and make recommendations for the long-range preservation, use and development of the marine resources of Virginia.

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9Ch. 746 [1968] Va. Acts. This was a result of the work of the 1967 Virginia Marine Resources Study Commission. See note 99 and accompanying text infra.
95The Commission shall have authority to make such regulations as it deems necessary to promote the general welfare of the seafood industry and to conserve and promote the seafood and marine resources of the State, including regulations as to the taking of seafood, which regulations do not conflict with the provisions of statutory law.
The December 1967 report of the Commission, while primarily oriented to the Virginia food and sport fishing industries, did specifically focus on wetlands and recommended that study and inventory of Virginia's wetlands resources be carried out by the Virginia Institute of Marine Sciences (VIMS) at Gloucester Point, Virginia. The 1968 Session of the Assembly acted on this recommendation and funded the VIMS study by House Joint Resolution 69.

VIMS issued an interim report of its study in December 1969. This report, a comprehensive statement of the scientific state of knowledge at that time, emphasized the fragility and complexity of the natural processes in the wetlands. It concluded that wetlands, heretofore thought to be of little value, actually are among the most productive natural areas of the environment and form vital links in the intricate webs of the environment. These natural processes include the conversion of silt and other inorganic compounds into plant tissue by marsh grasses, which in turn are transformed by yeasts and bacteria into other compounds digestible by animal life. The wastes of these animals are then converted into other compounds used both by the marsh plants and by other animals, which also feed on lower animal life. The interlocking of these processes is not only by function, but also by time; the time when a food substance enters a web is as important as its type and quantity. The complex balance of these processes is illustrated by the fact that the same shoreland area is used during different seasons by several different species of fish for breeding, nursery and feeding. VIMS Report at 17-55; J. Teal & M. Teal, Life and Death of the Salt Marsh 205-07 (1969), which contains a detailed description in layman's language of the wetlands processes. Id. at 84-101, 159-201.

It has been estimated that one kind of marsh-grass alone, saltmarsh cordgrass (Spartina alterniflora), has seven times the food value of an equivalent acreage of wheat, to say nothing of the food web that it supports.

It was estimated that the total value of fishery product, sport fishing, wages and taxes from the shipping industry, spending from military payroll for goods and services, tourist expenditures, hunters' expenditures and shore based industry payroll was $4 billion in 1965. Id. at 31-32.

These natural processes include the conversion of silt and other inorganic compounds into plant tissue by marsh grasses, which in turn are transformed by yeasts and bacteria into other compounds digestible by animal life. The wastes of these animals are then converted into other compounds used both by the marsh plants and by other animals, which also feed on lower animal life. The interlocking of these processes is not only by function, but also by time; the time when a food substance enters a web is as important as its type and quantity. The complex balance of these processes is illustrated by the fact that the same shoreland area is used during different seasons by several different species of fish for breeding, nursery and feeding. VIMS Report at 17-55; J. Teal & M. Teal, Life and Death of the Salt Marsh 205-07 (1969), which contains a detailed description in layman's language of the wetlands processes. Id. at 84-101, 159-201.

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natural ecological processes.\textsuperscript{105} As much as 95% of Virginia’s annual harvest of commercial and sport fish depends in some way on its wetlands.\textsuperscript{106} The VIMS Report noted that Virginia wetlands are threatened with irreversible alteration and urgently recommended that these precious natural processes be protected by legislation.\textsuperscript{107}

The VIMS Report was issued at a time when a great deal of attention was being focused at all levels of government on wetlands and estuaries. The National Estuarine Pollution Study of the Department of Interior\textsuperscript{108} was released in November of the same year; the Technical Report of the Wetlands in Maryland Study appeared in January 1970,\textsuperscript{109} the month following the VIMS Report. Both of these reports essentially concurred in the findings of the VIMS Report.\textsuperscript{110} At this same time, ecologists were concluding that man had an ultimate physical and psychological depend-

\textsuperscript{105}The term webs is used rather than chains since the latter implies direct, isolated processes. Rather, wetlands processes are highly interrelated, and any one natural factor may serve a function in several discretely identifiable chains. See VIMS Report, supra note 102, at 49. The natural functions performed by wetlands include nutrient recycling, provision of nursery areas for aquatic animals, wildlife habitat, protection of upland areas and shorelines, and erosion and sedimentation control. Chesapeake Bay Study, supra note 104, at 31.

\textsuperscript{106}VIMS Report, supra note 102, at vii.

\textsuperscript{107}Id. at 93-96, 114-115.


\textsuperscript{109}Id. at IV-5.


The main cause of the problem of wetlands destruction has been their potential for other uses and a lack of understanding of, and appreciation for, the natural functions they perform. This in turn has led to their gross underevaluation when compared to the possible economic benefits of projects that would damage or destroy them. Even now, when their enormous value is starting to be recognized, the difficulty of putting a price tag on the services they perform presents an obstacle in fighting the economic pressures that threaten them.

Chesapeake Bay Study, supra note 104, at 31-32.
ence on an environment relatively free from disruption of its important processes; and wetlands processes were high in importance.\textsuperscript{111}

In response to the recommendation of the VIMS Report, hastily drawn bills were introduced in the 1970 Session of the Assembly,\textsuperscript{112} giving an existing central agency, the Virginia Marine Resources Commission (VMRC), dredge and fill authority over the wetlands, much as many other Atlantic Coast states had already done.\textsuperscript{113} The haste with which the bills had been drafted, their incomplete nature,\textsuperscript{114} the lack of preparation among key legislators, and the fact that important agencies of the state government were divided over the bills led to their demise;\textsuperscript{115} they failed

\textsuperscript{111}For a sensitive description of the physical interaction of man with his environment, see I. McHarg, Design With Nature (1969). Chapter 2 of this estimable volume contains a superb description of the living natural process of the shore dunes, and shows how tough these areas are in withstanding the forces of nature and how helpless they are before man. *Id.* at 7-17. The psychological dependence of man on natural processes was forcefully stated by Rene Dubos:

The genetic endowment of *Homo Sapiens* has changed only in minor detail since the Stone Age, and there is no chance that it can be significantly, usefully, or safely modified in the foreseeable future. This genetic permanency determines the psychological limits beyond which human life cannot be safely altered by social and technological innovations. In the final analysis, the frontiers of cultural and technological development are determined by man's genetic make-up which constitutes his own biological frontiers.

R. Dubos, *So Human an Animal* 240 (Lyceum ed. 1968). A highly detailed exposition of nature's exceedingly strong imprint on man is contained in G. Luce, Biological Rhythms in Human and Animal Physiology (1971). In fact, to speak of man as separate from natural processes is incorrect:

There is no hope whatever that man's biological nature can be changed enough to enable him to survive without the earth's atmosphere; in fact, the very statement of this possibility is meaningless.

R. Dubos, *So Human an Animal* 145 (Lyceum ed. 1968). Here, Dr. Dubos was referring, when he spoke of earth's atmosphere, to the natural environment in general.

\textsuperscript{112}H.D. 1102 to 1118, Va. Gen. Assem., 1970 Sess. In the Senate, S. 56 was introduced; this bill proposed a “nuisance” approach to private wetland development:

It shall be unlawful for any person to erect structures on, dredge out, bulkhead or otherwise alter the configuration of lands adjacent to or in the vicinity of the public lands or waters of the Commonwealth when such activity directly or indirectly affects the public lands and waters in respect to the water level or depth, siltation, accretion, channel size, direction and flow, or in any particular which disturbs the natural state of such lands and waters at the time of passage of this Chapter.


\textsuperscript{113}For a discussion of this approach, see note 167 infra.

\textsuperscript{114}The major drafting problem with the Bills was that, while VMRC would have been given sweeping authority to regulate activities within the wetlands, no standards were set out to guide the judgment of VMRC. For instance, the standard of decision in H.D. 1106 was “consistent with sound public policy and sound conservation practices.” A Review
to be reported out of Committee.

In the following year, a Special Session of the General Assembly met, primarily for the purpose of considering the proposed new Virginia Constitution. The Conservation Council of Virginia, a powerful lobbying group, had seized upon the issue of wetlands protection and, with a year to prepare, saw to the preparation of a more carefully drafted bill. The 1971 draft bill retained the mechanism of placing authority over wetlands in a central state authority, VMRC. No wetlands legislation was introduced at the 1971 Session, but the Assembly did adopt House Joint Resolution 60, which set up a Wetlands Study Commission:

Resolved by the House of Delegates, the Senate concurring, that a commission is hereby created to make a study and report upon the wetlands of this State. Such study shall include, among other matters, an inventory of the wetlands resources available to us, the dangers threatening them, and steps the State and local governments can take to preserve the potential of this great resource for this and future generations.

Thus the task of immediate relevance for the wetlands Study Commission was to create legislation that would be unassailable on constitutional grounds, even if the Virginia Supreme Court ultimately were to reject the interpretations of the constitutional and public trust doctrines open to it and follow the rationale of the Massachusetts and Maine courts. This task was imposed not only because of the legal uncertainty about judicial doctrine but also because of political factors. First, the general political climate in Virginia tends to favor decentralized government; legislation that could involve a judicial finding of undue interference with private property rights would a priori be unacceptable.

The Review Board may approve, disapprove or modify the decision of the
Marine Resources Commission.

The uncoordinated legislative management of the bills was illustrated by the absence of the patrons when the bills first came up for a House of Delegates committee hearing on February 26, 1970. See Newport News Times-Herald, March 2, 1970. Although the bills substantially followed the recommendations of VIMS, the chairman of VMRC was "incredulous" about some of the provisions of the bills, and was "aghast" at the idea of strong regulation of private property. Newport News Times-Herald, Feb. 25, 1970.

This bill was not formally introduced but did serve as leverage for the introduction and passage of the Joint Resolution creating the Wetlands Study Commission. H.D.J. Res. 60, Va. Gen. Assem., 1971 Extra Sess.

In fact, land use control of any kind is viewed with extreme suspicion. Speaking in reference to a proposed bill to establish controls over land use to minimize the deleterious consequences of siltation, a member of a Soil Conservation District opined that the bills
Second, a statute that in application involved takings would be ineffective because the necessary funds would not likely be available for Virginia to protect her wetlands by purchase.\footnote{That is, there is little political chance that they would be made available by the budgetary process of the General Assembly. There are funds potentially available; for instance, during calendar year 1966, unrefunded gasoline taxes imposed on marine users totalled $1,192,890. 1967 VMRSC Report, \textit{supra} note 99, at 8.}

The starting point for the Wetlands Study Commission, then, consisted of three elements. First, the most prestigious scientific authorities agreed that wetlands were natural resources of unusual complexity, fragility and value. Second, the law of land use was in a state of flux because of the new and as yet uninterpreted conservation article of the constitution, but land use law at least contained an expanding policy favoring ecological protection commensurate with the accommodation of private property rights. Third, the General Assembly, by its previous actions had made out a rather consistent message that the state level agency approach was not acceptable\footnote{The General Assembly had rejected H.D. 1102-1118, Va. Gen. Assem., 1970 Sess., which would have established wetlands regulation under a central state agency, and in H.D.J. Res. 60, Va. Gen. Assem., 1971 Extra Sess., had specifically directed the Wetlands Study Commission to study the “steps State and local governments can take to preserve” the wetlands.} and that the general political climate strongly favored local control.\footnote{The Accomack-Northampton Planning District Commission and the Accomack and Northampton County Boards of Supervisors made a very detailed presentation at the October 15, 1971 Eastville hearing arguing strongly for local control. The Fairfax County Director of Pollution Control and Planning, testifying at the Arlington hearing on October 8 on behalf of the County of Fairfax, urged “we must state in rather strong terms that we believe that the political subdivisions within which the activity will occur, is entitled to notice of the filing of an application, and an opportunity to participate in the disposition of the proposed activity.” On October 18, 1971, the Northampton County Planning Commission set into motion the process to amend the county zoning ordinance to set up control over its wetlands. On January 5, 1972, the Eastern Shore Soil Conservation District adopted a resolution urging the “General Assembly to oppose any efforts to remove from the level of local government responsibility of the control of the said wetlands.” And, on January 10, 1972, the Tidewater Soil and Water Conservation District adopted substantially the same resolution.}

The political considerations were strongly reinforced by the series of public hearings held throughout Eastern Virginia by the Wetlands Study Commission.\footnote{The hearing sites were Norfolk, Arlington, Yorktown, Eastville and Richmond. Tape recordings of all five hearings are in the possession of the State Division of Statutory Research and Drafting at the State Capitol in Richmond.} The hearings were heavily attended, both by private citizens and by public officials. No witness opposed the concept of wetlands protection,\footnote{For instance, of the twenty four candidates in the Norfolk area in the Fall 1971} but a significant portion of the testimony expressed a prefer-
ence for local control and a concern that care in drafting be taken lest there might be set up an oppressive and time-consuming bureaucratic process for making decisions regarding alteration of private property.123

In December 1971, the Commission issued its report.124 In short, the report recognized the need for strong legislative protection, and recommended that alterations of defined wetlands should take place only after a process of review carried out by the Virginia localities and involving citizen participation, with the Virginia Marine Resources Commission acting as an overseer.

The bill drafted by the Commission was introduced early in the 1972 Session of the Assembly.125 At House hearings before the Committee on General Laws, strong sentiment was exhibited for adding citizen appeal;126 this amendment was made and the Bill passed the House unanimously.127 In the Senate, sections dealing with standards of decision were modified.128 With the Senate amendments to the standards adopted at a House-Senate Conference, the Bill passed the Assembly.

The Wetlands Bill which passed the General Assembly sets out general policy and standards to apply to decisions regarding wetlands, defines wetlands, and provides a zoning ordinance which localities must enact if they desire to exercise authority over local wetlands. If a locality chooses not to adopt the wetlands zoning ordinance, the Virginia Marine Resources Commission is empowered to exercise authority on behalf of the locality in the same manner as provided by the ordinance. In any case, the VMRC has appeal and review authority over wetlands, whether by appeal from an applicant, the locality, or twenty-five freeholders; or by discretionary review initiated by the VMRC itself. The same parties may appeal VMRC decisions to the circuit courts. The wetlands zoning ordinance provides that, except for certain excepted activities, any person who desires to alter or develop wetlands must apply to a local wetlands zoning board; the board, in acting on the application, is required to hold a public hearing, allowing any person to testify, and prepare a hearing record; the

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122Several witnesses appeared at the Richmond hearing on October 29 with unhappy experiences about the several month process currently required by the United States Army Corps of Engineers and the VMRC for permits for quite small scale projects to be carried out below mean low water, where both of these agencies have jurisdiction.

125Virginia Wetlands Study Commission, Protection of Virginia’s Wetlands (1972).


128See note 172 and accompanying text infra.
decision process of the board involves a weighing of the public and private benefit and detriment that it finds will result from the development. Activities on government owned wetlands are not handled by the localities; instead, applications concerning these wetlands are made directly to VMRC.

III. The Decision Making Structure of the Wetlands Act

The structure and tenor of the Act reveal the legislature's policy choice that the primary initiative and responsibility for wetlands protection be concentrated at the level of the localities, where maximum citizen participation is to be encouraged. The role of state level agencies is channeled toward supplying expertise and insuring a general uniformity among the decisions of the various localities.

a. Section 1—Legislative Policy

The first section of the Act sets out the legislative findings and policy.\textsuperscript{129} The first part of this section provides:

§ 62.1-13.1. The Commonwealth of Virginia hereby recognizes the unique character of the wetlands, an irreplaceable natural resource which, in its natural state, is essential to the ecological systems of the tidal rivers, bays and estuaries of the Commonwealth. This resource is essential for the production of marine and inland wildlife, waterfowl, finfish and flora; is valuable as a protective barrier against floods, tidal storms and erosion of the shores and soil within the Commonwealth; is important for the absorption of silt and of pollutants; and is important for recreational and aesthetic enjoyment of the people for the promotion of tourism, navigation, and commerce.

Continued destruction of Virginia's coastal wetlands will greatly contribute to the pollution of the Commonwealth's rivers, bays and estuaries; will diminish the abundance of Virginia's marine and inland animals and waterfowl, finfish, shellfish and flora as sources of food, employment and recreation for the people of Virginia; will increase costs and hazards associated with floods and tidal storms; and will accelerate erosion and the loss of lands productive to the economy and well-being of our citizens.

This enumeration, similar to those found in the wetlands statute of other states,\textsuperscript{130} sets out in summary form the physical significance of


wetlands and the practical results of indiscriminate wetlands alteration. This enumeration can have two significant functions. First, it can provide a check list for the local boards to use in assessing the impact of the proposed development. Second, these legislative findings could be used by the courts as a factual statement of the importance of wetlands and the deleterious effect on societal values resulting from their destruction; this would provide a firm basis for a ruling that the prevention of wetlands development is not interference with property rights but simply the abatement of a nuisance. The policy statement of Section 1 provides:

Therefore, in order to protect the public interest, promote the public health, safety and the economic and general welfare of the Commonwealth, and to protect public and private property, wildlife, marine fisheries and the natural environment, it is declared to be the public policy of this Commonwealth to preserve the wetlands and to prevent their despoliation and destruction and to accommodate necessary economic development in a manner consistent with wetlands preservation.

This language by itself would seem to raise a presumption in favor of preservation over development whenever the two are irreconcilably at odds. But such a presumption would not be consistent with creating legislation that would avoid constitutional problems, because such a presumption might involve a taking of wetlands by legislative fiat. It also would not be consistent with other standards of the Act, which will be discussed below. As a minimum, however, this policy declaration, by incorporating "public interest" and "public welfare," would include the constitutional policy of Article XI. This policy, which focuses on natural processes, is especially relevant since nowhere are natural processes so evident, so abundant and so important as in the wetlands. The real impact of this presumption will be considered more fully in the discussion of the standards of the Act which follows.

b. Section 2—Definitions

This section includes definitions of "wetlands," "person," and "Tidewater Virginia."

The definition of Tidewater Virginia is the same as contained in the chapter of the Virginia Code dealing with the Virginia Marine Resources Commission; this definition includes all the cities and counties lying wholly or in part in that portion of Virginia below the fall line and thus subject to the rise and fall of the tide. In theory, this definition requires

131 See note 42 supra.
that all these localities must enact a wetlands zoning ordinance and undertake to protect such wetlands as may be found within their boundaries. But the definition of wetlands is keyed to a tidal range plus certain named plants usually associated with coastal wetlands. Thus, many of the Tide-water Virginia localities as defined here will not have any wetlands over which to exercise the authority provided by the Act.

The definition of "persons" is quite inclusive:

any corporation, association or partnership, one or more individuals, or any unit of government or agency thereof.

Because the Act permits any person to be heard at the required public hearings, and because the hearing record plays an important role in decisions and the review of decisions, this definition provides for broad participation in the process of decision.

The definition of wetlands proposed in the 1970 Bills provided:

"Coastal wetlands" shall mean any bank, marsh, swamp, flats, beach or submerged shallow between the vertical bounds of mean higher high water and mean lower water and such contiguous lands and waters as the Commission of Marine Resources reasonably deems necessary to insure the physical stability of the wetland, adequate quality of the water and adjacent bottoms and the well-being of its fauna and flora.134

It was felt both during the 1970 and 1971 Sessions of the Assembly and during the 1971 deliberations of the Study Commission that this definition provided too much administrative discretion.135

There are three basic methods of defining wetlands (as opposed to giving an administrative agency ad hoc power to designate wetlands as the 1970 and 1971 bills provided). The first method is to provide a generic description of wetlands, relying on agency practice and judicial decision to precisely delineate it. The second is to define wetlands in terms of lands contained with a certain tidal range. The third is to define wetlands in terms of floral characteristics.

Other Atlantic Coast states have used each of these methods with varying degrees of success. New Jersey has used a generic definition, but this clearly would have been little more acceptable in Virginia than the definition proposed in the 1970 bill.136 Maryland has used the tidal range method, with the high water mark as the upper limit to its wetlands.137

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135 In addition, "Mean Higher High Water" and "Mean Lower Low Water" are terms used only on the west coast.
This leaves out the ecologically important salt meadow hay marshes, nearly all of which grow above high water. On the other hand, if an expanded tidal range is used—for instance, $X$ feet above mean high water so as to include the salt meadow hay marshes—then a great deal of land which is not wetlands will be included, the amount varying from locality to locality. A floral definition, as Connecticut has used, is more directly related to the natural values which are to be protected, and from a scientific point of view this is probably the most correct method. However, such a definition ignores tidal action, which is a crucial physical aspect of wetlands.

The definition of wetlands as proposed by the Study Commission Bill provided:

Wetlands means all that land lying between mean low water and an elevation above mean low water equal to the factor 1.5 times the tide range at the site of the proposed project in the county, city or town in question.

This definition was worked out with the assistance of the Virginia Institute of Marine Science. It uses the low water mark, which has legal meaning, as a datum. It also uses an upper limit which depends on the local tidal range, thus avoiding a fixed upper limit which could be overinclusive in one locality and underinclusive in another. This definition was amended in the House by the addition of certain marsh plants in order to insure that areas of little ecological significance were not included. The Senate amended the House version by expanding the list of flora indigenous to Virginia, and in this form the definition was adopted.

This definition represents a compromise in methodology by the Assembly, but on the whole it does establish a tidal range which will include most of the important wetlands. The list of marsh plants, while cumbersome and potentially prone to obsolescence, does help insure that areas which need not be regulated are excluded.

c. Sections 3 and 4—Standards and Guidelines

These sections establish statutory standards to apply to the use and development of wetlands. Section 3 provides that "[w]etlands of primary
ecological significance shall not be unreasonably altered so that the ecol-
ogical systems of the wetlands are disturbed" and that:

Development in Tidewater Virginia, to the maximum extent possi-
ble, shall be concentrated in wetlands of lesser ecological signifi-
cance, in wetlands which have been irreversibly disturbed before
[the effective date of this Act], and in areas of Tidewater Virginia
apart from the wetlands.

Taken separately, these standards involve a certain amount of ambi-
quity and conflict. "Primary ecological significance" and "lesser ecologi-
cal significance" are not defined, although the terms are a central part
of these two standards. In the absence of a definition, it is not clear, on
their face, whether these terms are meant to be scientific standards, legis-
lative standards, or merely generalities of no particular significance.
Thus, their meaning will have to be fashioned from the context in con-
junction with the other standards and the policy of the Act, which means
that their substantive content will come from administrative practice and
judicial interpretation.

The other standards of the Act are apparently conflicting. For in-
estance, section 1 of the Act declares that necessary economic development
is to be accommodated only "in a manner consistent with wetlands pres-
ervation," implying that development is never to take precedence over
preservation. Section 3 states in the imperative that "wetlands of primary
ecological significance shall not be unreasonably altered," implying
that development may take precedence if the wetland involved is of lesser
ecological significance.

Taken together, however, these policy statements and standards argu-
ably do not stand for the proposition that development of wetlands is per
se prohibited. Such an interpretation would be plausible only under a
literal and inflexible reading of the policy statement of section 1 of the
Act. It would also ignore the implication in section 1 that at least some
accommodation of economic development be made.\footnote{\textsuperscript{144}}

Further, if the diminution of value doctrine were to be applied to
wetlands in Virginia as it was applied in Maine and Massachusetts, a
taking of all private Virginia wetlands by statutory fiat could be involved

\footnote{\textsuperscript{143}Emphasis added.}

\footnote{\textsuperscript{144}An example of judicial willingness to accept a legislative policy favoring industrial
development in derogation of the common law and in conflict with other statutory provi-
sions is the original adoption and judicial test of the 1946 Virginia State Water Control
187 Va. 831, 48 S.E.2d 279 (1948). For the common law background see, e.g., Arminius
Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459 (1912), discussed at note 180 \textit{infra}. The
legislative policy of the Wetlands Act, by being consonant both with the Virginia Constitu-
tion and arguably with common law, ought to be even more acceptable.}
with so literal an interpretation. Such a legislative intent is hardly plausible given a political climate in Virginia which is highly suspect of further governmental interference with property rights. Finally, such an interpretation would reduce the decision-making process so carefully established by the Act to a finding whether or not the wetlands proposed for development contribute to the natural values set forth in the findings of section 1 of the Act. The elaborate decision-making framework provided by the Act would be highly unnecessary, and it would have been illogical to place what would be essentially a scientific decision in the hands of the localities rather than an agency possessing expertise in the area, e.g., VIMS or VMRC.

A second possible interpretation is that the policy statement of section 1 is a declaration by the legislature which operates on two levels of significance. On the first level, it functions as a finding by the legislature that the ecological processes of the wetlands are of such importance that certain broad rights and interests of the public are done violence by indiscriminate wetlands development. Thus, if the courts of Virginia are inclined to treat wetlands development more as a nuisance than as a desirable activity to be protected under the diminution of value doctrine, not only is there no legislative policy to hinder such a judicial conclusion, but also there is legislative policy inviting such a conclusion. This interpretation at least imputes to the legislature an awareness of the necessary dual role of the courts and the legislature in any regulatory scheme for the wetlands.

This second interpretation also makes it possible to accommodate the other standard-setting language without conflict and to rationalize the succeeding sections of the Act. The phrase "lesser ecological significance" presumably means wetlands fitting the statutory definition but for which it can be shown that no scientific evidence has yet been found that they contribute to the natural values protected by the Act. Thus, if an application involves wetlands of "lesser ecological significance" or wetlands "which have been irreversibly disturbed," then the decision-making process is completed. By parity of reasoning, the phrase "primary ecological significance" means those wetlands which fit the definition in the Act and therefore which contribute to the natural values set out in section 1 and whose development would result in the dire consequences set out in section 1. For these wetlands, the language of section 3 applies: they "shall not be unreasonably altered so that the ecological systems of the wetlands are disturbed."
The determination of what is unreasonable is thus the central regulatory function. This function is the subject of later provisions setting up the standards of decision for the local boards. As the policy language in section 1 concerning the accommodation of development and the decision standards set out later in the Act provide, the determination of what is reasonable of necessity must include the consideration not only of the scientific value of the wetlands but also of economic and social values as well.

The regulatory function established by these standards necessarily will involve a certain amount of scientific judgment in the decision-making process in order to identify those areas which are functioning as wetlands and to estimate the likely results of their alteration. One of the primary contributing factors to the political acceptance of wetlands alteration is the voracious appetite of local government for an expanding tax base as increasing costs of service and demands for a wider range of services strain local budgets. It is therefore not likely that localities will be able to afford to provide their wetlands boards with sufficient resources to acquire scientific expertise. Thus, the processes of the Act must supply this expertise. One source is the legislative findings of fact regarding the consequences of wetlands development set out in section 1. Another source of scientific knowledge is the testimony of proponents and opponents at the mandatory public hearings. Another possible source is that cities and counties, through the planning district commissions and local planning commissions, are able to pool their resources and therefore provide collectively what they could provide individually only with difficulty. Finally, there is the expertise available from state level agencies, notably the Virginia Institute of Marine Science as well as federal agencies.

Section 4 of the Act specifically contemplates the use of VIMS expertise by calling for guidelines, limited to objective scientific statements, to be promulgated by VMRC, with "the advice and assistance of the Virginia Institute of Marine Science." These guidelines are to "scientifically evaluate wetlands by type and ... set forth the consequences of use of these wetlands types." This section could be a possible way in which the term "primary ecological significance" is to be defined.

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147See discussion at notes 161-191 and accompanying text infra.
148See discussion at note 157 and accompanying text infra.
149Localities grouped into planning districts by the Division of State Planning and Community Affairs may exercise district-wide land use planning powers. See the Virginia Area Development Act, VA. CODE ANN. §§ 15.1-1400 to 1499 (Cum. Supp. 1971).
147The enabling acts for localities provide for the exercise of locality-wide planning powers. VA. CODE ANN. §§ 15.1-446 to 456 (Cum. Supp. 1971).
151Practically, because of inevitable administrative delays, these guidelines will not likely be available for some time after the effective date of the Wetlands Act (July 1, 1972).
As to the legal significance of these guidelines, it is important that the Act does not provide that they be adopted in the manner of an administrative agency rulemaking.\textsuperscript{132} It is therefore arguable whether the legislature intended that the guidelines be binding on the local wetlands boards.

The legislature could have provided for the promulgation by administrative rulemaking of further decision standards by the VMRC. Such rules would go beyond the objective statements which were instead provided, and their effect on wetlands development would be quite substantial. As rules, they would be legally binding, and they would most likely have as great an ultimate effect as the decisions of the wetlands boards themselves. Because so much would be at stake, the process of adoption of such standard as administrative rules would be subject to the vicissitudes of political pressure and administrative delay.

As non-binding guidelines, their effect would be to provide a certain measure of scientific guidance, or perhaps rebuttable presumptions, to local boards while keeping the exercise of administrative discretion and the play of political factors at the local level. To interpret them in this way would be consistent with the legislative decision to provide an administrative structure which preserves the initiative of the localities to the greatest extent possible; additionally, as guidelines rather than rules, they could be used by the wetlands boards much more flexibly.

\textit{d. Section 5—Wetlands Zoning Ordinance}

This section\textsuperscript{133} consists of a wetlands zoning ordinance that a locality must adopt verbatim if it chooses to exercise regulatory authority over the wetlands within its jurisdiction. The General Assembly took the highly unusual step of setting forth a complete local ordinance. This is a significant departure from the Virginia zoning and land use planning statutes, which provide general standards and guidelines for the localities to follow in enacting zoning ordinances.\textsuperscript{134} The Assembly has insured

\begin{footnotesize}
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\item On the other hand, there is no reason why a wetlands board could not rely on prior publications of VIMS, properly introduced into the record, or on advice given by VIMS regarding specific development applications.
\item The Virginia zoning enabling act provides for the adoption of a local land use plan in the form of an ordinance. \textsc{Va. Code Ann.} \S 15.1-486 (Cum. Supp. 1971). Uses of land inconsistent with the ordinance are handled either by a rezoning of the specific parcel by ordinance or by the granting of a variance through an administrative process. \textsc{Va. Code Ann.} \S S 15.1-495 to 497 (Cum. Supp. 1971). The Virginia Area Development Act provides for the adoption of planning district wide land use plans by ordinance. \textsc{Va. Code Ann.} \S 15.1-1406 (Cum. Supp. 1971). In the Wetlands Act, the ordinance is provided to the localities for adoption and the ordinance, rather than being a land use plan, instead provides an administrative process for making land use decisions.
\end{itemize}
\end{footnotesize}
thereby that wetlands regulation will have a certain degree of uniformity among the forty-seven localities in Tidewater Virginia, even without the active participation of VMRC. Because of the form that the ordinance takes, the regulatory activities of the localities will be administrative in nature, unlike the zoning actions of localities under the zoning enabling act which are legislative in nature. This will have a substantial impact on the judicial scope of review of wetlands board decisions.\textsuperscript{165}

The ordinance consists of a definition section which repeats section 2 of the Act; a section exempting various private non-commercial uses of private wetlands and all public uses of government-owned wetlands from the local permit process; a section exempting various private non-commercial uses of private wetlands and all public uses of government-owned wetlands from the local permit process; a section setting out the information required of the applicant; provisions setting down a time frame for local board action and requirements for public hearings; a comprehensive framework for board decisions; and various housekeeping provisions providing for bonding of permitees, notarization of permits, and time limits for permit authority.

Section 3 of the ordinance excepts certain private, non-commercial uses of wetlands. If they were not excluded, the ordinance would be open to constitutional challenge as being unduly restrictive of private property rights; practically it would result in an extremely burdensome volume of permit applications to the local wetlands boards. Since the excepted uses are primarily non-commercial in nature, the impact should be small. It would appear that the exception is a sensible trade-off for greater legal acceptability and administrative convenience. Section 3 also excepts governmental activity on wetlands owned by state or local governments; these activities are to be regulated directly by the VMRC.\textsuperscript{166}

Section 4 of the ordinance requires that applications for wetlands alteration provide a very detailed description of the proposed activities. The applicant is also required to set forth the public benefit to be expected from his project and the steps that he expects to take to reduce deleterious external effects, thus establishing a burden of proof on the applicant. This section, along with section 5 of the ordinance, which makes the application a matter of public record, insures that any interested member of the public has a vehicle for apprising himself of the details of proposed activities. Further provision for notice is set out in section 6, which requires that certain state agencies, owners of record of any land adjacent to the

\textsuperscript{165} Judicial review is discussed at notes 191-199 and accompanying text \textit{infra}.

\textsuperscript{166} Section 9 of the Wetlands Act provides that an applicant is to apply directly to the VMRC for a project on lands owned by the Commonwealth; the VMRC processes such applications in the same way that the local wetlands boards do under the zoning ordinance. \textsc{Va. Code Ann.} § 62.1-13.9 (Cum. Supp. 1972).
wetlands in question, and known claimants of water rights in or adjacent to the wetlands in question must be given notice of the required public hearing on the application.

Section 7 of the ordinance provides that a public hearing is to be held within sixty days of receipt of the application by the board and spells out the requirements for the hearing. Any person may testify, and both the ordinance and the Act define person as broadly as possible: "any corporation, association or partnership, one or more individuals, or any unit of government or agency thereof." This makes participation in the process possible both for members of the general public and for interested conservation groups and for federal agencies possessing expertise not necessarily found at the state or local level.

This section further provides for a mandatory hearing record. This record is to include the application, any written statement submitted by witnesses, a summary of the statements of all witnesses, the findings and decision of the board, and the rationale for the decision. While the ordinance does not specifically require that the decision of the board be based on the record, succeeding provisions of the Act do require that decisions on appeal or review must be based on the record. Hence, an active review process will tend to insure that the local boards are practically confined to the record in making their decisions.

Section 7 of the ordinance also reflects the concerns expressed at the Wetlands Study Commission hearings over a bureaucratic process. The ordinance provides that the board make its decision within thirty days of the hearing; if the board does not act within that time, the application is deemed to be approved. This insures that a maximum of ninety days will elapse before the applicant will have the primary action on his application. The "automatic approval" provision could well mean that a board faced with a controversial decision might "finesse" the entire problem and fail to issue a decision. However, adverse parties have a vehicle to appeal board decisions and, since the appeal must be heard on the record, this effectively means that such appeals will, if there is strong opposition, be remanded at least for the purpose of producing a record. It means also


The court, sitting without a jury, shall hear the appeal on the record transmitted by the agency and such additional evidence as may be necessary to resolve any controversy as to the correctness of the record. And the court, in its discretion, may receive such other evidence as the ends of justice require.

159 See note 123 supra.
that the initiative for decision making will pass to a state level agency; this could be embarrassing for a locality jealous of its prerogatives.  

Section 9 of the ordinance provides the framework of decision for the local wetlands boards. Subsection (a) provides that the boards shall base their decisions on the "[i]mpact of the development on the public health and welfare as expressed by the policy and standards [set out in the Act] and any guidelines which may have been promulgated [by the VMRC]." Subsection (b) requires:

If the board, in applying the standards above, finds that the anticipated public and private benefit of the proposed activity exceeds the anticipated public and private detriment and that the proposed activity would not violate or tend to violate the purposes and intent of Chapter 2.1 of Title 62.1 of the Code of Virginia and of this ordinance, the board shall grant the permit, subject to any reasonable condition or modification designed to minimize the impact of the activity on the ability of this . . . . . . (county, city or town), to provide governmental services and on the rights of any other person and to carry out the public policy set forth in Chapter 2.1 of Title 62.1 of the Code of Virginia and in this ordinance. Nothing in this section shall be construed as affecting the right of any person to seek compensation for any injury in fact incurred by him because of the proposed activity. If the board finds that the anticipated public and private benefit from the proposed activity is exceeded by the anticipated public and private detriment or that the proposed activity would violate or tend to violate the purposes and intent of Chapter 2.1 of Title 62.1 of the Code of Virginia and of this ordinance, the board shall deny the permit application with leave to the applicant to resubmit the application in modified form.

This section is the crux of the decision-making process. As the discussion of the standards of the Act (sections 3 and 4) indicated, the central function of the local wetlands boards is to decide when it is reasonable to allow the alternation of wetlands of primary ecological significance to take place.

The explicit preservation policy of Section 1 of the Act would seem to act as a presumption that wetlands ought not to be developed unless there is compelling reason to do so. What are the factors that the wetlands boards should consider in deciding whether to permit wetlands development?

160Ideally, these constraints are meant to insure that "automatic approval" will happen only in those cases where there is little doubt that the application should be granted and the writing of an opinion would be a needless burden.
The Act, either explicitly or implicitly, provides several. First, there is the statement in section 1 concerning the accommodation of necessary economic development. There is the implied policy of constitutional fairness—that is, wetlands regulation ought not involve unnecessary interference with private property rights. Finally, there are the public and private benefit and the public and private detriment considerations set out in the zoning ordinance.

The term "necessary economic development" is a rather difficult criterion to assess. Presumably it does not mean that a wetlands board is to take an Olympian view of the state's economy and judge whether a development project will contribute to the balance and health of that economy. On the other hand it is not readily apparent what constitutes an unnecessary development. Since the applicant would not propose a clearly unprofitable project, the fact that he stands to make a profit means also that this enterprise is filling some market need.

A possible meaning is that the term is intended to inject the consideration of economic efficiency into the content of the other decision criteria. This would mean that the term has no independent standing of its own. More importantly, it would mean that the decision process would involve the weighing of incommensurables, with the outcome inevitably biased in favor of development. This is so because of a significant transactional problem. Development, by its nature, is readily susceptible to a precise market measurement of its benefits. Ecological damage, on the other hand, is not susceptible to specific market quantification. Thus, an estimate of economic efficiency tends to be impressionistic when the market benefits of development are being compared with the externalities that will result.

Additionally, the proponent of a development activity is usually a single individual who is highly motivated to calculate both the benefits that will accrue to him as well as the benefits that will accrue to the public. Those who would oppose the proposal are most likely large in number, but with each having only a small increment of damage. Economists have long recognized that the transactional costs of altering arrangements often exceed the costs that would be incurred if nothing were done; this explains why many nuisances continue unabated despite their great total impact. Putting them to a stop would cost even more.

\begin{quote}
... to accommodate necessary economic development in a manner consistent with wetlands preservation.
\end{quote}

\[162\text{Of course, from a "pure" point of view, his project might be economically unwise if he were required to include environmental "costs."}
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\[163\text{See Coase, note 12 supra, at 15-19; Mishan, note 12 supra, at 272-73. For a description of the nature of these transaction costs, see Mishan, note 18 supra, at 21-24. Economists are beginning to measure empirically these costs. See, e.g., Demsetz, The Cost of}
In any event, despite the acceptance of economic efficiency as a desirable goal in current legal literature, economists and political scientists are beginning to question strongly its rationale and effect. Economic efficiency, then, is a conceptually faulty concept and its use as a decisional criterion would strongly bias wetlands use decisions. Thus, it does not comport with the overall goal of the Act to interpret this criterion in terms of economic efficiency. It is possible to give the criterion of accommodating necessary economic development independent standing if it is given a more limited and specialized meaning. This criterion could be intended to provide a safety valve to an economically hard-pressed locality. A rural county with significant unemployment, for instance, might be faced with an application for a project which will provide substantial employment, which cannot be located anywhere but on the shore, which will destroy the wetlands on which it is built, but which can be provided with enough safeguards so that no wide-ranging external effects will re-

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Economists tend to define economic efficiency as that arrangement of society's resources which results in the greatest net product. E.g., Coase, *The Problem of Social Cost*, supra note 12, at 2. But Michelman implies that this is not a necessarily desirable goal when he chooses fairness over what he terms utilitarian ethics as the criterion of compensation. See Michelman, *supra* note 12, at 1218-1224. This implied disfavor of economic efficiency as a panacea is consistent with the recent development of the theory of welfare economics. To assume that there will be a gain in the total welfare of society as a result of an increase in total product without a careful evaluation of distributional effects leads to severe logical inconsistency. M. Dobb, *Welfare Economics and the Economics of Socialism: A Commonsense Critique* 86-116 (1969); E. Mishan, *Welfare Economics: An Assessment* 38-51 (1969). Further, the market value of total product not only does not equal the total welfare of society, but also in many cases the divergence is so severe that a total gain in product can occur and yet result in a net loss in welfare. *Id.*, 73-81; E. Mishan, *The Costs of Economic Growth* (1967). A continuing and salient political controversy centers around the degree to which government should control private actions even if it were certain that governmental actions (e.g., measures taken to maximize total product) were known to lead to a maximization of social welfare. This controversy is partially involved with American constitutional political values favoring individuality, which carry with them an implied acceptance of the loss in economic efficiency which they entail. A growing political value which also affects this question is the rejection of materialism. Social philosophers are beginning to emphasize the spiritual and ritualistic needs of man which have been rather underemphasized in recent decades. For a thesis that man ultimately depends more on spiritual values than material see L. Mumford, *Technics and Human Development* 48-71 (1966). In the absence of certainty about the desirability of increasing total product, the suspicions of the populace toward further governmental control, as noted at note 117 supra, are understandable. A striking example of this suspicion is described in the account of the demise of a well-conceived plan to preserve the amenities of a pristine watershed in Pennsylvania, a goal desired by the local populace, but which did not come to fruition because the plan to achieve that goal involved increased governmental control over land use. Keene and Strong, *The Brandywine Plan*, 36 Am. Inst. Planners J. 50 (1970).
suit. In such a case, development might well be a reasonable trade-off. In this kind of situation, this criterion has a great deal of substantive application.

The criterion of constitutional fairness, the second factor that the wetlands boards should consider, is somewhat diffused and speculative in that there is no certainty how the Virginia courts will react to comprehensive preservation of private wetlands. However, it is significant that the Act carefully requires that all persons be permitted to participate and to submit testimony, and that the decision criteria include the broadly-stated criterion “public and private benefit and detriment.” This means that the factual basis of decision is intended to include the impact of the proposed development on all private individuals who might be affected. It is also significant that the judicial decisions which have found constitutional difficulties with wetlands regulation have expressed the problem as too great a concentration of economic burden on one or a few people in order to advance the welfare of the public as a whole.68

The Act instead tends to focus the inquiry on the impact on the applicant of a denial of his proposal as against the impact on other individuals—not necessarily the public at large—of a grant of the application. Such a shift in focus thus tends to avoid the problem of the single individual being forced to “pay” for an advance in the public welfare.67 Presumably, an administrative decision which denies a use of private property because too much harm will be caused to other private individuals has much greater constitutional acceptability. This shift in focus also opens up the inquiry to a broad consideration of effects, thus avoiding a fixation on the quantifiable benefits of development against the unquantifiable loss of just a small portion of the totality of the ecological processes.

The goal of constitutional fairness is also two-edged. If it requires a concern for the rights of the applicant, it also requires a concern for the rights of all those individuals who will be affected by the decision whether or not to grant to the applicant permission to engage in his proposed use.

The language of the final criterion—“public and private benefit and detriment”—is unique in the Virginia Code,66 which uniqueness of itself raises the presumption that the legislature intended that the ambit of the decision-making process is not to be limited by the traditional interpreta-

66See note 11 supra.
67A decision-making structure which places authority in a central state agency tends to cast the issue in terms of the property rights of the wetlands owner versus the broad public interest in wetlands preservation. There is great practical difficulty for individuals who may only have a small increment of damage caused by wetlands development to participate.
tion of similar language. But is it also reasonable to presume that the criterion is not meant to be open ended.

The language of this section of the ordinance indicates what matters are relevant:

to minimize the impact of the activity on the ability of [the locality] to provide governmental services and on the rights of any other person and to carry out the public policy of [the Act and of] this ordinance.

It has already been noted that the comparison with the benefits of development with the externalities associated with development, especially ecological damage, has a severe quantification problem. But the language concerning the assessment of the ability of the locality to provide governmental services calls for a much narrower inquiry into the net economic benefits of the proposal as measured by its tax revenue consequence. This assessment will expose those proposals demanding governmental services the cost of which will equal or exceed the tax revenues that the proposals will generate. Virginia common law doctrine is sensitive to protecting the taxpayer from erosion of tax revenues.

The language "on the rights of any other person" is not accompanied by words of limitation (e.g., personal rights, property rights); the statutory definition of person itself is quite broad. In the absence of words of limitation, the presumption is strong that this language is intended to approximate the similarly broad injury-in-fact test recently enunciated by the United States Supreme Court which includes property, economic and tortious injury. The language "to carry out the public policy

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169 For an analysis of the eroding effect of new suburban development on public revenues see Potomac Basin Newsletter, Dec. 29, 1970, at 6-7. It was found that the taxes generated by new suburban development in one instance would fall short of the capital requirements for schools, day care centers, mental health, libraries, parks and hospitals to serve the development by 57%, which deficit must be made up by current taxpayers, since unequal taxation is constitutionally impermissible. VA. CONST. art. X, § 1.


172 The bill proposed by the Wetlands Study Commission contained language which could have been interpreted as a limitation to consideration only of injury to property:

§ 62.1-13.3. The following standards shall apply to the use and development of wetlands: . . .

(3) Development of the wetlands shall not result in irreparable injury in fact to the property of any person;

H.D. 320, Va. Gen. Assem., 1972 Sess. This language was removed by Senate amendment.

of” the Act presumably means that the types of direct injury to be considered must at least include the deleterious consequences of wetlands alteration set out in the findings of the policy section of the Act; so long as these consequences are expressed in terms of specific direct effects on individuals and not just on the general public welfare, they are relevant to the inquiry.

Beyond the terms of the Act and the ordinance, Virginia land use law provides additional indicators of the content of the benefit-detritment calculus. The zoning enabling act, as a general statement of Virginia land use policy, encourages the fostering of amenities, the protection of historic areas, the prevention of overcrowding and overtaxing of public service facilities, the prevention of congestion, and the expansion of the tax base. These statutory standards have a high standing in Virginia land use law. The general zoning actions of localities are, by the nature of Virginia’s zoning structure, legislative and presumably more immune to judicial review. The courts, however, have not hesitated to step in to insure that local government adheres to them strictly, and the Supreme Court of Appeals has permitted zoning actions to cause substantial loss in property value because they advanced harmonious use and the preservation of amenities.

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176Boggs v. Board of Supervisors, 211 Va. 788, 178 S.E.2d 508 (1971), discussed at note 91 and accompanying text supra. But see Southern Ry. v. Richmond, 205 Va. 699, 139 S.E.2d 82 (1964), in which a claim by the railroad of an uncompensated taking by a municipal zoning action was denied. In this case, a parcel of land owned by the railroad, which planned to use the property as an extension of its yards, was zoned residential by the city which had long standing plans to use it as a park. The court noted that the railroad had to show not only that it needed the land as a matter of internal efficiency, but also that the public interest (as manifested by the railroad service it received) demanded that this parcel be used as a yard. Since this showing had not been made, since the railroad’s use would have been completely inharmonious with an adjacent “desirable” residential area, and since the land possessed unusual aesthetic and natural values, the zoning was held to be reasonable. Although the court found that the parcel could not itself be used for a residential area, all use had not been precluded since the railroad could sell the land to the city for a park or it could use the parcel as a private, non-commercial recreational area. It is interesting to note that in both Boggs and Southern Ry., a great deal of emphasis was placed on the compatibility and harmony of the use with the surrounding area. This is an important criterion in Virginia zoning law. See Board of Supervisors v. Carper, 200 Va. 653, 107 S.E.2d 390 (1959); Andrews v. Board of Supervisors, 200 Va. 637, 107 S.E.2d 445 (1959).

178In Andrews v. Board of Supervisors, 200 Va. 637, 107 S.E.2d 445 (1959), the Supreme Court of Appeals ruled that a local zoning ordinance which was so broadly drawn as to permit the issuance of a variance allowing the establishment of a quarry operation in a rural district was impermissibly vague. It would be contrary to the standards of the zoning enabling statute to allow so inharmonious a use.
The benefits accruing from economic development, on the other hand, have been subject to a more restricted impact by the Supreme Court of Appeals. The court has consistently refused to consider the general economic benefit brought by development as an offset to specific property injury caused by the development. This is closely analogous to the concept that the advancing of the general public benefit does not justify an uncompensated taking of private property by governmental action.

Thus, the judicial policy developed with regard to land use is especially solicitous of mitigating the direct injuries suffered by the citizenry as a consequence of economic development. At the same time, Virginia common law accords significantly less weight both to the private benefit accruing to the developer because he has put his property to a very high use and to the general public benefit resulting from this intensive activity.

Taken together, these various legislative and judicial policies can be interpreted to mean that preservation of wetlands is the central goal of the Wetlands Act; that the policy of accommodating necessary develop-

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180 Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459 (1912):

Without considering the question, whether or not special benefits resulting to a land owner from the mining or manufacturing plant, operated in such a manner as to become a nuisance and injure the lands of such owner, can be proved to mitigate the damages resulting from the wrongful act, it is clear, we think, that general benefits, like an increase in the market value of land, which may result or come to all the lands in the vicinity of such mining or manufacturing plant by reason of its establishment and operation, cannot be shown to mitigate the land owner's damages which result from the improper manner in which the plant is operated. These general benefits are mere incidents or accidents arising out of the existence of the mining or manufacturing plant. They give the owner of the plant no claim against the land owner. Their value cannot be treated by the plant owner as the purchase price, in whole or in part, of a right to so use or operate his plant as to injure the land owner, nor as a set-off against damages resulting from a wrongful act.

113 Va. at 11, 73 S.E. at 462. See also G.L. Webster Co. v. Steelman, 172 Va. 342, 1 S.E.2d 305 (1939):

However important may be the successful operation of the business of the defendant to its stockholders, or to the farmers and laborers of the surrounding country, that cannot be the standard by which to measure the rights of others, or a reason to confer upon it the right to destroy or to injure the property of another without just compensation to the injured person.

172 Va. at 367, 1 S.E.2d at 315. The statements in Arminius Chemical Co. and G.L. Webster Co. strongly imply that the Virginia Supreme Court of Appeals has rejected the notion that an increase in total product is per se an increase, if not in social welfare as such, then at least in those values demanding judicial protection. These statements support the conclusion that economic efficiency ought not to be a judicially approved goal. See the discussion at note 165 supra.

ment is meant to be a rather specialized exception, that the goal of accommodating property rights establishes the decision-making process as a weighing of the identifiable effects of the proposed developments on all affected persons as individuals; that the types of effects to be considered are as inclusive as reasonably possible; and that the benefit of the landowner accruing from development is to be rather restrictively weighed in the decision process.

Under this interpretation, then, the first step in the decisional process is to inquire whether the wetland in question is of lesser ecological significance or is already irreversibly altered; if so, then development is perfectly proper. If a wetland of primary ecological significance is involved, then the board must decide whether it is reasonable that the wetland be altered. This decision is accomplished by assessing the public and private benefit and detriment as provided by the ordinance.

Given that the benefits of development are, whatever type of decisional process is adopted, inevitably more easily quantified, can this assessment permit a wetlands board validly to conclude that a development project is unwise and thus deny a permit without involving a taking? To take a simple example, assume that the proposal before the board involves a use that will not demand more in governmental services than the tax revenues that it will yield, as in the case of a marina for recreational power boats. Assume also that the benefit to others is negligible; the only benefit is to the developer through the profit that he will realize. Assume finally that a sufficient number of persons testify so that the board has an adequate factual basis for its decision.

In this example then, the task before the board is to weigh the specifically identifiable injury that will result from the project against the denial to the developer of at least some use (but not necessarily the highest use) of his land.\(^{182}\)

What is the nature of the possible injuries? First, there is the visual aesthetic damage,\(^{183}\) and the noise and activity that would be disharmonious to nearby residents.\(^{184}\) Second, there is the loss of flood water, silt, and pollution absorption capacity suffered by all other landowners abutting that same body of water.\(^{185}\) Third, there is the damage to the shell

\(^{182}\)The comparison is with a moderate use since judicial policy does not recognize a right in a landowner to put his property to the most intensive economic use.

\(^{183}\)Aesthetic and natural values were given important weight in Southern Ry. v. Richmond, 205 Va. 699, 139 S.E.2d 82 (1964).


fishing and finfishing values which would be suffered by the other landowners abutting the body of water on which the threatened wetlands lie, as well as loss to those who use both estuarine and deepwater recreational or commercial fisheries supported by the threatened wetlands in their role as a breeding, nursery or feeding area. Fourth, there is the physical damage to the land of others abutting that same body of water (e.g., erosion, siltation) caused by the change in flow patterns because the wetlands have been disrupted. Fifth, there is the damage to the navigable waters and their beds which belong to the state; this includes oil and sewage pollution from the marina and its boats, siltation, and noise pollution, all of which would damage the natural values specifically protected by the Virginia Constitution.\textsuperscript{186}

Although each increment of damage may be small, the total summed over all the persons that can be directly affected may be quite significant. If the board finds that this foreseeable injury is qualitatively significant in comparison to the loss suffered by the developer if he is not allowed to put his land to some use, then it it perfectly proper for the wetlands board to deny his permit.\textsuperscript{187}

An important question is how the various matters of benefit and detriment are to be calculated. The benefit of the development is part of the showing that the applicant must make in his application. If he does not establish a prima facie showing of public benefit, or at least no public

\textsuperscript{186}VA. CONST. art. XI, § 1.

\textsuperscript{187}The term "significant" is not mere tautology. While it does not mean that a mathematically precise assessment is required of the wetlands board, a mathematical example will illustrate the point. If for instance the wetland is "worth" $100,000, then assume also that the capital improvements needed for the commercial use posited are of the same order of magnitude, for a total investment of $200,000. The developer instead could have invested the $200,000 in risk free government bonds at 6% per annum; but he would expect a higher return for assuming the business risk of development, says 12% per annum. The difference, 6%, is a measure of the benefit to the developer of being permitted to develop his wetland, or some $12,000 per annum. Assume also that injury of the types noted will be suffered by some 500 people in the area of the wetland. It is impossible to quantify this injury in a market accepted way, but it would not be unreasonable to place a nominal value, say $1000, on the natural values in the state lands and waters that would be destroyed. If this $1000 is "subtracted" from the developer's "benefit," comparing the $11,000 that is left with the 500 persons affected yields $22 per annum per person. If the board concludes that the loss suffered by these persons exceeds, in some qualitative way, $22 per annum, then the project is unwise in terms of the decisional standard of the Act, and the permit ought to be denied. This assessment is the same as the "contingency calculation" concept set forth in E. Mishan, Welfare Economics: An Assessment 78-81 (1969). In Sierra Club v. Morton, the United States Supreme Court noted the trend "towards discarding the notion that an injury that is widely shared is ipso facto not an injury sufficient to provide the basis for judicial review," 405 U.S. 727 (1972). Another way of looking at this is to say that the permit ought to be denied if the developer could not give monetary compensation to all those found to suffer damage from the development and still have enough net potential profit to induce him to develop.
detriment, attending his wetland development, his application is presum-
ably insufficient. As a practical matter, the applicant is the most likely of
the participants to have the incentive and the means to provide testimony
to back up his proposal.

Although testimony from state and federal scientific agencies is both
contemplated and encouraged by the Act, these agencies will not be able
practically to participate in more than a small portion of the local hear-
ings. Opponents of wetlands development will by their nature tend to be
less organized and less able to afford expert testimony.

On the other hand, the broad range of effects which the process of
the Act contemplates as relevant to the decision-making process will tend
to be impressionistic and unquantifiable. It is certain that the Act con-
templates the weighing of testimony which on one side of the question
will tend to be precise and on the other side to be imprecise. Presumably
the legislature did not intend for the testimony on one side of the question
to be considered as having a built-in defectiveness.

If the testimony itself will be qualitative in nature, to require precision
of the board decisions would be an overwhelming burden even for a body
with a high level of expertise and extensive staff resources. The general
pattern set up by the Act provides substantial indications of a legislative
intent to the contrary. First, the primary decision is made by a local body
which would gain expertise only in time, but which has no provision for
staff resources. Second, participation in the process is open to as broad
a range as possible of persons whose testimony would more likely be a
qualitative assessment of the impact they foresee. Third, the process calls
for prompt decisions, which would preclude the exhaustive factual in-
quires associated with the administrative process. Fourth the standard
of judicial review of local board decisions is basically the "arbitrary and
capricious" standard which gives a certain degree of latitude to admin-
istrative decisions. Most importantly, it has not yet been possible to
develop techniques to measure environmental damage as precisely as the
market measures the products of development. The Act calls for a com-
parison of the two; it is unlikely that the Assembly intended, in light of
the policy of the Act, for one side of the question to labor under a built-

188 See Long, Administrative Proceedings: Their Time and Cost Can Be Cut Down, 49

189 See discussion at notes 192-200 and accompanying text infra.
in disadvantage. These factors indicate that as long as the decision of the board is a reasonable and fair assessment of the relevant matters presented in the record, quantitative accuracy is not a requirement.

e. Sections 10 to 15—Review and Appeal

These sections provide for the review of and appeal from the decisions of the local boards. Under sections 10 and 11, the VMRC may review any decision, on its own initiative, whenever it believes that a board decision is not in consonance with the Act. This, along with the uniform zoning ordinance, is apparently intended to insure uniformity of regulation among the many Tideland Area localities. The applicant and the locality may both appeal to the VMRC. And any twenty-five freeholders in the locality may appeal to VMRC on a statement that in specific instances the board decision does not follow the policies, standards or guidelines of the Act; this is another factor which will encourage the process to function at the local level since unwise decisions, either pro-development or pro-preservation, will be appealed.

Section 12 establishes the importance of the public hearing record; it requires that the review by VMRC be conducted on the record and such other evidence that the VMRC deems in the public interest to be required. The VMRC may make up for an inadequate or missing record in two ways: it may remand or it may reconduct the entire proceeding. The former would be irksome to the local board, and the latter would be a politically embarrassing loss of local initiative; thus, it is likely that the records sent up by the local boards will tend to be adequate.

Section 13 sets out two basic standards for review by the VMRC. The VMRC shall modify or reverse the decision below, first, if the decision will not adequately achieve the ends of the Act, and second, if it is ultra vires, unconstitutional, arbitrary or capricious. It is significant that these standards are stated as imperative rather than as discretionary; this provides a scope of review wider than that for most administrative decisions. Section 15 of the Act provides for appeal of VMRC decisions.

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19 Presumably, without judicial guidance to the contrary, "the ends of the Act" means regulation that will not involve a State v. Johnson taking rather than absolute preservation of wetlands.
19 In the General Administrative Agencies Act, permissive language is used: (g) The court may affirm the decision of the agency or remand the case for further proceedings; or it may reverse or modify the decision

Id. (emphasis added).

19 See Howard, supra note 42, at 216-218.
to the circuit courts in the same manner as appeals of local board decisions to the VMRC. Discretionary review power is not given to the courts as it is to the VMRC. The standards of judicial review are the same as for VMRC review, with the same imperative language.

The land use decisions of localities have always been subject to stringent judicial review. Although most local zoning actions are legislative in nature rather than administrative, the Virginia courts have shown no hesitation to overrule these legislative zoning actions. The Supreme Court of Appeals has on many occasions strictly measured zoning actions against the standards set out in the zoning enabling act. The court has consistently ruled that the actions of localities must be guided by the public interest, and the public interest is confined to the statement of purpose in the General Assembly grant of authority to the localities to take the action under challenge.

An even broader scope of inquiry has been judicially fashioned when a discretionary rather than a legislative action of local government is being challenged. Unlike a case involving a challenge to a legislative action of a locality, the court will consider a broad range of issues,

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109 In 1883, the Virginia Supreme Court of Appeals permitted a challenge, by citizens, of an action of a locality on the basis of the injurious effects of that action on those citizens as taxpayers. The court stated:

In this country the right of property-holders or taxable inhabitants to resort to equity to restrain municipal corporations and their officers from transcending their lawful powers or violating their legal duties in any way which will injuriously affect the tax-payers, such as making an unauthorized appropriation of the corporate funds, or an illegal disposition of the corporate property, has been affirmed or recognized in numerous cases in many of the states. It is the prevailing doctrine on the subject. Roper v. McWhorter, 77 Va. 214, 217 (1883) (emphasis in the original) quoting from 2 Dill., Municipal Corporations §§ 908, 914 (3d ed.). The usual application of this doctrine has been in cases involving the illegal disposition of corporate funds. For instance, taxpayers may maintain suit against the locality in which they reside in order to prevent the illegal disbursement of public funds. Gordon v. Board of Supervisors, 207 Va. 827, 153 S.E.2d 270 (1967); Vaughan v. Galax, 173 Va. 335, 4 S.E.2d 386 (1939); Sauer v. Monroe, 171 Va. 421, 199 S.E. 487 (1938). But the doctrine itself is broadly stated and seems to encompass almost any financial effects of government actions. What is significant about this doctrine is that the court does not limit itself, in judging the wisdom of the challenged action, to the public interest criteria contained in the legislative grant of authority to the locality.

200 If there is impropriety involved in the legislative actions of a locality, the citizen's
including allegations of impropriety and collusion.

With this background of judicial willingness to inquire into not only the administrative but also the legislative actions of localities, the imperative language of the review sections of the Act provides a broadly based tool for both the VMRC and the Virginia courts to insure that the intent of the legislature is met in the administrative decisions of the local wetlands boards and that the aggregate decisions of the boards will, despite the fact that as many as forty-seven boards could be created, be uniform throughout the Virginia Tidelands Area.

IV. Conclusions

The Virginia Wetlands Act is the unique product of the considerations bearing on its adoption. The law of Virginia regarding land use and natural resources in general and wetlands regulation in particular, the political preference both within the legislature and among the general body of citizens, and the economic pressures for development as man's sheer numbers and technological capabilities continue to increase all had their effect.

On paper, at least, the Act successfully responds to these considerations. It accommodates the political pressure for the decentralized exercise of regulatory authority, and the most plausible interpretation of its provisions reveals suitable concern for the protection of private property rights. It opens the door to a more responsive judicial interpretation of the effects of governmental regulation of wetlands use. And, in responding to these considerations, it creates a unique decision-making structure which potentially will yield decisions more consonant with traditional judicial doctrines than structures based on a central state authority.

To a significant extent, the actual impact of the local wetlands boards will be determined by a factor outside of the control either of the boards or of the legislature which authorized their creation. Natural resource law has been changed, in potentially a very far-reaching way, by the new Virginia Constitution. But is it so new that judicial doctrine has yet to be fashioned which will be the working out of that potential.

Several significant and highly plausible interpretations of constitutional doctrine have been presented. If, for instance, the courts determine that Article XI of the new Constitution establishes an environmental trust per se, then the policy of the Act becomes absolute; no wetland of primarily ecological significance may be altered, and this flat prohibition will not involve a constitutionally defective interference with private property rights in any way. If the courts reaffirm the historical ambit of the trust doctrine, then this flat prohibition will extend to those wetlands between remedy is at the polls. Blankenship v. Richmond, 188 Va. 97, 49 S.E.2d 321 (1948); Roanoke v. Fisher, 137 Va. 75, 119 S.E. 259 (1923).
mean high water and mean low water; the wetlands boards will be concerned only with those (still significantly large) wetlands areas between mean high water and the point 1.5 times the tidal range. If potential state initiative to protect state-owned lands below mean low water from damage through private wetland alteration under a nuisance theory is judicially approved, then the wetlands boards will be the venue for the Attorney General to impose an effective prohibition on the alteration of wetlands of primary ecological significance. Finally, the courts may think through anew the assumptions underlying traditional applications of constitutional taking law and, by finding that wetlands alteration is not a socially approved activity, cast the role of the local boards as the advocate of the general public interest in wetlands protection rather than as a referee among the multifarious matters raised in support or opposition to specific wetlands projects.

The comprehensive process of the Wetlands Act can thus be seen as a hedge against the possibility, however likely or unlikely, that the Virginia judiciary will reject all of the many interpretations of constitutional doctrine open to it.

Until the courts fashion the doctrines under which the Wetlands Act will function, the practical success of the Act will depend on a number of factors. The most important of these is the intense political and economic pressure for development. Broadly based and objective decisions will be possible only if private citizens and the VMRC participate in their assigned roles to counterbalance the natural initiative of the developer. The citizens must develop anew a desire to participate in the political process; the incentive is there—truly important decisions, decided in most states in the state capital, will be made at the county courthouse. In one sense, if the citizens do not participate, then they will deserve the decisions which will ensue.201

The role of the VMRC is wide; both before and after the fact, through its authority to issue guidelines and to exercise discretionary review, it can influence the substance of the local decisions, not only to see that they are uniform among the many local boards, but also to insure that the intent of the legislature is faithfully followed. The discretion of the VMRC is broad, and political pressures will have much to say about its performance; but the VMRC is, at least to some extent, confined on both sides since both proponents and opponents may appeal both board decisions and VMRC decisions. Perhaps the widest discretion exercised by the VMRC lies in two areas. First, because it has the responsibility to process applications concerning government owned wetlands, its deci-

201 The citizens apparently plan to participate. Within one month of the passage of the Wetlands Act, but more than two months in advance of its effective date, the Conservation Council of Virginia was planning a system to monitor the actions of the local wetlands boards. Richmond Times-Dispatch, Apr. 12, 1972, at B5, col. 5.
sions on these applications will set strong precedent for the local boards. Second, and of crucial importance, the VMRC must create the incentive for localities to adopt wetlands zoning by its willingness to actively pursue applications made from localities which have not yet adopted wetlands zoning. If the localities do nothing, the unique local focus of the Act will be lost.

The local boards will be successful in wetlands protection to the extent that they are able to handle the important scientific, technological and economic questions presented to them and to keep the focus of inquiry on specific rather than general factors. If they achieve this, then their decisions are not likely to risk even a narrow reading of constitutional considerations by the Virginia courts.

Of course, successfully avoiding judicial findings of uncompensated takings does not equal successfully protecting the Virginia wetlands. Potentially, there is no question that fewer applications will be denied under the focus of the Virginia Wetlands Act than would be denied under a standard based on the general public welfare. And there is no question that the former will result in fewer court reversals than the latter. In a sense, the Virginia General Assembly has gambled that the total protection that can be achieved is greater if the focus of the decision is local. That a gamble is involved is testified to by the anguished cries of the conservationists predicting gloomy results for the Wetlands Act.11

In sum, the Virginia Wetlands Act creates a structure quite close to the Jeffersonian ideal of full participation by an enlightened citizenry. Its practical success is yet to be demonstrated, but, by its innovative structure, it ought not to fail for the same reasons that other wetlands regulatory schemes have failed.

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202See, e.g., the statement of William R. Walker of the Virginia Water Resources Research Center, Blacksburg, Va.: “This is politics at its worst.” Richmond Times-Dispatch, Apr. 18, 1972, at B1, col. 8.