Bulletin 9:
WATER RESOURCES LAWS IN VIRGINIA

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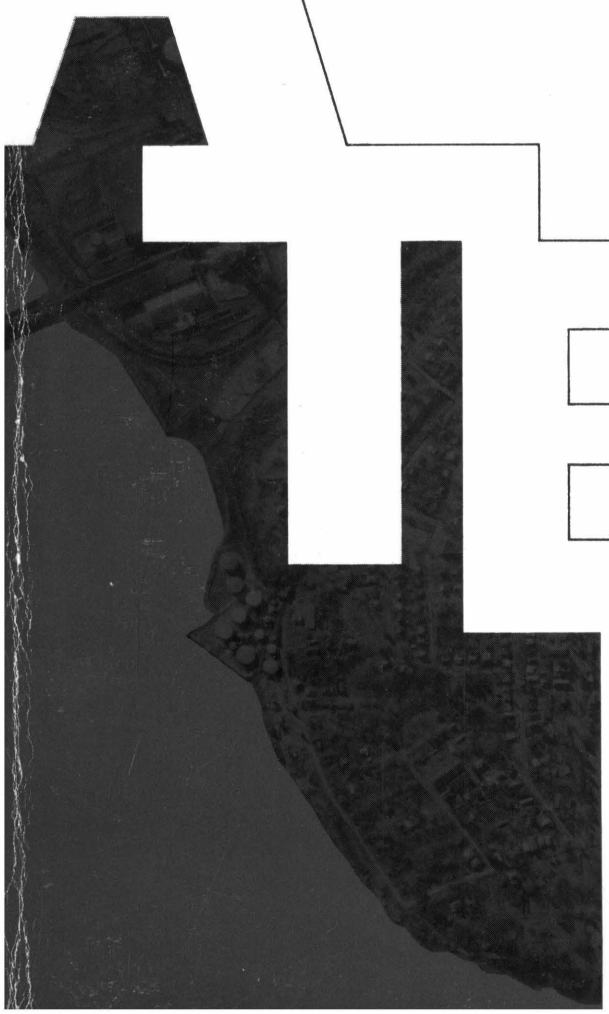

WATER RESOURCES LAWS

FOR VIRGINIA

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PREFACE

The advances in water technology have been very substantial in the last 50 years, and in recent years the problems of water have been given increased attention by economists. Much of this new development can be lost unless it is fitted into a satisfactory legal and institutional framework. In order to put Virginia's water problems into perspective, it seemed desirable that the existing laws related to water resources be determined. Once the legal base has been established, adaptations and modifications which are likely to facilitate the accomplishment of the various goals in water resource management can be instituted.

Judge Alvin T. Embry published in 1931 the first comprehensive look at Virginia's water laws in a book entitled Waters of the State. This work traced the various water-related land grants from England to the Virginia colony. It also gives consideration to the early land legislation of the State after independence and the effects of this legislation on water rights. Much of the discussion concerns the ownership of the beds of navigable and nonnavigable streams and the rights of riparian owners in these beds. The latter part of the book is concerned with the Virginia Water Power Act and the Federal Water Power Act.

Since the publication of Judge Embry's work, the Virginia Advisory Legislative Council on several occasions has studied the water problems of the Commonwealth. With the exception of certain legislation resulting from these studies, such as that enacted in 1966 concerning the authority of the Board of Conservation and Economic Development in the water resources field, most of the laws passed in the intervening years have been isolated pieces of legislation introduced to correct certain individual problems with very little thought given as to the precedents being established. Therefore, it seemed advisable to undertake a comprehensive look at the existing legal framework related to water resources as a basis for determining what future comprehensive adjustments might be made to facilitate the resolution of immediate problem areas, those in the near future, and those on the horizon which are taking form as projected from the present state of technological, economic, and social development.

The preparation of this compilation of the law concerning water rights in the Commonwealth of Virginia involved a search of the State Constitution, the Code of Virginia, the reports of the Virginia Supreme Court of Appeals, and other relevant literature. Although there may be omissions concerning certain aspects of the law, an attempt has been made to construct a comprehensive report which summarizes all the important features of the law.

Emphasis is placed on those laws which have direct application to water rights, but others which affect water only indirectly also are discussed briefly.

Both common and statutory law are given consideration, and the relationship between the two is explored for the various aspects of water rights. The statutes applicable to water are discussed in the appropriate sections of the text and some of the passages stating their primary intents are quoted therein. The major statutes are given further consideration in the appendices where they are outlined briefly and additional passages are quoted.

Water rights as they now exist are presented in five separate sections. The first four sections of the report following the introduction deal with water in its natural state. Separate bodies of law are presented for natural watercourses, percolating ground water, and diffused surface water, since these types of water are given somewhat independent legal treatment. Underground watercourses, tidal waters, lakes, and springs are all considered in the same section because the law applicable to each is basically similar to one or a combination of the three major doctrines presented separately. The law applicable to water subjected to various conditions of artificial confinement is presented in a separate section because the rights in such water vary from those pertaining to water in its natural state.

The last section (before the appendices) presents a list of topics which should be given serious consideration in making changes in the law. These recommendations are not to be construed as all-inclusive but represent areas for re-evaluation if more efficient utilization of the water resources of the State is to be affected.

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INTRODUCTION

Virginia water law has its origins in the colonial and state grants of land to individuals, the state Constitution, the decisions of the courts of the State, and in various statutory enactments.

The Constitution of Virginia contains only one positive statement regarding the water law of the State. Section 175 reads as follows:

> *The natural oyster beds, rocks and shoals, in the waters of this State shall not be leased, rented or sold, but shall be held in trust for the benefit of the people of this State, subject to such regulations and restrictions as the General Assembly may prescribe, but the General Assembly may, from time to time, define and determine such natural beds, rocks or shoals by survey or otherwise.*

There is, however, one other provision in the Constitution concerning the navigable waters of the State. This provision is contained in section 63:

> *The General Assembly shall not enact any local, special or private law in the following cases:*
>
> . . . .
>
> *15. Declaring streams navigable, or authorizing the construction of booms or dams therin, or the removal of obstructions therefrom.*

The schedule to the Virginia Constitution makes the following provision in relation to the laws which are applicable in the State:

> *The common law and the statute laws in force at the time this Constitution goes into effect, so far as not repugnant thereto or repealed thereby, shall remain in force until they expire by their limitation, or are altered or repealed by the General Assembly.*

The common and statutory laws that exist act jointly to define rights in water. Although a common law doctrine of water rights has long been the primary legal basis for the use of water and is still important in defining and protecting individual rights, the increased demands placed on the water resources of the State in recent years has resulted in the passage of a considerable amount of legislation dealing with water rights.

A large part of this legislation is made up of statutes designed to regulate certain individual aspects of water use. A number of these statutes authorize special agencies to exercise control over water use for limited

purposes. These agencies include the State Water Control Board, the State Department of Health, the State Corporation Commission, the Virginia Ports Authority, the Commission of Fisheries, the Commission of Game and Inland Fisheries, the Potomac River Basis Commission of Virginia, and the Ohio River Valley Water Sanitation Commission of Virginia. Since the jurisdiction of these agencies is limited to particular aspects of water use, each will be discussed later when the individual water uses are considered separately. For ease of reference, a summary of the activities of these agencies and other organizations with authority in the water resources field is included in Appendix I.

Recognition has also been made of the need for state level planning and guidance of the over-all use and development of the state's water resources. The following statement of state policy concerning water indicates this need:

> *(a) Such waters*[1] *are a natural resource which should be regulated by the State.*
>
> *(b) The regulation, control, development and use of waters for all purposes beneficial*[2] *to the public are within the Jurisdiction of the State which in the exercise of its police powers may establish measures to effectuate the proper and comprehensive utilization and protection of such waters.*
>
> *(c) The changing wants and needs of the people of the State may require the water resources of the State to be put to uses beneficial to the public to the extent of which they are reasonably capable; the waste or unreasonable use or unreasonable method of use of water should be prevented; and the conservation of such water is to be exercised with a view to the welfare of the people of the State and their interest in the reasonable and beneficial use thereof.*
>
> *(d) The public welfare and interest of the people of the State requires the proper development, wise use, conservation and protection of water resources together with protection of land resources, as affected thereby.*
>
> *(e) The right to the use of water or to the flow of water in or from any natural stream, lake or other watercourse in this State is and shall be limited to such water as may reasonably be required*

[1] "'Water' includes all waters, on the surface and under the ground wholly or partially within or bordering the State or within its jurisdiction and which affect the public welfare." (Va. Code Ann., section 62.1-10(a) (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-9.1(a) (Supp. 1966))).

[2] "'Beneficial use' means domestic, agricultural, recreational and commercial and industrial uses." (Va. Code Ann., section 62.1-10(b) (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-9.1(a) (Supp. 1966))).

for the beneficial use of the public to be served; such right shall not extend to the waste or unreasonable use or unreasonable method of use of such water.[3]

The legislation which provides for this state control over the development of its waters places the responsibility for the necessary planning with the Department of Conservation and Economic Development and its Division of Water Resources. As planner for the development of Virginia's water resources, the Board of Conservation and Economic Development is responsible for the formulation and revision when necessary of a coordinated policy for the use and control of all the state's water resources. The law requires that the Board take the following principles into consideration in formulating this policy:

(1) Existing water rights are to be protected and preserved subject to the principle that all of the State waters belong to the public for use by the people for beneficial purposes without waste;

(2) Adequate and safe supplies should be preserved and protected for human consumption, while conserving maximum supplies for other beneficial uses. When proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption purposes over all other uses;

(3) It is in the public interest that integration and coordination of uses of water and augmentation of existing supplies for all beneficial purposes be achieved for the maximum economic development thereof for the benefit of the State as a whole;

(4) In considering the benefits to be derived from drainage, consideration shall also be given to possible harmful effects upon ground water supplies and protection of wildlife;

(5) The maintenance of stream flows sufficient to support aquatic life and to minimize pollution shall be fostered and encouraged;

(6) Watershed development policies shall be favored, whenever possible, for the preservation of balanced multiple uses, and project construction and planning with those ends in view shall be encouraged;

(7) Due regard shall be given in the planning and development of water recreation facilities to safegard against pollution.[4]

[3]Va. Code Ann., section 62.1-11(H 277, April 5, 1968, becomes effective Oct. 1, 1968, now Code, section 62-9.2 (Supp. 1966)).

[4]Va. Code Ann., section 10-17.1 (Supp. 1966).

Another important duty placed upon the Board is that it recommend a plan to resolve any conflict as to actual or proposed water use or other practice directly affecting water use that involves a potential or existing conflict between water use functions under the jurisdiction of different state agencies. The Board can make such a recommendation upon application of any state agency or political subdivision, or upon its own motion.[5]

The law requires that the Board devise plans and programs for the development of the water resources of the State in such a manner that the maximum beneficial use and control of such waters are secured. These plans may include comprehensive water and related land resource plans for each major river basin and for other areas not within these major river basins. The Board is not authorized to take action to implement such plans or programs but is required to recommend to the General Assembly any additional legislation that it deems necessary for the accomplishment of such plans or programs.[6]

It is the duty of the Board to act as a technical advisor on water resources. For the purpose of effecting its plans or otherwise securing the maximum beneficial use and control of the State's water, it may make available technical advice and information to any agency or political subdivision of Virginia; any committee, association, or person interested in the conservation or use of water resources; any interstate agency; or any agency of the federal government.[7] In addition, the Board is responsible for advising the governor and the General Assembly as to all matters relating to the State's water resources policy.[8]

The Board is authorized to speak and act for the State in all relations with the federal government, the government of all other states, or with interstate agencies or authorities directly concerning conservation of use of the State's water resources.[9] In acting for the State or in carrying out any of its functions as provided by law, the Board may cooperate fully with and receive cooperation from the other agencies and political subdivisions of the State.[10]

The legislation conferring the foregoing powers and duties on the Board of Conservation and Economic Development specifically excludes the Soil

[5] Ibid., section 10-17.2

[6] Ibid., section 10-17.3

[7] Ibid , section 10-17.4

[8] Ibid., section 10-17.5

[9] Ibid., section 10-17.6

[10] Ibid., section 10-17.7

Conservation Districts Law [11] and the State Water Control Law[12] from being affected. It also states that it shall not be construed as altering, or as authorizing any alteration of, any existing riparian rights or other vested rights in water or water use.[13]

This policy of protecting all riparian and other vested water rights from alteration is upheld by all of Virginia's major water legislation. Both the State Water Control Law[14] and the act concerning water power development[15] contain similar provisions for protecting private rights. Thus, the traditional common law method of determining rights by litigation is still an important part of Virginia's system of water rights adjudication.

The relatively recent realization that Virginia's water resources may not remain adequate to meet all needs indefinitely without proper planning and control has caused a considerable increase in the interest in the State's water law. Much of the authority that the Board of Conservation and Economic Development now possesses concerning water resources is the result of legislation enacted in 1966. This legislation was the result of study and recommendation by the Virginia Advisory Legislative Council. Several of the other provisions in Virginia's present water law are the result of similar studies conducted in the past 20 years. A resolution introduced into the House in 1966 would have directed the Virginia Advisory Legislative Council to make a study on all the laws in Virginia regarding water resources and riparian rights, but no action was taken on the resolution at the time. However, further studies are certain to be made, and it is likely that Virginia's water law will undergo more changes as the demand on the State's water resources increases.

This tendency toward change in Virginia's system of water rights as yet has not resulted in major alteration of its basic structure. Most rights are still defined by a body of law which was developed with little apparent regard for the existence of the hydrologic cycle and the relationships of the water in all the phases of this cycle. Thus, the law does not exist as a single body of legal principles which regulate the various uses of water irrespective of its source, but rather is made up of several separate bodies of law, each of which applies primarily to a particular source of water. Certain

[11] Ibid., sections 21-1 to -112.20 (1960), as amended (Supp. 1966).

[12] Ibid., sections 62.1-14 to -44.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-10 to -42 (1950), as amended (Supp. 1966).

[13] Va. Code Ann., section 10-17.9 (Supp. 1966).

[14] Ibid., sections 62.1-36 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-32 (1950))).

[15] Ibid., section 62.1-82 (now section 62-70).

aspects of water use are governed by the same legal principles regardless of the source of the water, but many aspects receive treatment which varies according to the source of the water.

There are three legal classifications of water for which major doctrines of law have been developed. These are natural surface watercourses, percolating ground water, and diffused surface water. There are also other sources of water about which some special legal principles have been developed. These include underground watercourses, lakes, tidal waters, and springs. In addition, there exists a considerable body of law which deals with water that has been transferred from its natural state to some type of artifical confinement.

NATURAL SURFACE WATERCOURSES

There is no universal definition by which a "natural surface watercourse" may be distinguished from the other types of waters. The following statutory definition has been set forth:

> *'Watercourse' means a natural channel having a well defined bed and banks and in which water flows when it normally does flow.*[1]

The Virginia Supreme Court of Appeals had previously adopted a definition set forth by the Florida court when it quoted with approval the following passage:

> *A stream, or watercourse, consists of bed, banks and water, and to maintain the right to a watercourse, it must be made to appear that the water necessarily flows in a certain direction, and by regular channel, with banks or sides, and having a substantial existence, but it need not be shown that the water flows continually, as it may be dry at times.*[2]

The situation has not arisen in Virginia that would require consideration by the court as to the importance of each of these characteristic features. It is interesting to note that the courts in many jurisdictions having a similar definition have not required a strict compliance with all the features. In these jurisdictions, the definition is given considerable flexibility, and watercourses have been held to legally exist without the normal presence of certain of the requirements.[3]

The term "watercourse," as used in this report, includes both those that are navigable and those that are non-navigable, though there are certain differences in the rights which attach to these two types of watercourses. A single body of law applicable to watercourses in general will be presented with the differences enumerated.

[1] Va. Code Ann., section 62.1-104(4) (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-94.1(4) (Supp. 1966)).

[2] Heninger v. McGinnis, 131 Va. 70, 76, 108 S.E. 671 (1921), quoting from Tampa Water Works v. Cline, 37 Fla. 586, 20 So. 780.

[3] 93 C.J.S., Waters, sec. 4(a) (1956, Supp. 1968).

Riparian Doctrine

The collection of principles which govern the use of Virginia's watercourses is a form of the riparian doctrine (a common law system of water rights based on the ownership of land traversed or bordered by a natural watercourse) and specific statutory modifications thereof.

The Virginia court has adopted the general riparian doctrine as set forth by Minor in his treatise on Real Property.

> *The well settled general rule on this point is that each riparian proprietor has ex jure naturae an equal right to the reasonable use of the water running in a natural course through or by his land for every useful purpose to which it can be applied. whether domestic, agricultural or manufacturing, providing it continues to run, after such use, as it is wont to do, without material diminution or alteration and without pollution; but he cannot diminish its quantity materially or exhaust it (except perhaps for domestic purposes and in the watering of cattle) to the prejudice of the lower proprietors, unless he has acquired a right to do so by grant, prescription or license.*[4]

This general statement supports the right of the riparian proprietor to make a reasonable use of the water in a natural watercourse while it passes his property, but it also appears to support the "natural flow"[5] theory which existed in the old English Common Law. Obviously conflicts between these two concepts were inevitable and the court has had to reach a compromise.

The reasonable use doctrine has usually been upheld in Virginia, and it acts as an exception on the natural flow theory. The following passages are

[4]Hite v. Town of Luray, 175 Va. 218, 225, 8 S.E. 2d 369 (1940), quoting from 1 Minor, Real Property sec. 55 (2d ed, 1928).

[5]Under the natural flow concept, each riparian proprietor is regarded as having the right that the stream continue to flow over and through his land in its natural condition, diminished only by the domestic uses of the other riparian owners. Non-domestic uses of the water can be made as long as there is no material diminution of the flow or pollution of the water. What constitutes a material diminution in quantity or quality is variable, but in some jurisdictions, any perceptible or noticeable effect on the stream may be regarded as material. Therefore, the rights of water use can be extremely limited under this theory of water rights. (Stanley V. Kinxon, "What Can a Riparian Proprietor Do?" Minnesota Law Review, Vol XXI, No. 5 (April 1937), pp. 517-522.)

examples of the court's attitude toward the riparian's right to make use of the water in a natural watercourse.

> *A proprietor may make any reasonable use of the water of the stream in connection with this riparian estate and for lawful purposes within the watershed, provided he leaves the current diminished by no more than is reasonable, having regard for the like right to enjoy the common property of other riparian owners.*[6]

> *The right of any riparian owner to the use of the water of a running stream is a right inherent in the land as a right publici juris. And the right to the use of the water as a general rule is limited to each use as is not inconsistent with a like reasonable use by the other riparian owners on the same stream above and below. . . .*[7]

There are several features of the riparian doctrine to be clarified before discussing the rights concerning water use under the doctrine. These features include the nature of the riparian right, extent of riparian land, and the definition of "reasonable use."

The Virginia court considers riparian rights to be valuable and vested,[8] and as such they cannot be taken without due process of law. Riparian rights have been described as follows:

> *These respective riparian rights of user are in no sense easements, but are qualified property rights incident to the ownership of the soil through or by which the waters of the stream flow.*[9]

Since riparian rights attach only to lands through which or by which a stream flows, the extent of "riparian land" needs to be clarified. One limitation placed upon the extent of riparian land is set out in the following passage:

[6] Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 467, 130 S.E. 408 (1925).

[7] Mumpower v. City of Bristol, 90 Va. 151, 153, 17 S.E. 853 (1893).

[8] Hite v. Town of Luray, 175 Va. 218, 226, 8 S.E. 2d 369 (1940).

[9] Ibid. at 226.

> *According to the weight of authority, riparian land is, in any event, limited in its extent by the watershed of the stream; in other words, lands beyond the watershed cannot be regarded as riparian, though part of a single tract, held in common ownership, which borders upon the stream.*[10]

There may be, however, circumstances under which the land in question is within the same watershed as the stream and is attached to land abutting on a stream, but will not be considered riparian. Such was the case in Gordonsville v. Zinn.[11] Plaintiff city owned a one acre lot bordering on a stream. Defendant owned riparian property both above and below plaintiff's lot, both connected by a strip of land, and she pumped water from the upper section of property to the lower section of her property. The court held that although the lower section of property was riparian to the stream, it was not riparian to the part of the stream abutted by defendant's upper property. Therefore, it would appear that the court has limited "riparian property" to that which lies directly behind that abutting on the stream.

There are other problems relating to the extent of riparian land which have not been decided by the Virginia court. One of these concerns the use of water from a main stream on land which is within the watershed of a tributary to the main stream. It has been held in other jurisdictions that the drainage area of two streams which unite are separate watersheds for the purposes of determining whether lands abutting thereon above the junction are riparian.[12] Therefore, land within the watershed of the tributary is not within the watershed of the main stream, and it can be riparian only if it abutts on the tributary. A single tract of land adjoining both streams is all riparian, but only that portion of the land in the watershed of each stream is riparian to that respective stream. If an estate bordering the main stream extends into the watershed of the tributary, but does not touch upon it, that portion of the land within the watershed of the tributary is non-riparian property. Another limitation on the extent of riparian land concerns the chain of title leading to the ownership of land at any given time. This concept has neither been approved nor rejected by the Virginia court although it has been quoted in at least one opinion. The following sets forth this restriction:

[10]Town of Gordonsville v. Zinn, 129 Va. 542, 556, 106 S.E. 508 (1921).

[11]Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

[12]Rancho Santa Margarita v. Vail, 11 Cal. 2d 501, 81 P. 2d 533 (1938).

> *If the owner of a tract abutting on a stream conveys to another part of the land not contiguous to the stream, he thereby cuts off the part so conveyed from all participation in the use of the stream and from riparian rights therein, unless the conveyance declares the contrary. Land thus conveyed and severed from the stream can never regain the riparian right, although it may thereafter be reconveyed to the person who owns the part abutting on the stream so that the two tracts are again held in one ownership.*[13]

After noting the existence of this rule, the court stated that consideration of the question involved was unnecessary at that particular time.[14]

The primary qualification placed on the use of water from watercourses under the riparian doctrine is that the use be reasonable; therefore, a concept of "reasonable use" is important. No precise definition may be given, but some general principles have been established. The following gives some of the considerations upon which the determination of reasonableness is based and indicates the flexibility of the requirement:

> *The reasonableness of the use depends upon the nature and size of the stream, the business or purposes to which it is made subservient, and on the ever-varying circumstances of each particular case. Each case must, therefore, stand upon its own facts, and can be a guide in other cases only as it may illustrate the application of general principles.*[15]

Thus, reasonableness is a relative matter, and it is conceivable that a use of water under one set of circumstances might be held to be reasonable and under another, unreasonable.

One general principle of reasonableness is that the use of water by one riparian owner must not be inconsistent with the uses of the other riparian owners, who have the same right.

[13]Town of Gordonsville v. Zinn, 129 Va. 542, 555, 106 S.E. 508, 14 A.L.R. 318 (1921), quoting from Anaheim Union Water Co. v. Fuller, 150 Cal. 327, 88 Pac, 978, 11 L.R.A. (N.S.) 1062.

[14]Town of Gordonsville v. Zinn, 129 Va. 542, 556, 106 S.E. 508, 14 A.L.R. 318 (1921).

[15]Davis v. Town of Harrisonburg, 116 Va. 864, 869, 83 S.E. 401 (1914), quoting from 2 Cooley, Torts 1209.

[T]he general principle of law is, that all riparian proprietors upon the same stream have the same right to the use and enjoyment of its waters the right of no one is absolute but is qualified by the right of the others to have the stream substantially preserved in its size, flow, and purity. This is the common right of all. The use of one must not, therefore, be inconsistent with the rights of others. . . .[16]

The necessity or importance of a use (in a public sense) is not a material element in the determination of the reasonableness of the use. The basis for this principle is set forth below:

The necessities of one man's business cannot be the standard. . .by which to measure another's rights in a thing which belongs to both. . . .[17]

It would be a source of regret if, in the administration of justice by the establishment and enforcement of sound principles, the prosperity of our people should be hindered or checked, but it would be not only a source of regret, but of reproach, if material prosperity were stimulated and encouraged by a refusal to give to every citizen a remedy for wrongs he may sustain, even though inflicted by forces which constitute factors in our material development and growth. Courts have no policies, and cannot permit consequences to influence their judgments further than to serve as warnings and incentives to thorough investigation and careful consideration of the causes submitted to them. . . .[18]

The issue of damage can be an important factor in determining the reasonableness of a water use. The general rule is that to be unreasonable a water use must cause or threaten damages.[19] Substantial actual

[16] Arminius Chemical Co. v. Landrum, 113 Va.7, 13, 73 S.E. 459, 38 L.R.A. (1912).

[17] Ibid., at 14, quoting from Wheatley v. Chrisman, 24 Pz. 298, 64 Am. Dec. 657.

[18] Townsend v. Norfolk Ry. and Light Co., 105 Va. 22, 49, 52 S.E. 970 (1906). It is possible that a statutory provision stating that intergration and coordination of uses of water for all beneficial purposes is in the public interest (Va. Code Ann., section 10-17.1(3) (Supp. 1966)) may modify somewhat the Common law principle that the importance of a water use is not a material element in the determination of its reasonableness.

[19] Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

injury is a necessary condition for an action at law to lie, and without such injury, not even nominal damages may be recovered.[20] However, in cases of suits for injunction, threatened damages are all that is required. In Town of Purcellville v. Potts,[21] the court stated that "a diversion of a natural watercourse, though without actual damage to a lower riparian owner, is an infringement of a legal right and imparts damage, and that infringement a court of equity will prevent."

There are several different aspects of the use of water from natural watercourses that are regulated by the principles of the riparian doctrine as supplemented and modified by existing statutes. These aspects include diversion, pollution, obstruction, bed rights, navigation, and conveyance of riparian rights.

DIVERSION

The general rule concerning the diversion of water from natural watercourses is that a riparian owner may divert water for any reasonable purpose not inconsistent with the reasonable uses of other riparian owners on the same stream. The Virginia court adopted the following rule concerning diversions:

> *A proprietor may make any reasonable use of the water of the stream in connection with his riparian estate and for lawful purposes within the watershed, provided he leaves the current diminished by no more than is reasonable, having regard for the like right to enjoy the common property by other riparian owners.*[22]

This general statement indicated that only those diversions of water for use on riparian land are reasonable and therefore legal. The extent to which this rule is upheld was shown when the court stated that an upper riparian owner cannot legally divert to nonriparian land water which he

[20] Ibid. Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 130 S.E. 408 (1925).

[21] Town of Purcellville v. Potts, 179 Va. 514, 19 S.E. 2d 700 (1942).

[22] Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 467, 130 S.E. 408 (1925), quoting form Stratton v. Mt. Hermon Boys' School, 216 Mass. 83, 103 N.E. 87, 98 (1913). See also Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 14 A.L.R. 318 (1921).

was entitled to use on the upper riparian estate but does not so use.[23] The case in which this statement was made involved a situation in which the land of one riparian proprietor had a configuration such that water was diverted from a stream above the land of another riparian owner and the unused portion returned to the stream at a point below the land of the second owner. Since this case concerns the definition and extent of riparian land, it is discussed in the section dealing with riparian rights in general.

Although the diversion of water for use on nonriparian land has been held to be wrongful, a special qualification has been placed on the application of the general rule. The court has said that the owner of a lower riparian estate has no right to complain of diversion to nonriparian land unless damage to some present or future water use is inflicted upon him. The following passage concerning the injury requirement has been quoted with approval:

> *If he diverts the water to a point outside the watershed or upon a disconnected estate, the only question is whether there is actual injury to the lower estate for any present or future reasonable use. The diversion alone, without evidence of such damage, does not warrant a recovery of even nominal damages.*[24]

Thus, the general rule of the riparian doctrine appears to have been subjected to an important modification by the Virginia court.

The injury requirement is not restricted only to those situations involving diversion of water to nonriparian land.

> *[I]n an action for damages or suit for injunction by a lower against an upper riparian landowner for wrongful diversion of water by the latter, either upon the upper riparian land or therefrom to nonriparian land, the plaintiff, in order to prevail must show some substantial actual damage occasioned by the diminution of the quantity of the water which the plaintiff has the right to use, or (in cases of suits for injunction), threatened damage, by the claim of the right of the defendant and his conduct in asserting same being of such character as to set in*

[23] Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

[24] Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 467, 130 S.E. 408 (1925), quoting from Stratton v. Mt. Hermon Boys' School, 216 Mass. 83, 103 N.E. 87 (1913).

motion the running of the prescriptive period against the right of the plaintiff, so that in time such right would be barred by prescription unless the injunction is awarded. . . .[25]

Although the preceding statement by the court does not deal specifically with the importance of damages in establishing the legality of normally unreasonable uses of water on riparian land, it does give some indication that diversion for any prupose is lawful unless damage to another landowner is produced. This conclusion would seem to be in accord with the decision of the court holding nonriparian uses of water to be lawful unless damage was produced.

In regard to the general issue of the importance of damages in establishing the legality of a diversion, it is important to note that the riparian owner has a legal course of action in the event that his future water rights are threatened. The last quotation from the Gordonsville case[26] indicates that any action of another landowner which is of such character as to set into motion the running of the prescriptive period gives rise to the right of suit for injunction.

The effect of an injunction awarded to prevent threatened damage to a riparian owner due to a diversion by an upper owner in effect compels the upper owner to restore the water to its natural channel. Some of the conditions under which an injunction will be awarded are brought out in the following statement:

[T]he diversion of a natural stream is a private nuisance, and, therefore, from an early period, courts of equity have granted relief by way of injunction, in such cases, at the suit of the injured party. The jurisdiction is founded upon the notion of restraining irreparable mischief, or preventing vexatious litigation, or a multiplicity of suits. And where the complainant's legal right is clear, and the case is one "of strong and imperious necessity;" or, in other words, where the right is clear, and its violation palpable, and the complainant has not slept upon his rights, equity will ordinarily interfere, although the right has not been established at law; and in such a case a preliminary mandatory injunction. . .will be granted, which is so framed that it

[25]Town of Gordonsville v. Zinn, 129 Va. 542, 560, 106 S.E. 508, 14 A.L.R. 318 (1921).

[26]Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

restrains the defendant from permitting his previous act to operate and, therefore, virtually compel him to undo it – that is, to restore the water to its natural channel.[27]

No matter what relief is sought, be it for damages or for an injunction, the complainant's right of recovery will depend upon his right to the water so diverted. He will not be allowed to recover solely because the diverter had no right to make the diversion – he must prevail on his own right.

[T]he extent of the relief to which the town. . . is entitled, is measured by the extent of the right the plaintiff [town] has to the use of the water. Relief by injunction being sought by the town, that right of use of the water, to the extent that it exists, should be protected from all substantial injury, whether actual or threatened, by the wrongful continuous diversion of the water by the upper riparian owner. Beyond this the court will not go to the relief of the plaintiff, whatever may be the lack of the abstract right in the upper riparian owner to divert the water.[28]

Three particular types of diversion which have been given special consideration by the Virginia court are diversion for domestic purposes, diversion for a public or municipal water supply, and diversion for the purpose of relocating a watercourse. The diversion of water for domestic use has from early time been regarded as a fundamental right of a riparian owner, and this usually will be given precedence over other diversions. The importance attached to this right is clearly indicated in the case of Hite v. Town of Luray,[29] where the court indicated that a riparian might be able to completely exhaust the natural flow of a stream for domestic purposes. Although the court did not specifically establish this right, it did except domestic use from the general rule that the natural flow of a watercourse cannot legally be exhausted.

The rights concerning diversion of water for the purpose of providing a public water supply have not been determined completely. The right to make such a diversion without accountability to riparian owners injured thereby has not been recognized in the two Virginia cases which dealt directly with the question.

[27]Carpenter v. Gold, 88 Va. 551, 553, 14 S.E. 329 (1892).

[28]Town of Gordonsville v. Zinn, 129 Va. 542, 561-62, 106 S.E. 508, 14 A.L.R. (1921).

[29]Hite v. Town of Luray, 175 Va. 218, 8 S.E. 2d 369 (1940). See also Town of Purceville v. Potts, 179 Va. 514, 19 S.E. 2d 700 (1942).

The first case to deal with this question was Town of Gordonsville v. Zinn.[30] In this case a municipality was diverting water from a small stream at a point where it owned an acre of riparian land. The water was then used as the public supply of the municipality, which was not itself riparian to the stream. The court made the following statement regarding the rights of the municipality to make the diversion:

> *[T]he right of the town, as a riparian owner, to the use of the water of the stream, is. . .limited to uses on its one-acre lot, and, as an original proposition, it had no more right to divert any water not used on this riparian lot to the town itself (a nonriparian locality)... [than did the defendant]....*[31]

The court made a similar statement in a second case involving diversion by a municipality:

> *[A] municipal corporation, in its construction and operation of a water supply system, by which it impounds the water of a private stream and distributes such water to its inhabitants, receiving compensation therefor, is not in the exercise of the traditional right of a riparian owner to make a reasonable domestic use of the water without accountability to other riparian owners who may be injured by its diversion or diminution. . . .*[32]

It is important to note the special circumstances involved in these two cases which restrict the application of the decisions to other situations. Perhaps the most important factor is the small, nonnavigable nature of the streams involved. The more general quotation from the Purcellville case refers to a "private stream."[33] The decisions of these cases therefore are limited to certain type of watercourse and do not apply to watercourses in general.

[30]Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

[31]Ibid. at 562.

[32]Town of Purcellville v. Potts, 179 Va. 514, 521, 19 S.E. 2d 700 (1942), citing Pernell v. City of Henderson, 220 N.C. 79, 16 S.E. 2d 449.

[33]"Private" refers to the ownership of the bed of the stream since private ownership of the water of a flowing stream is not possible. Bed ownership is discussed in the section of this report dealing with rights in beds of watercourses.

The Virginia court has not passed directly on the issue of diversion of water for a public water supply from a navigable watercourse. The rights concerning such diversions have been recognized in other jurisdictions. The State of Michigan recognized such rights in a case involving a municipality and a downstream mill owner. The court held that the city could take the water from the navigable stream for its water supply without compensating the lower owner for injury he suffered.[34] The reasoning upon which this and similar cases are based seems to be that the rights of individual riparian owners in navigable streams are subservient to any public water use, such as public water supply, just as their rights are subservient to the public right of navigation.[35]

Although the Virginia court has not passed directly on the general question of the right concerning the diversion of water from a navigable watercourse for a public water supply, it has reached a decision which restricted the rights of individual riparian owners in favor of public diversion and control of water in a particular section of one of the State's navigable watercourse. In Old Dominion Iron and Nail Co. v. Chesapeake and Ohio Railway,[36] the court held that the waters and bed of a certain portion of James River were the property of the State and that the State could dispose of the same in its discretion. Therefore, rights in the water of this section of the James depend on grants from the State and are not governed by the principles of the riparian doctrine. A riparian proprietor damaged by a municipal or other diversion of water authorized by the State would be without legal relief.

A riparian owner also has the right to divert a stream while it is on his property so that it flows in a different channel, providing that it returns to the natural channel prior to leaving his property and that no other riparian owner is injured by the diversion.

> *[A] proprietor [of riparian land] may change the whole course of a stream within the limits of his own land, provided he restores the water undiminished to the original channel before leaving his premises, and other persons are not injured by such diversion. . . .*[37]

[34] Loranger v. City of Flint, 185 Mich. 454, 152 N.W. 251 (1915).

[35] 3 U. Va. L. Rev. 65-66 (1915).

[36] Old Dominion Iron and Nail Co. v. Chesapeake and Ohio Ry., 116 Va. 166, 81 S.E. 108 (1914).

[37] Cook v. Seaboard Air Line Ry., 107 Va. 32, 35, 57 S.E. 564 (1907).

POLLUTION

The importance of preserving the quality and purity of the waters of the State's watercourses has caused the body of law concerned with pollution to undergo extensive development. This aspect of water use is controlled by both the riparian doctrine and statutory law. Statutory law is now the primary regulating force, but a considerable body of common law concerning pollution exists and still serves to protect private rights.

There are several statutes that have the control of pollution of the State's watercourses as a primary or secondary purpose. These statutes include the State Water Control Law,[38] the Sanitation Districts Law of 1946,[39] the Fish Law,[40] and statutory provisions which prohibit the placing of certain materials in watercourses.[41] Each of these statutes is discussed below, and additional information about them is contained in Appendix II.

State Water Control Law

The most important and comprehensive of these statutes for the control of pollution is the State Water Control Law, enacted by the 1946 Virginia General Assembly. The purpose of the State Water Control Law is to:

(1) Maintain all State waters in, or restore them to, such condition of quality that any such waters will permit all reasonable public uses, and will support the propagation and growth of all aquatic life, including game fish which might reasonably be expected to inhabit them,

(2) Safeguard the clean waters of the State from pollution,

(3) Prevent any increase in pollution, and

(4) Reduce existing pollution.[42]

Pollution is defined by the Act as follows:

> *"Pollution" means such alteration of the physical, chemical, or biological properties of any State waters, or such discharge*

[38] Va. Code Ann., sections 62.1-14 to -44.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-10 to -42 (1950), as amended (Supp. 1966)).

[39] Va. Code Ann., sections 21-224 to -90 (1964), as amended (Supp. 1966).

[40] Ibid., sections 29-148 to -53.

[41] Ibid., sections 62.1-194 to -4.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-182 to -91 (1950), as amended (Supp. 1966)).

[42] Ibid., section 62.1-14 (now section 62-10 (1950)).

or deposit of sewage, industrial waste or other wastes into State waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety or welfare or to the health of animals, fish or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that an alteration of the physical, chemical, or biological property of State waters, or a discharge or deposit of sewage, industrial wastes or other wastes to State waters by any owner which by itself is not sufficient to cause poilution, but which, in combination with such alteration of or discharge or deposit to State waters by other owners is sufficient to cause pollution, is "pollution" for the terms and purposes of this law; and provided further that the discharge of untreated sewage by any owner into State waters is "pollution" for the terms and purposes of this law; . . .[43]

The preceding definition of pollution makes a distinction between three different types of pollution. These types are sewage, industrial wastes, and other wastes and are defined in the following manner:

"Sewage" means the water-carried human wastes from residences, buildings, industrial establishments or other places together with such industrial wastes, underground, surface, storm, or other water, as may be present; . . .[44]

"Industrial wastes" means liquid or other wastes resulting from any process of industry, manufacture, trade or business or from the development of any natural resource;. . .[45]

"Other wastes" means decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, tar, oil, chemicals, and all other substances, except industrial wastes and sewage, which may cause pollution of any State waters; . . .[46]

[43] Ibid., section 62.1-15(6) (now section 62-11(6) (1950), as amended (Supp. 1966)).

[44] Ibid., section 62.1-15(7) (now section 62-11(7)).

[45] Ibid., section 62.1-15(8) (now section 62-11(8) (1950)).

[46] Ibid., section 62.1-15(9) (now section 62-11(9)).

The State Water Control Law is applicable to all State waters. This term includes the watercourses of the State, but is not limited to this type of water.

> *"State Waters" means all water, on the surface and under the ground, wholly or partially within or bordering the State or within its jurisdiction; . . .*[47]

Supervision over the administration and enforcement of the State Water Control Law is the responsibility of the State Water Control Board. The Board, a part of the Executive Department of the State, has the following powers and duties.

(1) To exercise general supervision over the administration and enforcement of the State Water Control Law as set forth in the code.

(2) To study and investigate all problems concerned with the pollution of State waters, and to make reports and recommendations for the prevention, abatement, and control of pollution.

(3) To establish standards of quality for waters and general policies relating to existing or proposed future pollution.

(4) To conduct research to discover economical and practical methods for preventing pollution.

(5) To issue, amend, and revoke certificates for the discharge of sewage, industrial wastes, and other wastes into or adjacent to State waters.

(6) To make investigations to insure compliance with rules or regulations, to make recommendations, and give advice on methods of compliance.

(7) To adopt rules and regulations governing the procedure of the State Water Control Board.

(8) To issue special orders to owners whose discharges existed on July 1, 1946, reasonable and practical. This process requires progress reporting on the compliance with the special orders.

[47] Ibid., section 62.1-15(4) (now section 62-11(4) (1950), as amended (Supp. 1966)).

(9) To issue under certain conditions special orders requiring immediate *cessation* of pollution which commenced after July 1, 1946.

(10) To make rulings upon applications to the Board requesting authority to construct new or alter existing establishments discharging industrial wastes or sewage.

(11) To adopt such regulations as it seems necessary to enforce the general pollution abatement program of the Board.

(12) To investigate any large scale killing of fish believed or known to have resulted from pollution.[48]

The State Water Control Law is based on the principle that the right to pollute the waters of the State does not exist by virtue of past or future pollution, but must be obtained from the State. It is against public policy to make pollutional discharges to or otherwise detrimentally alter the physical, chemical, or biological properties of the State waters without possession of an authorizing certificate issued by the Board.

> *No right to continue existing pollution in any State water shall exist nor shall such right be or be deemed to have been acquired by virtue of past or future pollution by any owner. The right and control of the State in and over all State waters is hereby expressly reserved and reaffirmed.*
>
> *It is hereby declared to be against public policy and a violation of this chapter punishable under Section 62.1-44 for any owner who does not have a certificate issued by the Board to (1) discharge into State waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances, or (2) otherwise alter the physical, chemical or biological properties of such State waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses.*[49]

[48] Ibid., 62.1-27 (now section 62-23).

[49] Va. Code Ann., sections 62.1-16, -17 (now sections 62-12, -13 (1950)).

The particular requirements concerning authorization for a waste discharge or other alteration of water properties are dependent on the nature of the discharge or alteration involved. The requirements are also dependent on whether the discharge or alteration existed on July 1, 1946, the date the State Water Control Law became effective.

The following regulations apply to discharges of industrial wastes which existed on July 1, 1946:

> *Upon request of the Board, any owner who on July 1, 1946 was discharging or permitting to be discharged industrial wastes into any waters of the State, or any owner who was otherwise altering the physical, chemical, or biological properties of any State waters, shall within thirty days after such request apply to the Board for a certificate to continue discharging waste into such waters, or to continue such other alteration of the physical, chemical or biological properties of any State waters. The Board shall issue such certificate for an indefinite period.*
>
> *The owner may be required by the Board, from time to time, to adopt measures for improving the quality of State waters, and to furnish pertinent information with regard to the progress he has made. The Board may amend the certificate, or revoke it and issue a new one, to reflect changes in the quality of State waters made in response to such requirements.*
>
> *The Board may revoke the certificate in case of a refusal to comply with all such reasonable and proper requirements and may issue a special order as specified in Section 62.1-27 (8).*[50]

Different regulations apply to industrial waste discharges resulting from the operation of new establishments now existing on July 1, 1946, or the operation of plants that have been expanded or altered from the condition in which they existed on July 1, 1946.

(1) Any owner who after July one, nineteen hundred forty-six, erects, constructs, or opens, or reopens and operates any establishment which in its operation would cause pollution of State waters shall first provide facilities for the treatment of industrial wastes or other wastes, or take such other measures as will be adequate to prevent such pollution.

[50] Ibid., section 62.1-28 (now section 62-26).

(2) Any owner under this section proposing to discharge industrial wastes or other wastes into or otherwise alter the physical, chemical or biological properties of State waters shall make application therefor to the Board. Such application shall be accompanied by a copy of pertinent plans, specifications, maps, and such other relevant information as may be required, in scope and detail satisfactory to the Board.

(3) Public notice of every such application shall be given by notice published once a week for four successive weeks or by such other means as the Board may prescribe in a newspaper of general ciruclation in the county or city where the certificate is applied for.

(4) The Board shall review the application and the information that accompanies it as soon as practicable and make a ruling approving or disapproving the application and stating the grounds for conditional approval or disapproval. If the application is approved, the Board shall grant a certificate for the discharge of the industrial wastes or other wastes into State waters or for the other alteration of the physical, chemical or biological properties of State waters, as the case may be. If the application is disapproved, the Board shall notify the owner as to what measures, if any, the owner may take to secure approval.

(5) Establishments enlarging or employing new processes which in their operation will result in the discharge into State waters of new or additional industrial wastes or other wastes into State waters which will alter the physical, chemical or biological properties of such State waters shall be subject to the provisions of this section.

(6) The provisions of this section shall not apply to establishments existing on July one, nineteen hundred forty-six, which may hereafter be temporarily closed for a period not exceeding six months.[51]

The requirements for authorization of sewage discharges which existed on July 1, 1946 are similar to those concerning discharges of industrial wastes which existed on the date,[52] but the regulations concerning new or altered discharges are somewhat different from those that apply to new or altered industrial waste discharges. This difference results from the fact that sewerage

[51] Ibid., section 62.1-29 (now sections 62-25, -28).

[52] Ibid., section 62.1-32 (now section 62-27).

systems are under the joint supervision of the State Department of Health and the State Water Control Board.[53] The primary difference in the regulations is that plans for new sewerage systems which serve more than 400 persons or plans for material alteration of sewerage systems serving more than 400 persons must be approved by the Department of Health before the Board can grant an authorizing certificate.[54]

Special requirements are also provided for all other wastes which are not classified as industrial wastes or sewage. Upon request of the Board, facilities must be installed or measures adopted as are necessary to prevent the pollution of State waters by these other wastes. A certificate must be obtained from the Board to authorize the handling, storing, distribution, or production of these other wastes whose escape would cause pollution of State waters.[55]

Any party aggrieved by a standard, policy, rule, regulation, ruling, or special order issued by the State Water Control Board; or by the revocation, amendment, or modification of a certificate; or any other action of the Board may secure a review of the Board's actions. The State Water Control Law provides for rehearing by the Board and review by circuit or corporation court, with the right to apply for an appeal to the Virginia Supreme Court of Appeals regardless of the amount involved.[56]

Violation of the provisions of the State Water Control Law or any special final order of the Board or a court lawfully issued according to the provisions of the Law is unlawful.[57] Provision is made for a fine of not less than 50 dollars nor more than 500 dollars for each violation within the discretion of the court. Each day of continued violation after conviction constitutes a separate offense and subjects the system, business, or establishment causing the unlawful pollution to abatement as a nuisance.[58]

[53] Ibid., section 62.1-31 (now section 62-39).

[54] Ibid., section 62.1-33 (now section 62-40).

[55] Va. Code Ann., section 62.1-30 (H 277, April 5, 1968, becomes effective Oct. 1, 1968).

[56] Ibid., sections 62.1-38 to -42 (now Va. Code Ann., sections 62-34 to -38 (1950)).

[57] Ibid., section 62.1-43 (now section 62-41, as amended, (Supp. 1966)).

[58] Ibid., section 62.1-44 (now section 62-42 (1950)).

The relationship that exists between the State Water Control Law and other statutes pertaining to the pollution of State waters is explained by the following quotations:

> *This chapter is intended to supplement existing laws and no part thereof shall be construed to repeal any existing laws specifically enacted for the protection of health or the protection of fish, shellfish and game of the State, except that the administration of any such laws pertaining to the pollution of State waters, as herein defined, shall be in accord with the purpose of this chapter and general policies adopted by the Board; and it is hereby expressly provided that the provisions in this chapter shall not affect any owner who discharges sewage, industrial wastes or other wastes into a sewer or sewerage system which connects with or is a part of the sewerage system maintained and operated (a) by any sanitation district commission heretofore created and existing or hereafter created prusuant to the sanitation districts law of nineteen hundred thirty-eight, as amended, or (b) by any such district commission created under any act passed at the nineteen hundred forty-six regular session of the General Assembly; and further provided that the Board shall have authority, jurisdiction and power to issue, in the case of any sanitation district commission now existing or hereafter created pursuant to such laws, such special order or orders as it may issue to an owner or owners under the provisions of section 62.1-27, such order or orders to be issued in the same manner, for the same reasons and with the same effect as is provided in such section; and further provided that, except as herein otherwise expressly provided, nothing in this chapter shall affect the jurisdiction or powers of such district commissions.*[59]

The control the State Water Control Law exerts over pollution does not remove the controls of the common law. Any party who discharges wastes in accord with a certificate issued by the State Water Control Board is liable for damages resulting to private rights.

> *The fact that any owner holds or has held a certificate issued under this chapter shall not constitute a defense in any civil action involving private rights.*[60]

[59] Ibid., section 62.1-18 (now sections 62-14 (1950) and 62-14.1 (Supp. 1966)).

[60] Ibid., section 62.1-36 (now section 62-32 (1950)).

Other Statutes

Other statutes which exert some control over pollution of the watercourses of the State include the Sanitation Districts Law of 1946,[61] the Fish Law,[62] and statutory provisions which prohibit the placing of certain materials in watercourses.[63] The Sanitation Districts Law of 1946 has the control of pollution as its stated purpose and authorizes the creation of special districts to provide facilities for the treatment of wastes. This law's primary regulation of pollution arises from a special provision making unlawful the discharge of polluting matter into the waters of any sanitation district when the district has complied with the terms of the law regarding public notice. The Fish Law prohibits pollution which is injurious to fish life. Section 62.1-194 of the Code makes unlawful the casting of any debris or noxious substance into any of the State waters unless otherwise permitted by law, and section 62.1-194.1 prohibits the placing of any substance in State waters which "may reasonably be expected to endanger, obstruct, impede, contaminate, or substantially impair the lawful use of such waters and their environs" unless otherwise permitted by law. Appendix II contains the applicable sections of these acts related to pollution control.

The provisions of these other statutes regarding the control of pollution can be given effect only so far as may be done without denying effect to the provisions of the State Water Control Law. The Water Control Law does not repeal any of these other statutes but does require that they be administered in accord with its prupose.[64]

In a case where there was a conflict between the State Water Control Law and the Fish Law, the court held that the Water Control Law, being the last expression of the State Legislature, supplanted the Fish Law to the extent of conflict. However, the court stated:

> *The Water Control Board is not given jurisdiction of all matters to which the Fish Law applies, as appears from a comparison of the two statutes. Also the jurisdiction of the Board in cases of industrial pollution has been made selective. The*

[61] Va. Code Ann., sections 21-224 to -90 (1964), as amended (Supp. 1966).

[62] Ibid., sections 29-148 to -53.

[63] Ibid., sections 62.1-194 to -4.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-182 to -91 (1950 as amended (Supp. 1966)).

[64] Ibid., section 62.1-18 (now sections 62-14 (1950) and 62-14.1 (Supp. 1966)).

application for a certificate to continue to discharge industrial waste is made on the request of the Board (section 1514-b 17). Until the Board assumes jurisdiction in a particular case, by making such request and issuing its certificate, all the provisions of the Fish Law remain in effect.[65]

The State Water Control Law is framed so as to give recognition to the Sanitation Districts Law of 1946. The State Water Control Law does not affect the provision of the Sanitation District Law except as expressly provided.[66] The powers and duties of the Sanitation Commissions are apparently not altered by the express provisions of the Water Control act. It, therefore, appears that a "discharger" holding a permit from the State Water Control Board, located within the geographic boundaries of a Sanitation District might be required to use the latter's facilities for treatment if the provision of the Sanitation Statute were complied with so as to demonstrate the Commission's capability to furnish the treatment services required by the "discharger."

Additional controls over pollution are exercised by the federal government and power emanating from interstate compacts. Since this report deals primarily with the internal control and intrastate law of Virginia, matters of interstate regulation will not be discussed. (A brief discussion of the Potomac River Basin Compact and the Ohio River Valley Water Sanitation, of which Virginia is a member, is included in Appendix II.)

Common Law Rights

The riparian doctrine provides a remedy for the violation of private rights due to pollution. The use of water from a natural watercourse which causes pollution and thereby inflicts damages on others is not a reasonable use within the riparian concept. The common law rights of the riparian owner concerning water quality are explained in the following statement:

[A]ll common law authorities agree that a riparian owner has the right to the natural stream of water flowing by or through his land, in its ordinary, natural state, both as to quantity and quality, as incident to the right to the land on or

[65] American Cyanamid Co. v. Commonwealth, 187 Va. 831, 843, 48 S.E. 2d 279 (1948).

[66] Va. Code Ann., section 62.1-18 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-14 (1950) and 62-14.1 (Supp. 1966)).

through which the water-course runs .... If, therefore, ... the defendants, being upper riparian proprietors, and as such entitled to the ordinary use of the water, including the right to apply it in a reasonable way to purposes of trade and manufacture, are using the water of the stream in an unreasonable manner, and have defiled the same in such manner and to such an extent as to operate an actual invasion of the rights of the complainants, the latter are entitled to redress by action at law, and, in case the nuisance be continued, to summary relief by injunction.[67]

The court in Trevett v. Prison Association of Virginia[68] stated that not all instances of pollution of the State's watercourses are actionable offenses. The limitations places on the right of the riparian proprietor to have the water flow to his land in a pure state are discussed below:

What nature and extent of pollution will call for the active interference of the court is not in all cases easy to define. It is not every impurity imparted to the water, however small in degree, that will be the subject of an injunction. All running streams are, to a certain extent, polluted; and especially are they so when they flow through populous regions of country, and the waters are utilized for mechanical and manufacturing purposes. The washing of the manured and cultivated fields, and the natural drainage of the country, of necessity bring many impurities to the stream; but these, and the like sources of pollution, cannot, ordinarily, be restrained by the court. Therefore, when we speak of the right of each riparian proprietor to have the water of a natural stream flow through his land in its natural purity, those descriptive terms must be understood in a comparative sense; as no proprietor does receive, nor can he reasonably expect to receive, the water in a state of entire purity.[69]

Damage must be sustained by another riparian owner before pollution will be considered unlawful under the riparian doctrine. The following statement approvingly quoted by the court discusses the types of impurities that are actionable:

[67]Trevett v. Prison Association of Virginia, 98 Va. 332, 339, 36 S.E. 373 (1900), quoting qpprovingly from Mayor of Baltimore v. The Warren Mfg. Co., 59 Md. 96.

[68]Trevett v. Prison Association of Virginia, 98 Va. 332, 36 S.E. 373 (1900).

[69]Ibid. at 339-40, quoting with approval from Mayor of Baltimore v. The Warren Mfg. Co., 59 Md. 96.

The right of a riparian owner to have the water of a stream come to him in its natural purity is as well recognized as the right to have it flow to his land in its usual flow and volume. But in reference to this, as with the air, it is not every interference with the water that imparts impurities thereto that is actionable, but only such as impart to the water such impurities as substantially impair its value for the ordinary purposes of life, and render it measurably unfit for domestic purposes; or such as cause unwholesome or offensive vapors or odors to arise from the water, and thus impair the comfortable or beneficial enjoyment of property in its vicinity, or such as, while producing no actual sensible effect on the water, are yet of a character calculated to disgust the senses, such as the deposit of the carcasses of dead animals therein, or the erection of privies over a stream, or any other use calculated to produce nausea or disgust in those using the water for the ordinary purposes of life, or such as impair its value for manufacturing purposes.[70]

There are also certain situations in which the riparian doctrine does not provide relief for a riparian owner who sustains actual injury as the result of the pollution of a natural watercourse.

Cultivating and fertilizing the lands bordering on the stream, and in which are its sources, their occupation by farmhouses and erections, will unavoidably cause impurities to be carried into the stream. As the lands are subdivided, and their occupation and use become multifarious, these causes will be rendered more operative, and their effects more perceptible. The water may thus be rendered unfit for many uses for which it had before been suitable; but so far as that condition results only from reasonable *use of the stream in accordance with the common right, the lower riparian proprietor has no remedy.*[71]

This absence of remedy for injury caused by a combination of separately reasonable uses[72] is a result of the common law principle that no

[70] Ibid. at 336, quoting approvingly from 1 Wood, Nuisances sec. 427 (3d ed.).

[71] Ibid. at 337, quoting approvingly from Merrifield v. Worcester, 110 Mass. 219.

[72] The State Water Control Law has special provisions for such a situation. (Va. Code Ann., section 62.1-15(6) (H 277, April 5, 1968 becomes effective Oct. 1, 1968; now Code, section 62-11(6) (1950), as amended, (Supp. 1966)).

party should be held liable for any acts other than his own. The court has stated this principle in another case involving the pollution of a natural watercourse.

> *No one can be required to answer in damages for the wrong of another, with whom he was not in privity or concert, and whose action he could not control. This case comes within the purview of the line of authorities dealing with pollution of streams, the pollution causing damage to health or property, and though there is seeming lack of harmony in the authorities, the unmistakeable weight thereof is that where there are several concurrent negligent causes, the effects of which are separable, due to independent authors, neither being sufficient to produce the entire loss, then each of the several parties concerned is liable only for the injuries due to his negligence.*[73]

However, if a riparian proprietor is damaged by pollution whose source can be ascertained, the riparian doctrine does provide legal protection. Liability for damages caused by pollution is upheld even in those situations where the activity causing the pollution is of direct benefit to the general public. The leading Virginia case concerning this situation is Arminius Chemical Co. v. Landrum.[74] The defendant in the case maintained that it was free from liability for damages resulting from its mining operations since the pollution of the waters of a natural watercourse was an inseparable and necessary consequence from a beneficial use of its property which had been a significant factor in the economic growth of the local community. The company believed that the injury caused by the pollution was reasonable and lawful and damnum absque injuria. It relied on the doctrine of Pennsylvania Coal. Co. v. Sanderson[75] in support of this contention. The holding in the Sanderson case was that the use and enjoyment of pure water by the lower riparian owners must ex necessitate give way to the development of the resources of the country and to permit the lawful business of mining coal. The Virginia court rejected the reasoning in the Sanderson Case, and held the chemical company liable under the maxim sic utere tuo ut alienum non laedas (so use your own property that you do not injure another).

The court in the Arminius case also established a general principle concerning damages due a party who sustains injury as the result of unlawful

[73]Pulaski Anthracite Coal Co. v. Gibboney Sand Bar Co., 110 Va. 444, 449, 66 S.E. 73 (1909).

[74]Arnimius Chemical Co. v. Landrum, 113 Va. 73 S.E. 459 (1912).

[75]Pennsylvania Coal Co. v. Sanderson, 113 Pa. St. 126, 6 Ath. 453 (1886).

pollution. The defendant company in this case maintained that the increased value of the lands in the vicinity resulting from the operation of its mines served to mitigate any damages resulting therefrom. The court rejected this contention and stated that general benefits to all lands in the neighborhood arising from the operation of a mining or manufacturing plant give the owner of the plant no claim against the landowners.

Although liability for damages from pollution is upheld when the activity causing the pollution is beneficial to the public, the courts are usually reluctant to grant an injunction. The remedy is limited to an action in a court of law in those situations where the awarding of an injunction would be subversive of the public good.[76]

OBSTRUCTION

The law concerning obstructions in the watercourses of the State is a combination of common law principles and statutory enactments. The legal principles applicable to a given obstruction depend upon the type of obstruction and the nature of the watercourse where it is located. The latter is probably the most important factor in the law of obstructions. Different considerations control the right to obstruct navigable watercourses as opposed to non-navigable watercourses.

Although most of the law concerning obstructions applies to specific obstructions only, a certain body of law is concerned with obstructions in general without regard for their nature or form. One such statute prohibits the placing of any object or substance, except as otherwise permitted by law, upon the banks or in the channel of any State waters which may reasonably be expected to endanger, obstruct, impede, contaminate, or substantially impair the lawful use or enjoyment of the waters and their environs.[77] Another statute of general applicability authorizes the circuit court of any county to enter into contracts to have watercourses cleared of obstructions in such manner and to such extent as may seem to it proper. The cost of such work is charged to the county.[78]

[76] Akers v. Mathieson Alkali Works, 151 Va. 1, 144 S.E. 492 (1928).

[77] Va. Code Ann., section 62.1-194.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968).

[78] Ibid., section 62.1-6 (now Code, section 62-4 (1950)).

The principles of the riparian doctrine concerned with obstruction in general are related primarily to the detention of water involved. Such detention is likely to interfere with the traditional right of a riparian owner to the natural flow of the stream, a right which is limited only by the right of other riparian owners to make use of the water in a reasonable manner. The right to be free of interference with the flow of the water applies to the stream as it flows on, to, and from the riparian property. The right of the riparian proprietor to have a stream flow to his property has been established in a number of previously considered cases.[79] Regarding the right to have the water flow from the property, the court has said:

> *As a general rule the upper riparian owner has, as against the lower riparian owner, the right to have the water-course flow from his land according to nature, and a lower owner has no right to pen back or obstruct the flow of the water so as to flood the lands of the upper owners, or by raising the level of the water in the channel interfere with the drainage of the upper land, or to subtract from the water power of the upper owner. . .*[80]

Special legal considerations are necessary when obstructions are created or maintained by a municipality. This situation arises because of the immunity from liability that attaches to a municipality when it is acting in a governmental capacity. The general rule is that the adoption of a plan for public works is a governmental action but that the execution and maintenance of the plan are ministerial actions for which liability can exist in the event that negligence is involved.[81] The continuance by a municipality of structures which have been shown by experience to act as obstructions in water courses has been held to be a breach of ministerial duty for which liability exists.[82]

[79] Hite v. Town of Luray, 175 Va. 218, 8 S.E. 2d 369 (1940). See also Town of Purceville v. Potts, 179 Va. 514, 19 S.E. 2d 700 (1942); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 14 A.L.R. 318 (1921).

[80] American Locomotive Co. v. Hoffman, 105 Va. 343, 349, 54 S.E. 25, 6 L.R.A. (N.S.) 252 (1906), quoting from 30 Am. and Eng. Ency. 374-76 (2d ed.).

[81] Terry v. City of Richmond, 94 Va. 537, 27 S.E. 429, 38 L.R.A. 834 (1897); Stansbury v. City of Richmond, 116 Va. 205, 81 S.E. 26 (1914); Wright v. City of Richmond, 146 Va. 835, 132 S.E. 707 (1926).

[82] Stansbury v. City of Richmond, 116 Va. 205, 81 S.E. 26 (1914); Wright v. City of Richmond, 146 Va. 835, 132 S.E. 707 (1926); City of Richmond v. Cheatwood, 130 Va. 76, 107 S.E. 830 (9121).

When the watercourse in question is a part of the navigable waters of the United States, Federal laws concerning obstructions become important. If the obstruction is in the form of a dam, it is subject to the provisions of the Federal Power Act. Bridge and pier construction and other work in or across the navigable waters of the United States must also have Federal authorization. The manner in which this authorization, which is ordinarily in the form of a permit, is obtained is described in the pamphlet, "Permits for Work in Navigable Waters."[83] Since this report is concerned only with State regulation, these provisions of Federal law will not be discussed. The State statutes applicable to obstruction are outlined in Appendix III.

Dams

Much of the State water law concerning obstructions involves dams because of the widespread effects of such structures. It has been necessary to develop legal principles for dams which protect the riparian right, but at the same time provide for this beneficial use of the State waters.

Several types of dams are regulated by the water law of the State. Each of the following types is regulated by law which in some aspects is unique to that type of dam: hydro-electric dams and dams in navigable waters; milldams; dams for the impoundment of flood waters; and other dams.

Dams in Navigable Watercourses and Hydroelectric Dams. This group includes the major dams of the State. The primary legislation in this area is an act concerning water power development.[84] The purpose of the act is given in this declaration of public policy:

> *In order to conserve and utilize the otherwise wasted energy from the water powers in this State, it is hereby declared to be the policy of the State to encourage the utilization of the water resources in the State to the greatest practicable extent and to control the waters of the State, as herein defined, and also the construction or reconstruction of a dam in any rivers or streams*

[83]U.S. Army Corps of Engineers, "Permits for Work in Navigable Waters," 1962.

[84]Va. Code Ann., sections 62.1-80 to -103 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-68 to -94 (1950), as amended, (Supp. 1966)).

within the State for the generation of hydro-electric enegry for use or sale in public service, all as hereinafter provided.[85]

This act gives the State Corporation Commission jurisdiction over all hydro-electric power dams in the State constructed after January 1, 1928, but it is not limited solely to this particular type of dam. In addition, it is applicable to any other dam across or in the "waters of the State." This term is defined as follows:

> *The term "waters of the State" as used in this chapter shall mean: (a) Any stream or that portion of any stream in this State which prior to June twenty-first, nineteen hundred and thirty-two has been declared navigable by any unrepealed statute of this State, or (b) any stream or that portion of any stream in this State, the bed of which is owned by the Commonwealth, or (c) those parts of streams or other bodies of water in this State which either in their natural or improved condition, notwithstanding interruptions between the navigable parts of such streams or waters by falls, shallows, or rapids, compelling land carriage, are used or suitable for use for the transportation of persons or property in interstate or foreign commerce, including therein all such interrupting falls, shallows or rapids, and also any stream or part thereof in this State other than those above mentioned in this subdivision in which the construction of any dam or works as authorized by this chapter would affect the interests of interstate or foreign commerce, or (d) that portion of any river or stream flowing between the high water mark on the Virginia shore and the low-water mark when such low-water mark constitutes the boundary line between Virginia and another State.*[86]

Subdivision (c), which extends the term "waters of the State" to any watercourse in which the construction of a dam would affect the interest of interstate or foreign commerce, has been interpreted by the Virginia court to be applicable only to waterborne commerce and not to landborne commerce.[87]

[85] Ibid., section 62.1-80 (now section 62-68).

[86] Ibid., section 62.1-81 (now section 62-69 (Supp. 1966)).

[87] Garden Club v. Virginia Pub. Service Co., 153 Va. 659, 151 S.E. 161 (1930).

The power development statute does not apply to certain water power developments constructed or acquired prior to January 1, 1928. Parties possessing such developments have the same rights and powers as those subject to compliance, with the exception that they cannot exercise any of the additional powers of eminent domain conferred by the act.[88]

Dams under the jurisdiction of this act must be licensed by the State Corporation Commission. The process of obtaining a license includes an appropriate application to the Commission,[89] public notice of such application,[90] and a public hearing at which all interested parties may present facts, evidence, and argument for or against granting the license.[91] The Commission can then grant or refuse the license in either its original or modified form.

The factors to be considered by the Commission in making its decision are set forth by the following passages from the statute:

> *Before acting upon any application, the Commission shall weigh all the respective advantages and disadvantages from the standpoint of the State as a whole and the people thereof and shall make such investigation as may be appropriate as to the effect of the proposed construction upon any cities, towns, and counties and upon the prospective development of other natural resources and the property of others*
>
> *If the Commission shall be of the opinion from all the evidence before it that, in pursuance of the herein expressed policy of the State to encourage water power development, the plans of the applicant provide for the greatest practicable extent of utilization of the waters of the State for which the application is made and that the applicant is financially able to construct and operate the proposed dam and works and that the general public interest will be promoted thereby, it shall grant the license to construct and operate the proposed dam and works.*

[88] Va. Code Ann., section 62.1-99 (H 277, April 5, 1958, becomes effective Oct. 1, 1968; now Code, section 62-88 (1950)). Includes Virginia, Acts of the General Assembly, 1932 Session, chapter 346, page 685 by reference.

[89] Va. Code Ann., section 62.1-85 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-73 (1950)).

[90] Ibid., section 62.1-1-86 (now section 62-74).

[91] Ibid., section 62.1-87 (now section 62-75).

If the Commission be of the opinion, from the evidence before it, that the prospective scheme of development is inadequate or wasteful or that the applicant is financially unable to construct and operate the proposed dam and works, or that it is prejudicial to the public interest, the Commission may require the applicant to modify the plans for the development in such manner as may be specified by the Commission or the Commission may reject the application.[92]

The Virginia court has emphasized the importance of practical considerations in the determination of whether the plans of an applicant provide for the greatest practical extent of utilization of the waters of the State.

It is to be observed that practical considerations enter into the extent of the development required. In the instant case a dam from hilltop to hilltop would give the greatest possible power, but would make necessary construction and condemnation so extensive and expensive as to render the venture unattractive. In other words, a 1,390 foot water level seems to be concedely reasonable, although there is no magic in these figures. They do not demand that it be raised to a 1,400 foot level, but say that a 1,380 foot level violates the statute. It was a practical solution of a real difficulty and we see nothing to criticize in it. . . .[93]

In case of conflict between two or more applicants, the Commission grants a license to the applicant that it considers best in light of the same considerations relied on in the case of a single applicant. Priority of location or appropriation is not recognized by the Commission except in those cases where the application is for reconstruction or enlargement of an existing development.[94]

[92]Ibid., sections 62.1-88 to -90 (now sections 62-76 to -78).

[93]Garden Club v. Virginia Public Service Co. 153 Va. 659, 670-671, 151 S.E. 161 (1930).

[94]Va. Code Ann., section 62.1-92 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-81 (1950))

In addition to having the power of requiring an applicant to modify his plans before granting a license, the Commission also may impose certain terms and conditions upon the applicant regarding the construction of the dam.

> *In granting any license the Commission may include in the grant thereof such terms and conditions with respect to the character of construction, operation and maintenance of the proposed dam and works as may be reasonably necessary in the opinion of the Commission in the interest of public safety; and in granting every such license the Commission shall determine what provision, if any, shall be made by the licensee to prevent the unreasonable obstruction of then existing navigation or any unreasonable interference with stream flow. In the case of a dam located across any navigable waters of the United States, the owner shall make such provision for navigation as is required by the Secretary of the Army of the United States.*[95]

Another condition the Commission prescribes regulates the time limits of construction. The initial time limits for commencement and completion of construction cannot be greater than two and five years, respectively, from the granting of the license. These initial limits can be extended for good cause at the discretion of the Commission.[96]

All licenses granted under the provisions of this act remain in effect for 50 years. After expiration of this 50-year term, the licensee or its successors shall hold the property and rights under an indeterminate license until they have been acquired by the State.[97]

Alteration, amendment or repeal of this statute does not affect any license granted under it nor the rights of the licensee.[98] However, the provisions, terms, and conditions of a license may be altered at any time by mutual consent of the licensee and the State Corporation Commission, provided such alteration is not in conflict with the then existing law of the

[95]Ibid., section 62.1-91 (now section 62-79).

[96]Ibid., section 62.1-93 (now section 62-82).

[97]Ibid., section 62.1-94 (now section 62-83).

[98]Ibid., section 62.1-101 (now section 62-92).

State.[99] Transfer or assignment of a license must be approved by the Commission.[100]

In the event of violation of any of the terms of a license or the provisions of this act, the Attorney General of the State is required, upon request of the State Corporation Commission, to institute proceedings in the Circuit Court of the City of Richmond for the purpose of compelling compliance. If a decree is entered by the court revoking the right of the licensee to proceed further with the development under license, the court is empowered to sell at public sale the property and rights involved.[101]

A license granted under the power development statute does not replace the authority of the United States to control its navigable waters for the purpose of commerce.

> *Nothing contained in this chapter shall be so construed as to interfere with the exercise of lawful jurisdiction of the government of the United States, or its duly constituted agencies, over the waters of the States as herein defined.*[102]

The United States Supreme Court has held that in order to erect a dam across a navigable watercourse a license from the Federal Power Commission is necessary, even though a license has already been obtained from the state.[103]

The act bestows all necessary powers of eminent domain on those parties engaged in the development of hydro-electric power available from the waters of the state . This power extends to any land, property, and rights necessary, directly or indriectly, for the construction of the project. The power cannot, however, be used against public-carrier railroads; to impair the drinking water supply of any city or town; to acquire a municipal

[99] Ibid., section 62.1-102 (now section 62-93).

[100] Ibid., section 62.1-96 (now section 62-85).

[101] Ibid., section 62.1-97 (now section 62-86).

[102] Ibid., section 62.1-103 (now section 62-94).

[103] United States v. Appalachian Elec. Power Co., 311 U.S. 377 (1940).

electric light and power or water plant; nor to condemn any streets or alleys in incorporated cities or towns.[104]

Provision is made for acquisition of riparian rights through eminent domain proceedings:

> *When, in the operation of any dam, power station or other structure of a water power development, any such public service corporation interferes, to an extent beyond its common-law riparian rights, with the flow of water downstream from such structure and by reason of such interference any property or riparian right, or any part thereof or interest therein, is destroyed or damaged, such corporation may exercise the right of eminent domain for the purpose of acquiring such property, right or interest so destroyed or of ascertaining and paying just compensation for any such damage.*[105]

The common law rights of the riparian doctrine concerning the interference with the flow of water in a watercourse for power and mechanical purposes were considered by the court in Davis v. Town of Harrisonburg,[106] in which it recognized the right of gathering water into reserviors and established certain principles for determining the extent of interference which would be allowed.

> *We have found the governing principle in this class of case nowhere more clearly stated than in 2 Cooley on Torts, p. 1209, where the. . .author. . .says: "The general rule is that each riparian proprietor is entitled to the steady flow of the stream according to its natural course. But to apply this rule strictly would be to preclude the best use of flowing waters in most cases; and where power is desired, the rule must yield to the necessity of gathering the water into reservoirs. It is lawful to do this when it is done in good faith, for a useful purpose, and with as little interference with the rights of other proprietors as is reasonably practicable under the circumstances.*[107]

[104]Va. Code Ann., section 62.1-98 (a) (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-87 (a) (1950)).

[105]Ibid., section 62.1-98 (b) (now section 62-87 (b)).

[106]Davis v. Town of Harrisonburg, 116 Va. 864, 83 S.E. 401 (1914).

[107]Ibid. at 868.

The normal, not the abnormal, condition of a stream must control in the matter of installing suitable machinery, and likewise in determining the reasonableness of the use of flowing water. To apply general rules indiscriminately and inflexibly to seasons of extreme drought would result in disastrous consequences, and practically destroy the beneficial use of a stream for mechanical purposes. Hence the prevailing doctrine is that in times of unusual drought it is not an unreasonable use of a stream for the owner of machinery, which the power of the stream in its ordinary stages is adequate to propel, to detain so much of the water and for such reasonable time as may be necessary to enable him to use such machinery advantageously. The adoption of a different rule would paralyze industries along the entire stream. . .indeed, the person only whose property is situated at the mouth of the stream could avail of its benefits for the operation of machinery. . . .[108]

It is an unreasonable detention of the water to gather it into reservoirs for future use in a dry season, or for the purpose of obtaining a greater supply than the stream affords by its natural flow in ordinary states.[109]

The riparian principles that water in a natural watercourse cannot be detained for future use during dry season or for providing a greater flow than naturally afforded are obviously imcompatible with the statutory requirement that the water be utilized to the greatest extent possible. Therefore, it appears that one erecting a dam under the provisions of this act will more than likely have to acquire the riparian rights of downstream owners, through the use of eminent domain if necessary.

Milldams.-Another group of dams that are primarily regulated by statute are milldams and similar structures that are used for the operation of mechanical equipment. The applicable statute is generally referred to as the Milling Act.[110] There is no statutory provision as to the type of watercourses to which the Milling Act applies, but since the

[108] Ibid. at 870-871.

[109] Ibid. at 868, quoting from 2 Cooley on Torts.

[110] Va. Code Ann., sections 62.1-116 to -27 (H 277, April 5, 2968, becomes effective Oct. 1, 1968; now Code, sections 62-95 to -106 (1950)).

water power development statute provides for the regulation of dams in navigable streams, its jurisdiction is effectively limited to non-navigable streams.

Application for leave to construct a dam that comes under the jurisdiction of the Milling Act is made to the circuit court of the county where the structure is to be located.[111] Before any action can be taken on an application for leave to erect such a dam, the Milling Act requires the person desiring the leave to give proper notice to all other persons whose lands would be affected.[112] Once such notice has been given, the court to which the application has been made will appoint a group of commissioners[113] whose duty will be to study the proposed dam and its effects and to make a written report on the same to the court by which it was appointed.[114] The commissioners, in making their investigation are to take the following matters into consideration: whether or not any mansion house, outbuildings, yard, etc., of any person will be overflowed or taken; whether and to what extent navigation and the passage of fish will be affected; whether such obstruction of navigation (if any) may be prevented; and whether the health of any neighbors will be annoyed. They are also to circumscribe the amount of land to be taken and set a just compensation therefore.[115]

The Virginia court has found it necessary to set certain clarifying standards regarding this investigation and the resulting report. It has been held that the investigation and report are sufficient if they are in substantial compliance with the statutory requirements.[116] The investigators may also set the height of the dam if the application omits it.[117] The report need not

[111] Ibid., section 62.1-116 (now section 62-95).

[112] Ibid., section 62.1-117 (now section 62-96).

[113] Ibid., section 62.1-118 (now section 62-97).

[114] Ibid., section 62.1-119 (now section 62-98).

[115] Ibid.

[116] Mairs v. Gallahue, 9 Gratt. (50 Va.) 94 (1852).

[117] Ibid.

set out the land injured by the construction of the dam in metes and bounds,[118] and it need not set out any injury to land that is possible, but might never occur.[119]

After the report is returned to the circuit court, it makes a decision to either grant or refuse the requested license on the basis of the following considerations:

> *If, on the report, or on other evidence, it appears to the court that by granting such leave the mansion house of any person other than the applicant himself, or the outhouses, yard, garden, or orchards thereto belonging, will be overflowed, or taken, or that the health of the neighbors will be annoyed, the leave shall not be granted. But, if it shall not so appear, the court shall then grant or refuse the leave, as may seem to it proper. If it be granted, the court shall lay the applicant under such terms and conditions as shall seem to it right. It shall, in particular, provide that ordinary navigation and the passage of fish shall not be obstructed, nor the convenient crossing of the watercourse impeded; . . .*[120]

The provision that navigation and the passage of fish shall not be obstructed is reaffirmed in sections 62.1-7 and 62.1-8 of the Code.

Regarding the effect of the report on the decision, the court has held that the report of the commissioners is conclusive against the applicant where the commissioners have found that the health of others will be endangered if the dam is erected.[121] Also, the court has held that a report is fatally defective if it makes no answer regarding the passage of fish, the obstruction of navigation, or the annoyance of health in the neighborhood.[122]

[118] Nash v. Upper Appomattox Co., 5 Gratt. (46 Va.) 332 (1848).

[119] Wroe v. Harris, 2 Wash. (2 Va.) 126 (1795).

[120] Va. Code Ann., section 62.1-122 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-101 (1950)).

[121] Mayo v. Turner, 1 Munford (15 Va.) 405 (1810).

[122] Eppes v. Cralle, 1 Munford (15 Va.) 258 (1810).

Any of the terms or conditions referred to in section 62.1-122 which are imposed on the applicant by the circuit court are incident to the leave granted. The Virginia court has held that the provision of keeping a ferry boat at the crossing of a public road over a watercourse is not merely a duty personal to the grantee who erects a dam, but that it is incident to the grant and attaches to it into whosoever's hands it may pass.[123]

The applicant who obtains a license under the provisions of the Milling Act cannot construct or operate his dam in such a manner as to injuriously affect the vested rights of other dam owners or the rights of other riparian proprietors.

> *No person shall by means of any such leave, draw the water from any millpond of another, existing at the time of such leave, or do anything in conflict with any vested right in any water works erected on such water-course.*[124]

> *No preceedings had under this chapter, nor any judgement thereon, shall bar any prosecution or action which could have been maintained if this chapter had not been enacted, unless the prosecution or action be for an injury actually foreseen and estimates in such proceedings or judgment.*[125]

These provisions of the Milling Act regarding the vested rights of other dam owners are in accord with the principles of the riparian doctrine concerning the relative rights of two riparian owners who desire to construct dams on the same watercourse. Regarding this matter, the court has made the following statement which might be considered to be a more complete development of the idea expressed by the Code in section 62.1-124.

> *We have to deal here with the natural right of two riparian owners to the use of the water of a stream. The right of any riparian owner to the use of the water of a running stream is a right inherent in the land as a right publici juris. And the right to the use of the water as a general rule is limited to such use as is not inconsistent with a like reasonable use by the other riparian owners on the same stream above and below. But in a*

[123] Mairs v. Gallahue, 9 Gratt. (50 Va.) 94 (1852).

[124] Va. Code Ann., section 62.1-124 (H 277 April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-103 (1950)).

[125] Ibid., section 62.1-127 (now section 62-106).

controversy between the owners of two dams over the same stream, the proprietor who first erects his dam for a useful purpose has a right to maintain it, as against the proprietors above and below. And to this extent, prior occupancy gives a prior right to such use. It is a profitable, beneficial, and reasonable use, and, therefore, one which he has a right to make. If it necessarily occupies so much of the fall as to prevent the proprietor above from placing a dam or mill on his land, it is damnum absque injuria.

For the same reason the proprietor below cannot erect a dam in such a manner as to raise the water and obstruct the wheels of the first occupant. He had an equal right with the proprietor below to a reasonable use of the stream; he had made only a reasonable use of it; his appropriation to that extent being justifiable and prior in time, necessarily prevents the proprietor below from arising the water and interfering with a rightful use already made; and it is therefore not an injury to him.[126]

The Milling Act contains a forfeiture provision where by the rights granted by a court can be lost.

If the applicant shall not begin his work within one year, and so far finish it within three years after such leave, as then to have his mill, manufactory, machine, or engine in good condition for use; or if such mill, manufactory, machine, or engine, be at any time destroyed or rendered unfit for use, and the rebuilding or repair thereof shall not within two years from the time of such destruction or unfitness, be commenced, and within five years from that time be so far finished as then to be in good condition for use, the title to the land so circumscribed shall revert to the former owner, his heirs, or assigns, and the leave so granted shall then be in force no longer, except as provided in the following section.[127]

The above mentioned exception concerns a situation when the works in question are in possession of, but not erected by, a tenant for life or a

[126] Mumpower v. City of Bristol, 90 Va. 148, 153, 17 S.E. 853 (1893).

[127] Va. Code Ann., section 62.1-125 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-104 (1950)).

period of years. In this case, the person next entitled in remainder or reversion may rebuild or repair the works within three years from the time of the failure of such tenant and thereafter hold them for his use and benefit.[128]

However, this forfeiture provision is not retroactive. The rights concerning a particular milldam must be determined by reference to the Milling Act in force when the dam was built. The Milling Act of October, 1785, contained the first forfeiture provision, but it only applied to the land condemned for the dam and not to the right to maintain the dam. The provision was broadened in the act of March, 1819, to include the leave granted by the court.[129] Therefore, milldams authorized before 1785 are subject to no forfeiture provision, those authorized after the act of 1785 but before that of 1819 are subject to forfeiture of the condemned land, and those authorized after the 1819 act are subject to forfeiture of both condemned land and right to maintain the dam. Thus it would appear that rights created under the early Milling Acts containing no forfeiture provision regarding the leave granted would normally exist indefinitely.

Dams to Impound Flood Waters.-Dams constructed to impound flood waters of a watercourse are regulated by statutory provisions.[130] The following provisions concern the impoundment of such waters:

> *Water in watercourses which is over and above the average flow of the stream may, upon approval, be captured and stored by riparian owners for their later use under the following conditions:*
>
> *(1) As a result of the capture and storage of such waters, there will be no damage to others.*
>
> *(2) The title to the land on which the impounding structure and the impounded water will rest are in the person or persons requesting the authority.*[131]

[128] Ibid., section 62.1-126 (now section 62-105).

[129] Norfolk and W. Ry. v. Hayden, 121 Va. 118, 93 S.E. 77 (1917).

[130] Va. Code Ann., sections 62.1-104 to -15 (H 277 April 5, 1968 becomes effective Oct. 1, 1968; now Code, sections 62-94.1 to -.12 (Supp. 1966)).

[131] The bed of any watercourse to which the State has title may be used for the construction of any impounding structure under this statute (Ibid., section 62.1-113 (now section 62-94.10).

(3) All costs incident to such impoundment, including devices above and below for indicating average flow, will be borne by the person or persons requesting the authority.

(4) For impoundments with a capacity of more than fifty acre-foot of storage all construction is approved by a registered civil engineer or a registered agricultural engineer. For those with capacities of fifty acre-feet or less of storage all construction will be approved by a registered civil engineer or a registered agricultural engineer or by some other competent person.

(5) Those requesting the authority will insure that the flow below the impoundment is equal to:

(a) At least the average flow when the flow immediately above the impounding structure is greater than the average flow, or

(b) At least the flow immediately above the impounding structure when that flow is equal to or less than the average flow.

(6) If needed, provision will be made in the impounding structure for an adequate spillway and for means of releasing water to maintain the required flow downstream.

(7) If for purposes of irrigation, the quantity of water stored (exclusive of foreseeable losses) will not exceed that required for a period of twelve months to irrigate the cleared acreage owned by those participating in the undertaking and lying in the watershed of the stream from which the water is taken.

(8) All structures and equipment incident to such impoundment will be maintained in safe and serviceable condition by the owners and all parts thereof in a watercourse will be removed when no longer required for the purpose.

(9) Priority to the right to store flood waters, as outlined, will go to upstream riparian owners.

(10) Those impounding flood waters will, upon request, provide appropriate information concerning the impoundment to the Commissioner and State Water Control Board.[132]

A riparian owner desiring to impound flood waters must petition the circuit court of the county or the corporation court of the city in which the structure is to be built for leave to do so. All interested individuals are to be given notice, and a copy of the petition must be sent to the Commissioner of Water Resources.[133] Before a decision as to granting or refusing the petition is made, a hearing is held,[134] and the evidence including a report which the Commissioner of Water Resources must submit[135] are considered.

The report required of the Commissioner contains the following items:

(1) The average flow of the stream at the point from which water for storage will be taken.

(2) Whether the proposed project conflicts with any other proposed or likely developments on the watershed.

(3) The effect of the proposed impoundment on pollution abatement to be evidenced by a certified statement from the State Water Control Board together with such other relevant comments as such Board desires to make.

(4) Any other relevant matters which he desires to place before the court.[136]

The Code sets forth the matters the court is to consider in making the final decision as to the petition:

[132]Va. Code Ann., section 62.1-106 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-94.3 (Supp. 1966)).

[133]Ibid., section 62.1-107 (now section 62-94.4).

[134]Ibid., section 62.1-108 (now section 62-94.5).

[135]Ibid., section 62.1-109 (now section 62-94.6).

[136]Ibid.

If, on the report and other evidence, it appears to the court that by granting such leave other riparian owners will be injured, or there are other justifiable reasons for denying the petition, the leave shall not be granted; provided that in no case shall leave be granted if the certified statement from the State Water Control Board filed under section 62.1-109 shows that, in the opinion of such Board, the reduction of pollution will be imparied or made more difficult. If it be granted, the court shall place the applicant under such terms and conditions as shall seem to it right. An appeal shall be to the Supreme Court of Appeals.[137]

This statute states that any leave granted under it shall expire if the applicant does not begin his work within two years and finish it so as to have his impounding structure in good condition for use within three years. His leave also expires if the impounding structure is at any time destroyed or rendered unfit for use and the rebuilding or repair does not commence within two years and be finished such that it is in good condition for use within five years.[138]

There are, however, certain exceptions on the applicability of this statute. It does not apply to dams which are under the jurisdiction of the statute for water power development or the Milling Act, and it does not apply in cases where the consent of the federal government or of any agency of instrumentality thereof is required.[139]

Other Dams.-This group includes any dam which may exist that does not fall into any of the other special categories. It appears that such a dam can be constructed and operated without express authorization, provided that no law, common or statutory, is violated. The riparian doctrine limits the extent of the detention of water caused by such a dam to that amount which is reasonable relative to the uses of the water of the watercourse by other like proprietors. In addition, any general statutory law concerning obstructions in the natural watercourses of the State may be applicable to dams of this nature.

[137]Ibid., section 62.1-111 (now section 62-94.8).

[138]Ibid., section 62.1-112 (now section 62-94.9).

[139]Ibid., section 62.1-114 (now section 62-94.11).

Bridges and Culverts

Bridges and Culverts may act as obstructions when the volume of water flowing in the watercourse on which they are located is greater than their capacities. When such a situation does occur, the excess water is held back and flooding of lands in the vicinity of the bridge or culvert often results.

As a general rule, the owner of any bridge or culvert over or in a natural watercourse has the responsibility of providing adequate capacity for any volume of water that might reasonably be expected to flow in that watercourse.

> *Where bridges, culverts, etc., are constructed across water courses by railroad companies, municipalities, or other corporations, or by individuals, due care must be taken not to obstruct the natural flow, including that at seasons of either low or usual high water, and the failure to do so will render the offender liable for injuries to landowners caused by the penning back of the waters and the overflow of their lands; but such structures need not be constructed in such a manner as to permit the unobstructed flow of the watercourse in times of unprecedented and extraordinary freshets.*[140]

In the following passage, the court explained the responsibilities of providing for unusually high flows of water in watercourses:

> *. . . Bridges, trestles or culverts which are constructed over a stream must be so built and maintained as to provide, not only for the flow of all water that can be carried in the channel, but if the probabilities are that the stream to be crossed will at times overflow its banks, there is as much occasion to provide an outlet for the surplus water as for that which is confined within the channel. The question is not whether sufficient provision has been made for the escape of the water of ordinary floods, but whether there was provision for the escape of the water of such unusual or extraordinary floods as it should have been anticipated would occasionally occur in the future, because*

[140] American Locomotive Co. v. Hoffman, 105 Va. 343, 350, 54 S.E. 25 (1906), quoting from 30 Am. & Eng. Ency. 374 (2d ed.).

they had occasionally occurred after intervals, though of irregular duration, in the past. . . .[141]

The only situation in which the owner of a bridge or culvert will not be liable for damages resulting from the insufficiency of the structure to carry the flow of the stream is when the flood is so unprecedented as to be termed an "act of God." The court has set forth the criteria for determining if a flood is an "act of God" as follows:

> *The term "act of God," in its legal sense, applied only to events in nature so extraordinary that the history of climatic variations and other conditions in the particular locality affords no reasonable warning of them. . . .*[142]

> *. . .An extraordinary flood. . .is one which men of ordinary prudence would not have anticipated and provided for. A flood is not extraordinary which is such as residents of the neighborhood might expect from their observation. . . .*[143]

Whether a flood is an "act of God" is a mixed question of law and fact:

> *. . .Whether an extraordinary flood is an "act of God," as that expression is used in the law, is a mixed question of law and fact. The defining and limitation of the term, its several characteristics, its possibilities as establishing and controlling exemption from liability, are questions of law for the court, but the existence or non-existence of the facts on which it is predicated is a question for the jury. . . . The province of the court is to define in proper instructions what would be regarded in such an instance by the law as an act of God, and leave it to the jury to determine whether the evidence is sufficient*

141 Southern Ry. v. Neal, 146 Va. 229, 234, 135 S.E. 703 (1926), quoting from 27 R.C.L. 1105-1106.

142 Director General v. Bryant's Adm'r. 127 Va. 651, 661 105 S.E. 389 (1920), quoting from 2 Farnham, Waters and Water Rights sec. 577a.

143 Ibid., at 661, quoting from 2 Farnham, Waters and Water Rights sea. 577a. See also City of Richmond v. Cheatwood, 130 Va. 76, 107 S.E. 830 (1921).

to establish that the flood in question was an ordinary flood or was an extraordinary flood so unusual and unprecedented in its nature as to amount in law to an act of God. . . .[144]

One who attempts to escape liability for flooding damages by setting up the defense of "act of God" must bear the burden of proving that the flooding was caused by an "act of God."

. . .Where the act of God is presented as a defense in an action to recover damages against one obstructing a natural water-course for injuries sustained by reason of an extraordinary flood or freshet, the burden of proof is on the defendant to establish that defense. . . .[145]

The "act of God" is not a good defense when one's negligence is also a factor in causing the injury.

When the negligence of a defendant mingles with an act of God in the production of an injury, the latter does not constitute a defense. . . .[146]

To relieve one of liability because a flood is, in law, an "act of God," it must appear that the "act of God" was the sole proximate cause of the injury.[147]

Since liability for flooding damages may depend on the negligent actions of the one constructing the particular obstruction which allegedly caused the flooding, there must be some definition as to what constitutes negligence in the construction of bridges and culverts. The following passage is a consideration of this problem:

Ordinary care depends upon the character of the work to be done. Where one is charged with the conduct of matters

[144]Southern Ry. v. Neal, 146 Va. 229, 235-236, 135 S.E. 703 (1926) quoting from 27 R.C.L. 1107.

[145]Ibid. at 239, quoting from 27 R.C.L. 1107.

[146]City of Richmond v. Cheatwood, 130 Va. 76, 90, 107 S.E. 830 (1921).

[147]Southern Ry. v. Neal, 146 Va. 229, 239, 135 S.E. 703 (1926).

requiring special skill and knowledge, it is not reasonable care to depend upon the judgment of unskilled persons. . . .[148]

Of course negligence is not always a requirement to hold the builder of a bridge or culvert liable for flooding damages.

Failure to make proper provision for the flow of water under a bridge or culvert has been held to impose liability although such bridge or culvert may be constructed according to approved principles of engineering; the fact that it does materially obstruct the flow being held to be in itself evidence that it was not properly constructed, regardless of the principles on which it was built.[149]

The responsibility which the law imposes on those placing bridges or culverts over or in natural watercourses is not limited to the time and conditions of the original installation; rather, it is a continuing responsibility. In one case concerning the insufficiency of culverts, the court said:

The duty of a railroad company with respect to culverts to take care of surface water coming through a natural drain does not end with the original installation, but is a continuing one...[150]

In the case regarding the insufficiency of arches over a natural watercourse, the court applied the same principle as announced in the above decision.[151]

Protective Works

Another type of obstruction that can exist in natural watercourses includes embankments and other structures erected to protect property from flood damage. No specific authorization is necessary for the construction for these works, and the riparian owner is free to erect them at will

[148]City of Richmond v. Cheatwood, 130 Va. 76, 96, 107 S.E. 830 (1921).

[149]Southern Ry. v. Neal, 146 Va. 229, 235, 135 S.E. 703 (1926), quoting from 27 R.C.L. 1105-06.

[150]Atlantic Coast Line RR v. Southern Oil & Feed Mills, Inc., 129 Va. 323, 329, 106 S.E. 337 (1921).

[151]City of Richmond v. Cheatwood, 130 Va. 76, 107 S.E. 830 (1921).

so long as they do not cause damage to the property of another.[152] However, there are limitations which are applied as to this right.

> *[O]ne riparian owner has no right, in the improvement or protection of his own premises, no matter how careful he may be, to interfere with or obstruct the flow of the water in such manner as to occasion injury to the land of another riparian proprietor. . . .*[153]

The basis for this limitation is explained in the following passage:

> *The maxim [sic utere tuo ut alienum non laedas] emphatically applies to the case of a riparian proprietor, and is the true legal as well as moral measure of his rights. He has no right to divert the stream, or any part of it, from its accustomed course to the injury of other persons. . . .*[154]

The law does not compel a riparian owner adjacent to another owner who constructs protective works to erect like works as a means of defense.

> *It is often the mutual interest of adjacent riparian proprietors to agree to erect works on their respective lands to protect them against floods, and keep the water at all times in its natural channel. That interest is generally sufficient to bring them to such an agreement. But in the absence of agreement express or implied, or of any statutory provision on the subject, the law affords no means of compelling the erection of such works, however beneficial they might be to the proprietors or the public, and will not allow one proprietor, by erecting such works on his land, to compel another to erect similar works on his as a necessary means of defense. Each has the exclusive right to judge and act for himself on this subject; taking care not to injure the property of the other.*[155]

The restriction that a property owner must take care that the structures he erects for the protection of his property do not cause damage to the pro-

[152] McGehee v. Tidewater Ry., 108 Va. 508, 62 S.E. 356 (1908).

[153] McGehee v. Tidewater Ry., 108 Va. 508, 511, 62 S.E. 356 (1908).

[154] Burwell v. Hobson, 12 Gratt. (53 Va.) 322, 325 (1855).

[155] Ibid. at 326.

perty of others is applicable in all situations where the flow of water could have been reasonably anticipated. However, this restriction apparently does not apply in the case of extraordinary or unprecedented floods.

> *The case of Cubbins v. Mississippi River Commission*[156]*. . . is decisive of the questions here involved. Mr. Chief Justice White, delivering the opinion of the court in that case (after stating the general rule, "that the free flow of water in rivers was secured from undue interruption, and the respective riparian proprietors, in consequence of their right to enjoy the same, were protected from undue interference or burden created by obstructions to the flow, by deflections in its course, or any other act limiting the right to enjoy the flow, or causing additional burdens by changing it,") observes: "But while this was universally true, a limitation to the rule was also universally recognized by which individuals, in case of accidental or extraordinary floods, were entitled to erect such works as would protect them from the consequences of the flood by restraining the same, and that no other riparian owner was entitled to complain of such action upon the ground of injury inflicted thereby, because all, as a result of the accidental and extraordinary condition, were entitled to the enjoyment of the common right to construct works for their own protection". . . .*[157]

Another situation in which Virginia law does not protect a riparian owner from flood damage resulting from the protective works of another proprietor is the case where the land damaged was at the time of the construction of the protective works a part of the same estate as was the land where the works are located. Any person who owns land on both sides of a watercourse has a right to construct works for the protection of one side at the expense of increased flooding on the other side as long as the land of others is not damaged. The subjection to flooding creates an easement which passes with the land upon diversion. The owner who acquires such a subservient tract of land has no right to construct any works for protection which would result in damage to either the land or protective works of the dominant estate.[158]

[156]Cubbins v. Mississippi River Commission, 241 U.S. 351, 36 S. Ct. 671, 60 L. Ed. 1041 (1916).

[157]Chesapeake & O. Ry. v. Meriwether, 120 Va. 55, 57-58, 91 S.E. 91 (1916), citing to 241 U.S. 351 (1916).

[158]Burwell v. Hobson, 12 Gratt. (53 Va.) 322 (1855).

Since the erection of protective works is a lawful act in itself, the construction of such works, even in a defective condition, is not in itself a violation of other riparian owners rights; a cause of action arises only when actual damages are sustained due to the existence of the structure.[159] However, if danger of injury from such a structure is imminent, the threatened party can go to equity for an injunction to prevent such damages from occuring.

> *When confronted with a nuisance and threatened with the destruction of his property, a person does not have to await the actual infliction of damage upon his property, but has a right, when the potential danger arises, to appeal to a court of equity for relief, if such appeal is seasonably made.*[160]

Waste and Debris

Statutes have been enacted which prohibit the deposition of waste and debris in the watercourses of the State. One previously considered statutory provision makes unlawful the placing of any object or substance upon the banks or in the channel of any State waters, except as permitted by law, which may reasonably be expected to endanger, obstruct, impede, contaminate, or substantially impair the lawful use or enjoyment of such waters and their environs.[161] Another provision which is directly applicable to waste and debris is as follows:

> *Except as otherwise permitted by law, it shall be unlawful for any person to cast, throw, or dump any garbage, refuse, dead animal, trash, carton, bottle, container, box, lumber, timber, or like material, or other debris or noxious substance or matter into any of the waters of the State. Every such act shall be a misdemeanor. Every law enforcement officer of this State and its subdivisions shall have authority to enforce the provisions of this section.*[162]

[159] Southside R. R. v. Daniel, 20 Gratt. (61 Va.) 344 (1871).

[160] Mullins v. Morgan, 176 Va. 201-207, 10 S.E. 2d 593 (1940).

[161] Va. Code Ann., section 62.1-194.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968).

[162] Ibid., section 62.1-194.

Wharves

The law provides that any person owning land upon a watercourse may erect a wharf, pier, or bulkhead in such watercourse opposite his land, provided that navigation is not obstructed nor the private rights of any person otherwise injured thereby.[163] The riparian owner on navigable water has the common law right of constructing wharves to the line of navigability although his fee simple title ends at low water mark.[164] Any wharf, pier, or bulkhead maintained by a riparian owner on a watercourse which obstructs navigation or so encroaches on any public landing as to prevent the free use thereof is subject to abatement by the circuit court of the county in which the structure is located.[165]

The right to erect a wharf at a county landing may be obtained through petition to the circuit court of the county. The court can grant the privilege and fix rates and charges upon such conditions and limitations as seem fit to the court. The court may at any subsequent term revoke such privilege, alter the conditions or limitations, or regulate the rates and charges. These provisions do not enable circuit courts to authorize wharf construction within a city.[166]

BED RIGHTS

The right to use the bed of the stream depends on whether the stream is navigable and on the ownership of the bed. The dependence on ownership necessitates consideration of this issue before rights can be discussed.

Ownership

The present state of ownership of the beds of the State's watercourses is the result of the system of land patents in existence during the colonial period and the land grants made by the Commonwealth after independence from England. These various patents and grants are the source of much uncertainty regarding the ownership of these beds. The laws under which these patents and grants were issued have undergone many changes,

[163] Ibid., section 62.1-164 (now Code, section 62-139 (1950)).

[164] Peek v. City of Hampton, 115 Va. 855, 80 S.E. 593 (1914) Grinels v. Daniel, 110 Va. 874, 67 S.E. 534 (1910).

[165] Va. Code Ann., section 62.1-164 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-139 (1950)).

[166] Ibid., section 62.1-165 (now section 62-140).

and it is difficult to determine the exact extent of the property rights that have been transferred to private ownership through the various stages of their history.

The effect of the patents from the Crown of England on the ownership of the beds of the watercourses in Virginia has been given extensive consideration by Alvin T. Embrey in his Waters of the State.[167] Judge Embrey's conclusion is that no title passed to the bed of a navigable watercourse included within or bordered by the land conveyed by one of these patents. With Martin v. Waddell[168] as authority, he says:

> *[T]he great rights of dominion, and ownership in the navigable rivers, bays and arms of the sea, and the soils under them, in Virginia, as well as in New Jersey, and in the other colonies, were not severed from the sovereignty, but, since Magna Charta, were withheld from the Crown and lodged in Parliament; and, in the absence of parliamentary action of which there is no record which we have found, that these great rights of dominion and ownership of the rivers, bays and arms of the seas, and the soils under them, were not validly granted in any patent either by the Crown, by the Proprietors, or by the Colonal Governors; that they resided in Parliament; and that, upon the independence of the Colony of Virginia, they passed with other perogatives and political and sovereign attributes to the General Assembly, or Legislature of Virginia, in trust for all the people of the State..*[169]

However, ownership of the bed of a nonnavigable watercourse did pass by virtue of these Crown patents.[170]

These principles regarding passage of title to the beds of watercourses also apply to the early grants of land made by the Commonwealth. The authority is ample that these grants of land adjoining a watercourse passed the title to the bed of the watercourse when it was nonnavig-

[167]Alvin T. Embrey, Waters of the State (Richmond: Old Dominion Press, 1931).

[168]Martin v. Waddell, 16 Peters (41 U.S.) 367 (1842).

[169]Embrey, op. cit., p. 135-136.

[170]Crenshaw v. Slate River Company, 6 Rand (27 Va.) 245 (1828).

able but passed no title when the watercourse in question was navigable.[171] These principles were changed by the passage of legislation in 1792 and 1802. The 1792 enactment made grants by the land office subsequent to the passage of the statute void as to beds of watercourses where the land lies in the eastern part of the State,[172] and the statute of 1802 made identical provisions for land in the western part of the State.[173] Therefore, no title passed to the bed of any watercourse whether navigable or nonnavigable after the passage of these statutes.

The dividing line between the eastern and western parts of the State was not defined by these statutes, but has been considered by Embrey. After reading the ancient statutes, he concluded that the dividing line is the watershed in the Alleghenies which divides the waters flowing westward to the Ohio and Mississippi from the waters flowing eastward to the Chesapeake Bay and the Atlantic Ocean.[174]

The boundary of land bordering on a nonnavigable watercourse granted to an individual by the Crown of England or by the Commonwealth prior to 1792 in the eastern part of the State, or prior to 1802 in the western part, is the middle or thread of the watercourse.[175] The boundary of similar land granted after these dates, but prior to 1819, and any land bordering on a navigable watercourse which was granted prior to 1819 was originally defined as high water mark. An act of the General Assembly in 1819 extended the boundaries of all land on navigable watercourses to low water mark.[176] The following definition of low water mark has been given by the court:

[171] Home v. Richards, 4 Call (8 Va.) 441, 2 Am. Dec. 574 (1789); Hayes Ex'or v. Bowman, 1 Rand (22 Va.) 417 (1823); Mead v. Haynes, 3 Rand (24 Va.) 33 (1824); Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

[172] An act in 1792 added the clause to an act of 1780 concerning ownership of the beds of watercourses in the eastern part of the State. See Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932).

[173] Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

[174] Embrey, op. cit., p. 279.

[175] Home v. Richards, 4 Call (8 Va.) 441, 2 Am. Dec. 574 (1789); Hayes Ex'or v. Bowman, 1 Rand (22 Va.) 417 (1823); Mead v. Haynes, 3 Rand (24 Va.) 33 (1824).

[176] Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932), contains the history of law relating to boundaries of land bordering navigable watercourses. A summary of the relevant parts of this case can be found in Appendix IV.

The term "low-water mark." used in the statute, means ordinary low water, not spring-tide or neap-tide, but normal, natural, usual, customary or ordinary low water, uninfluenced by special seasons, winds or other circumstances. . . .[177]

This definition is based on the action of the tide and is therefore, applicable only to tidal waters. However, the legislation extending property boundaries to low water mark has been held to apply to tidal and nontidal waters as well.[178]

Boundaries that are defined by either the center or the margin of a watercourse are subject to change under certain conditions as the channel of the watercourse changes.

What effect, if any, does change in the channel of a creek have upon the title of riparian owners? Erosive accretions attach to the land on which they fall. Accessions or abstractions, particle on particle, are so necessary and so general that title cannot be made to depend upon them. When this is all, a stream once a line continues to be the line. But where there is avulsion or sudden change from any cause, natural or artificial, by which a stream leaves its old bed and cuts for itself a new channel, the rule is otherwise, for title cannot be made to depend upon the meanderings of vagrant streams.[179]

The rules as to the effect of erosion or avulsion on boundaries applies to the State and individuals alike.[180]

A complication arises in the application of the general rule regarding ownership of the beds of watercourses due to the fact that no precise definition of navigability has been adopted which can be used in all situations involving such ownership. It is generally agreed that the beds of tidal waters are owned by the State and that the beds of nontidal watercourses which are not navigable in fact are privately owned, but there appears to be no such agreement on the ownership of the beds of nontidal, navigable in fact

[177] Scott v. Doughty, 124 Va. 358, 366, 97 S.E. 802 (1919).

[178] Schermerhorn v. Dozier, 251 F. 839 (4th Cir. 1918).

[179] Woody v. Abrams, 160 Va. 683, 692, 169 S.E. 915 (1933).

[180] Steelman v. Field, 142 Va. 383, 128 S.E. 558 (1925).

watercourses. The following quotation is a discussion by the Virginia court concerning the ownership of such beds:

> *There is great conflict of authority in the States as to the ownership of the bed of non-tidal navigable waters. The authorities are nearly evenly divided. The opposing views are well stated in 27 R. C. L. pp. 1360, 1362, sections 270 and 272, and there is a full citation of authority in the notes. These sections are as follows:*
>
> *The size of many of the fresh water rivers of this country, and their capability of navigation, have induced some of the highest courts of several of the States to attach to them the common law consequences of navigability, thereby abrogating the common law distinction between them and those in which the tide ebbs and flows, so that grants bounded on such rivers stop at their margin. Thus in many States the same rule as to the ownership of and sovereignty over lands under the navigable fresh water rivers has been applied which obtains at common law as to the ownership of and sovereignty over lands under tide waters, and such lands are regarded as held by the same rights in the one case as the other, and subject to the same trusts and limitations.*
>
> *According to this view, in the case of large fresh water rivers which are navigable in fact, the riparian owners do not take to the middle of the river, but the State is the owner of the subjacent soil, and the public have an easement in the river. So it has been decided that the owner of premises bounded on one of the Great Lakes takes no title to any submerged land under the waters of the lake. The wrongful diversion of the waters of a navigable river from its bed does not extinguish the title of the State thereto, or add to that of riparian owners.*
>
> *Section 272: "The view that the State has title to the bed of navigable fresh water courses is not uniformly followed by all the States, but there is a strong array of authorities opposed thereto, which do not regard the greater size of rivers in the United States as furnishing a sufficient reason for departing from the rule at common law. They have, therefore, held to the strict application of the common law rule that only those rivers in which the tide ebbs and flows limit grants of lands adjoining*

to high water mark, and that in all others, without regard to size or capabilities for transportation and commercial intercourse, the middle of the river is the boundary of lands on either side, except in some cases where a different rule has been applied owing to the terms of the original grant, and is subject only to the public right of navigation. According to this view, where, by the law of a State, an owner of land on a river takes to the thread of the stream, a riparian owner whose land is bordered by a State boundary river takes title to the boundary between the two States regardless of whether that is nearer to or farther from the shore than the filum aquae of the stream. And where the lines of a grant of land from the State include a navigable river, the soil covered by the river passes with the grant, subject to the public easement of fishery and navigation, unless clearly confined within less limits by the grant, and will also pass by a conveyance by such person. So a conveyance of land abutting on a navigable stream vests title in the grantee to the thread of the stream, including any islands which lie between the thread of the stream and the land so conveyed and where land on a navigable river, deeded by metes and bounds, includes the bank of the river, although no reference is made to the river, it will be presumed prima facie that the bed of the river to the middle is conveyed. And where by gradual accretions the thread of the stream has been slowly changed, the riparian owner's grant follows the channel and still goes to the thread of the stream".[181]

Virginia does not appear to have made a definite decision on this issue, which has arisen in several cases but has never been satisfactorily resolved. The first case[182] of this nature involved a controversy between the owner of an island in the James River above tidewater and a grantee of the State who was diverting water upstream from the island. The owner of the island and complainant in this case, the Old Dominion Iron and Nail Company, traced the title to its land back to a grant from the Crown of England. The defendant, the Chesapeake and Ohio Railway Company, was grantee of the State of the waters of James River for certain purposes. The rights possessed by the defendant had been received from the original

[181] James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461, 466-468, 122 S.E. 344 (1924).

[182] Old Dominion Iron and Nail Co. v. C. and O. Ry., 116 Va. 166, 81 S.E. 108 (1914).

grantee of the State through various conveyances and included the right to take an unlimited amount of water from the James for navigation and other purposes.

The complainant who was being damaged by the diversion of water by the State's grantee, maintained that in all rivers navigable in fact where the tide does not ebb and flow, the riparian owners hold title to the bed of the stream and possess normal riparian rights subject only to the public right of navigation. The court did not choose to answer this broad claim, but placed certain limitations on its considerations.

> *In our view of this case it is not necessary to discuss or determine the rights of the State in all of her navigable rivers where the tide does not ebb and flow, and we will, therefore, confine our consideration exclusively to the rights of the State in James River above tide and between the termini of the James River and Kanawha Canal.*[183]

The decision in Old Dominion Iron and Nail Co. v. C. & O. Ry.[184] was not based solely on the general principles of law regarding the rights of riparian owners on nontidal watercourses navigable in fact, but was also the result of special considerations brought about by the particular circumstances of the case. It was based more on the laches of the complainant rather than on the existence or nonexistence of his claimed right.

> *It has been now nearly two hundred years since that grant was made. For more than one hundred and thirty years the James River has been controlled by the State of Virginia under and in accordance with her laws. By numerous statutes and recorded contracts with great works of internal improvement she has, during all that time, repeatedly asserted her right to the navigable waters of the James and the soil under such waters, and has continuously through all of those years exercised her superior right to control and dispose of the same at her discretion. . .*[185]

[183] Ibid. at 170.

[184] Old Dominion Iron and Nail Co. v. C. & O. Ry., 116 Va. 166, 81 S.E. 108 (1914) (cited herein as Old Dominion).

[185] Ibid. at 171.

If the claim asserted by appellant exists now, it existed one hundred and twenty-five years ago when the State of Virginia granted to the James River Company the right to take from this stream an unlimited amount of water for navigation and for power purposes; and yet appellant and its predecessors in title have stood by in silence throughout that great period of time. . . . If appellant had ever possessed the rights it now asserts, a court of equity, under such circumstances of silence and acquiesence in the openly asserted rights of others, would not lend its aid to the destruction of vast property rights and privileges that have become vested on the faith of the State's ownership and control of the waters of James river and its right to dispose of the same in its discretion.[186]

Thus, the general issue of bed ownership of nontidal watercourses navigable in fact was not resolved by this case.

A similar case[187] was decided by the court in 1915. Bed ownership was not directly involved here, but the case dealt with rights in the water of the same section of James River involved in the Old Dominion case. The decision in the former case that the title to the water in the section of the James under consideration was vested in the Commonwealth and its grantees and not in the riparian proprietors was adhered to fully. The court reemphasized that any riparian rights which may have existed in time past have long since been lost by laches and lapse of time.[188]

The issue of the ownership of the beds of the nontidal watercourses navigable in fact was brought before the court again in a 1955 case[189] involving the Jackson River above the City of Covington. The section of the river in question was held to be nonnavigable, and consideration of the issue was unnecessary. However, the court made the following statement regarding bed ownership:

Boerner next contends that even though the Jackson River at this point is properly embraced within the grant, it being a

[186] Ibid. at 176-77.

[187] Grant v. C. & O. Ry., 117 Va. 46, 84 S.E. 9 (1915).

[188] Ibid. at 47.

[189] Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

floatable or navigable stream, should be held to be the property of the Commonwealth which would give the public the right to fish therein. In view of our conclusion as later expressed, that Boerner has not proved the river navigable, it is not necessary to decide this question; yet there is persuasive authority to the effect that even though a stream may be floatable, and in some instances navigable, the public interest therein is limited to the right of navigation; the only restraint placed upon the owner being that he cannot obstruct or impede the public right. . . .[190]

Different views concerning the nature of the ownership of the beds of nontidal watercourses navigable in fact can be found. A Virginia Law Review article[191] states that the common law rule ownership by the holder of the adjoining riparian land is officially in effect but admits that the holding in Old Dominion seems inconsistent with common law principles.[192] Embrey relies on the Old Dominion case to support the opposite view that the beds of this type of watercourse are publicly owned.[193] The final decision in this case did uphold public ownership of the bed in question; however, the decision was based largely upon the special circumstances of the case and did not require a choice between the two opposing views of ownership. Another factor which would prevent the acceptance of the decision in the Old Dominion case as a statement of the general rule regarding bed ownership is the restriction the court placed on its considerations limiting them to a certain portion of the James River. Therefore, the conclusion drawn here is that the general issue of the ownership of the beds of the Virginia nontidal watercourses navigable in fact remains unsettled.

There is evidence that this undefined dividing line between public and private bed ownership exists at some point between the two extremes that have been considered. Although there were special circumstances involved which limit the formulation of general principles, the decision in the previously discussed Old Dominion case upheld public ownership of the

[190]Ibid. at 174.

[191]Andrew D. Christian, "The Rights of the Riparian Owner upon a Fresh-Water Stream Navigable in Fact," 2 Virginia Law R. 436 (1915).

[192]Ibid. at 444 and footnote on 445.

[193]Embrey, op. cit., p. 151.

bed of a section of James River above tidewater thus establishing some basis for rejection of tidal action as the dividing line. However, the court in Boerner v. McCallister[194] seemed to indicate that public ownership does not extend to the beds of all watercourses which are navigable because of their capacity for some commercial use. Therefore, some other limit on public ownership must exist.

This limit to public ownership does not appear to have been considered by the Virginia court, but Embrey describes such a limitation:

> *Prof. John B. Minor, in the 4th Ed. of Vol. 2 of his great "Institutes" at page 14, says:*
>
> > *Public waters mean navigable waters, and at common law they are waters wherein the tide ebbs and flows. In Virginia [italics added], however, any water is navigable (and therefore public) which is capable of being navigated by vessels employed in commerce (say of 20 tons burden or more), and which communicates with other States or countries, whether the tide ebbs and flows therein or not, and whether connected with the sea or not.*[195]

The cases cited by Minor as authority for this statement do not include any cases from Virginia, but some similar limitations on the extent of public ownership of the beds of watercourses must exist in Virginia, although not officially stated, because public ownership does appear to be limited to the beds of those watercourses navigated by vessels and does not extend to the beds of those watercourses which are capable only of floating logs.[196]

The issue of bed ownership has arisen in another situation in addition to the one predicated on the riparian doctrine. This second situation is not related to ownership of adjacent riparian uplands but is concerned with certain specified portions of the beds of watercourses claimed by individuals on the basis of special grants by the State.

[194] Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

[195] Embrey, op. cit., pp. 159-160.

[196] Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

One situation involving title to a portion of the bed of a navigable watercourse claimed by virtue of State grants to individuals resulted in the previously cited case of James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp.[197] In its consideration of the facts, the court discussed the act of the General Assembly that established the land office which issued the grants in question. Since the discussion also included some of the other land legislation of the State and its effects on the ownership of the beds of the State's watercourses, portions of the discussion are quoted:

> *The land office was constituted by an act of the General Assembly passed in 1779 (2 Rev. Code 1819, ch. 5, p. 365), and the lands for which it was authorized to issue grants are uniformly described as "waste and unappropriated lands". . .*
>
> *The terms "waste and unappropriated lands," in the usual acceptation of the term, [sic] was [sic] perculiarly appropriate to lands which were not occupied by anyone, and hence was [sic] "waste" so far as benefit to the State was concerned, and there were manifest reasons why the State should wish to sell them to those who would occupy and cultivate them. The object to be accomplished by the State was to increase its population and also its productive wealth. The phrase has no natural application to land under water. No one who bought a hundred acres of "waste and unappropriated lands" would expect to find the whole area in the bed of a navigable stream. If land under water was intended, it would have been so stated. . .*
>
> *When rights have been conferred in the beds of waters, it has usually been done either by an act specially conferring the right, or by act mentioning the right to be dealt with and conferring upon some court, board, commission or agency power to deal with the situation. This is well illustrated by the various acts conferring rights and powers in and over the waters, and the various acts relating to oyster planting grounds. The rights and interests of the State in the beds of its navigable waters are of a peculiar nature and would seem to be too valuable to be open to purchase by anyone who may offer the nominal price therefor asked by the State for its "waste and*

[197] James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461, 122 S.E. 344 (1924).

unappropriated lands."

Furhtermore, in May, 1780, the year after the establishment of the land office, the legislature adopted the following preamble and act (10 Hen. Stat., p. 226):

"1. Whereas certain unappropriated lands on the bay, sea and river shores, in the eastern part of this Commonwealth, have been heretofore reserved as common to all the citizens thereof, and whereas by the act of General Assembly entitled an act for establishing a land office, and ascertaining the terms and manner of granting waste and unappropriated lands, no reservation thereof is made, but the same is now subject to be entered for and appropriated by any person or persons; whereby the benefits formerly derived to the publick [sic] therefrom will be monopolized by a few individuals, and the poor laid under contribution for exercising the accustomed privilege of fishing: Be it therefore enacted by the General Assembly, That all unappropriated lands on the bay of Chesapeake, on the seashore, or on the shores of any river or creek in the eastern part of this Commonwealth, which have remained ungranted by the former government, and which have been used as common to all the good people thereof, shall be, and the same are hereby excepted out of the said recited act, and no grant issued by the Register of the Land Office for the same, either in consequence of any survey already made, or which may hereafter be made, shall be valid or effectual in law, to pass any estate or interest therein."

This exemption from grant was still further enlarged by the act of March 1, 1819 (1 Rev. Code 1819, ch. 86, p. 322), declaring that all unappropriated lands on the bay of Chesapeake, on the seashore, or on the shores of any river or creek, and the bed of any river or creek in this Commonwealth, which have remained ungranted by the former government, and which have been used as a common to all the good people thereof, shall be and the same are hereby excepted out of this act; and no grant issued by the Registrar of the Land Office for the same, either in consequence of any survey already made, or which may hereafter be made, shall be valid or effectural in law, to pass any estate or interest therein. See also Code 1919, sec.3573.

Under these circumstances it may be well doubted whether the legislature ever intended to confer upon the land office power to grant title to the river bed as set forth in the grants to Beverly Smith and Hall Neilson, hereinbefore mentioned, and, if it did, if that power was not revoked by the acts aforesaid;. . .[198]

However, the court did not base its decision in the case before it on these views concerning the validity of grants by the land office to portions of the beds of a navigable watercourse, but rather relied on the decision in a previous case.

. . .[B]ut however this may be, and whatever views this court, as at present constituted, may entertain as to the power of the State over the beds of navigable tidewater streams, or over the beds of nontidal streams, made navigable by statute though not in fact navigable, the waters and soil under the bed of James river involved in the case of the Old Dominion Iron & Nail Works v. Chesapeake & Ohio R. Co.[199]*. . .being "the identical waters and soil involved in the instant case," any departure from the holding in that case would work confusion and might prove disastrous to large investment made on the faith of it. We feel bound, therefore, by the decision in that case, and consequently adhere to the holding that the bed of the river covered by the grants to Beverly Smith and Hall Neilson was "public bed, belonging to the State of Virginia, and was incapable of private ownership, and incapable of private use," and consequently no title passed by such grants.*[200]

One aspect of the State land legislation which makes a clear understanding of its effects difficult is the reference to lands used as a common. These lands, which were usually exempted from passage to private ownership, have never been completely defined and located, and, according to Embrey[201] some of them are still believed to exist and remain unclaimed.

[198]Ibid. at 471-74.

[199]Old Dominion Iron and Nail Co. v. C. & O. Ry., 116 Va. 166, 81 S.E. 108 (1914).

[200]James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461, 474, 122 S.E. 344 (1924).

[201]Embrey, op. cit., p. 227. A discussion of the land legislation of the State that is more complete than the one undertaken by the Court in the James River case can be found in Embrey, chapter VIII.

The various revisions of the Code have resulted in the omission of reference to these public or common lands. The following passage from the latest revision of the Code is declaratory of the law existing at present:

> *All the beds of the bays, rivers, creeks and the shores of the sea within the jurisdiction of this Commonwealth, and not conveyed by special grant or compact according to law, shall continue and remain the property of the Commonwealth of Virginia, and may be used as a common by all the people of the State for the purpose of fishing and fowling, and of taking and catching oysters and other shellfish, subject to the provisions of Title 28 (Title 28.1), and any future laws that may be passed by the General Assembly. And no grant shall hereafter be issued by the State Librarian to pass any estate or interest of the Commonwealth in any natural oyster bed, rock, or shoal, whether the bed, rock or shoal shall ebb bare or not.*[202]

Although the Code provides that the ungranted beds of the waters of the State shall remain the property of the Commonwealth to be used as a common by its citizens, the power of the State to grant certain qualified rights in the beds of the public waters to individuals has been firmly established.

> *Undoubtedly there are certain public uses of navigable waters which the State does not [sic] hold in trust for all the public, and of which the State cannot deprive them, such as the right of navigation, but, subject to these public rights, there is no reason why the beds of navigable streams may not be granted unless restrained by the Constitution. The legislature is the representative of the people in such matters, and may exercise full power over the property of the State except so far as that right has been ceded to the Federal government, or is restrained by the State Constitution. The State Constitution is not a grant of power, and the legislature may exercise any and every legislative power of the State not forbidden by the State Constitution. . . .*
>
> *Section 175 of the State Constitution prohibits the legislature from leasing, renting, or selling, the natural oyster beds,*

[202] Va. Code Ann., section 62.1-1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-1 (1950), as amended, (Supp. 1966)).

rocks and shoals in the waters of the State, and declares that the same shall be held in trust for the benefit of the people of this State, but there is no other inhibition in the Constitution on the powers of the legislature over the beds of navigable waters of the State. The result is that the legislature has the power to dispose of such beds and the waters flowing over them, subject to the public use of navigation, and such other public use, if any, as is held by the State for the benefit of all the people.[203]

The rights of the State in the publicly owned waters and their beds and the right of disposal were considered in Commonwealth v. City of Newport News.[204] The court points out that when the states acquired their independence from England, they acquired all the proprietory rights enjoyed by the former government.

[I]t [the State] acquired full and complete sovereignty, and therewith the full and complete dominion for governmental purposes over all the lands and waters within its territorial limits, and the full and complete proprietory right in all the lands and waters, including tidal waters and their bottoms, within its territorial limits, except to the extent that such proprietory rights had been disposed of by the sovereign State to whose powers and rights it succeeded.

By the adoption of the Constitution of the United States the State of Virginia to a limited extent, defined by the Constitution itself, relinquished a portion of its sovereignty to the United States. In so doing it imposed upon itself the limitation that it may not so dispose of or appropriate to uses its tidal waters and their bottoms as to interfere with the power and right granted to the United States to regulate and control the navigation thereof, so far as may be necessary for the regulation of commerce with foreign nations and among the States. Further than this there is no limitation to be found in the Constitution of the United States upon the power of the State or of the State legislature to use and dispose of its tidal waters and their bottoms as it may deem proper. . . .

[203]James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461, 469-470, 122 S.E. 344 (1924).

[204]Commonwealth v. City of Newport News, 158 Va. 521, 164 S.E. 689, 3 A.L.R. 748 (1932).

When we come to consider the powers of the State legislature under the Constitution with reference to the public domain, it is necessary to take cognizance of the two different basic rights which the State has over and in the public domain.

As sovereign, the State has the right of jurisdiction and dominion for governmental purposes over all the lands and waters within its territorial limits, including tidal waters and their bottoms. For brevity this right is sometimes termed the jus publicum. But it also has, as proprietor, the right of private property in all the lands and waters within its territorial limits (including tidal waters and their bottoms) of which neither it nor the sovereign State to whose right it has succeeded has divested itself. This right of private property is termed the jus privatum.

[T]he 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 jus publicum. This is the only limitation upon the power of the legislature to dispose of any of the public domain, including tidal waters and their bottoms, which exists other than such as are expressly provided by or arise by implication from provisions contained in the State or Federal Constitution. . . .[205]

Rights of Use

Rights of Use

The dependence of bed rights on the ownership of the bed and on the capacity of the watercourse for navigation gives rise to three classes of rights; those that apply to nonnavigable watercourses, those that apply to privately owned navigable watercourses,[206] and those that apply to publicly owned navigable watercourses.

The rights of using the bed of a nonnavigable watercourse are reserved exclusively for the riparian proprietors. Since the bed of such a watercourse is private property, a riparian owner can make any use of the bed of the watercourse he desires; however, the maxim sic utere tuo ut alienum non laedas is the legal as well as moral measure of the rights of a riparian pro-

[205] Ibid. at 541-47.

[206] The assumption of the existence of this type of watercourse is discussed in the preceding section. See Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955).

prietor,[207] and his use of the bed must not affect the flow of water so as to unreasonably damage other riparian owners.

The rights concerning use of privately owned beds on a navigable watercourse are also exclusively reserved for the riparian proprietors with the exception that the public can exercise its right of navigation, and the riparian owners cannot use the bed in such a manner so as to impede this public right. However, this limitation is the only additional restraint placed upon the riparian owner. The public interest is limited to the right of navigation.[208]

Many of the rights concerning use of the beds of publicly owned watercourses are shared by the riparian owners and the public alike; however, even on this type of watercourse, the riparian owner has certain rights not possessed by the general public.

One such right is the right of access to the navigable part of the watercourse. Between low water mark and the line of navigability, the riparian owner has a form of a property right in the soil, and upon it he can fasten or build structures such as wharfs, piers, or bulkheads to the line of navigation. The owner cannot be deprived of this right except through eminent domain condemnation.[209]

Another right the riparian owner on a publicly owned watercourse has in addition to his public rights is the right to dredge sand and gravel. The Code expressly prohibits such dredging by any private individual or corporation other than a riparian owner.[210] Provision is made for removal of such materials by the State Highway Commission.[211]

[207] Burwell v. Hobson, 12 Grat. (53 Va.) 322, 65 Am. Dec. 247 (1855).

[208] "There is persuasive authority to the effect that even though a stream may be floatable, and in some instances navigable, the public interest therein is limited to the right of navigation; the only restraint placed upon the owner being that he cannot obstruct or impede the public right, " (Boerner v. McCallister, 197 Va. 169, 89 S.E. 2d 23 (1955)).

[209] Norfolk City v. Cooke, 27 Gratt. (68 Va.) 430, 435 (1876); Taylor v. Commonwealth, 102 Va. 759, 47 S.E. 875, 102 Am. St. Rep. 865 (1904); Grinels v. Daniel, 110 Va. 874, 877, 67 S.E. 534 (1910); Peek v. City of Hampton, 115 Va. 855, 859, 80 S.E. 593 (1914).

[210] Va. Code Ann., sections 62.1-190 to -93 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-178 to -81 (1950)).

[211] Ibid., section 33-69 (now Code, section 33-69 (1953)).

The rights of the public to use the publicly owned beds are always subject to the power of the State to exercise its proprietary rights in these beds. The exercise of these rights may involve holding the beds for public use or granting the beds to individuals for private use to the exclusion of public use.[212] The grants which the State can make of the beds of public owned watercourses are of several types. One of the most important is the type made to individuals or corporations for the purpose of planting and propagating shellfish. The details of grants for this purpose will be discussed in the section concerning the laws applicable to tidal waters since it is in the tidal waters of the State that shellfish propagation attains its major importance.

Another type of grant made by the State is for the purpose of duck blind construction. The law requires that such construction be licensed and that priority be given to the riparian owner.[213]

The State can also authorize the use of the publicly owned beds for construction of structures to impound flood waters,[214] provided that the owner complies with the special licensing requirements applicable to such structures.[215]

Authority to use the publicly owned watercourse beds for purposes not specifically provided for by law must be obtained in writing form the Marine Resources Commission. Excepted from this requirement are: (1) the erection of dams, the construction of which has been authorized by proper authority, (2) the uses of subaqueous beds authorized under the provisions of the shellfish laws, (3) uses incident to the construction and maintenance of approved navigation and flood-control projects, (4) seawalls and jetties incident to controlling erosion, (5) private docks and landings for non-commercial use, (6) fills by riparian owners opposite their property to the established bulkhead line, (7) bridge, dock, pier and other facilities for public use or owned or operated by any public service

[212] Commonwealth v. City of Newport News, 158 Va. 521, 164 S.E. 689, 3 A.L.R. 748 (1932).

[213] Va. Code Ann., sections 29-85 and -86 (1964).

[214] Ibid., section 62.1-113 (H 277, April 5, 1968; becomes effective Oct. 1, 1968; now Va. Code Ann., section 62-94.10 (Supp. 1966)).

[215] Ibid., section 62.1-106 to -15 (now sections 62-94.1 to -.12).

corporation, and (8) other uses which have been or may be authorized by the General Assembly.[216]

NAVIGATION

The rights concerning navigation are unlike those relating to any of the other water uses. Navigation rights are public rights and are not set aside for riparian owners or any other special group. These rights are paramount and affect all other water rights on navigable watercourses. One of the basic questions is concerned with whether a stream is in fact navigable. The Virginia court has made the following statement regarding navigability:

> *The question of navigability is one of fact. Its determination must stand on the facts in each case. The test is whether the stream is being used or is susceptible of being used, in its natural and ordinary condition, as a highway for commerce, on which trade and travel are or may be conducted in the customary modes of trade and trade and travel on water. . . .*[217]

A special type of navigation consists of the floating of logs upon watercourses. The court has recognized the important commercial aspects of this practice, and has established it as a public use of the State's streams. The court has held that streams are floatable and therefore subject to public use if the flow of water is sufficient at reasonably definite periods to be substantially useful as a means of transporting the products of field and forest. The stream does not have to be floatable during its usual condition, but occasional flooding which reasonably cannot be predicted will not impose the servitude of public use on an otherwise non-floatable watercourse.[218]

The federal test of navigability is important in any discussion of water rights. The federal test is similar to the state test in principle;[219] however, interpretations by the United States Supreme Court have expanded

[216] Ibid., section 62.1-3 (now section 62-2.1).

[217] Ewell v. Lambert, 177 Va. 222, 228, 13 S.E. 2d 333 (1941).

[218] Hot Springs Lumber & Mfg. Co. v. Bevercomb, 106 Va. 176, 55 S.E. 580 (1906).

[219] The Daniel Ball, 10 Wall (77 U.S.) 557, 19 L.Ed. 999 (1870).

the scope of the navigability concept. Congressional influence over the control of watercourse was first sustained by the Supreme Court's holding that the word "commerce" comprehended navigation.[220] Subsequent interpretations by the Court expanded the definition of navigability to include several types of watercourses that previously would have been excluded. Watercourses subject to the power of Congress now includes those that can be made navigable by reasonable improvements,[221] those that have at some past period been navigable;[222] and those that, although nonnavigable themselves, affect the navigable capacity of navigable watercourses.[223] The result of this expanded definition of navigability is that practically no watercourses in the United States are immune from the control of Congress as navigable waters.[224] It must be remembered that the rights on a nonnavigable watercourse are always subject to the power of Congress to declare the watercourse navigable by application of this broad definition.

The rights of a riparian owner located upon a navigable watercourse are subordinate to navigation rights and are held subject to use of the water in interest of these public rights. The following has been approvingly quoted by the court as a statement of the general rule in the United States:

> *Whatever rights a riparian owner may have in the bed and waters of a navigable body of water are subordinate to the public right of navigation, and an exercise of that right in any form which involves no physical occupation of the upland, however much pecuniary injury it may inflict upon a riparian owner, is not a taking in the constitutional sense. Accordingly, the United States or a State may construct works in aid of navigation in the bed of a navigable watercourse which wholly cut off access from the riparian land to the water, without incurring any obligation to make compensation. Similarly, the public authorities may divert the waters of a navigable stream to imporve navigation*

[220] Gibson v. Ogden, 22 U.S. (9 Wheat.) 1 (1824).

[221] United States v. Appalachian Electric Power Co., 311 U.S. 377 (1940).

[222] Oklahoma ex. rel. Phillips v. Guy F. Atkinson Co., 313 U.S. 508 (1941).

[223] United States v. Grand River Dam Authority, 363 U.S. 229 (1960).

[224] Robert E. Clark (ed.), Waters and Water Rights (Indianapolis: The Allen Smith Co., 1967), Vol. II, sec. 101.2.

at another point, without liability to a riparian proprietor; but the right has been denied when the navigation sought to be aided is navigation by means of a wholly artificial chanal. . . .[225]

The extent of the rule that a riparian owner on a navigable stream is not entitled to compensation for damage suffered as an incidental consequence of work done by the government for the improvement of navigation is further explained by the statement of the court:

Riparian ownership is subject to the dominant right of government to improve navigation, and where no property of the riparian owner is actually taken or directly invaded, compensation cannot be recovered for injuries which are merely incidental to the lawful and proper exercise of the governmental power. It is not a taking of private property to require, in the interests of navigation, a bridge over a navigable river to be changed or removed, or a tunnel to be lowered or rebuilt, nor to erect dams, dykes or other structures, which incidentally cut off access to the water or to a landing in a channel. . . .[226]

When work to improve navigation results in an encroachment on the riparian's uplands, it has been held that there is an actual taking of property for which compensation is due. The courts have established principles regarding the determination of the value of property for which compensation has to be made. One principle is that the value assigned to the property must be the value to the seller and not to the buyer.

The claimant is entitled to recover the fair market value of her property, for all available uses and purposes, which the State has taken; both the value of that which is taken and consequential damages to her remaining property-the value of that property viewed not merely with reference to the uses to which it is at the time applied, but with reference to the uses to which it is plainly adapted. . .But in fixing this market value, the court cannot attribute to the claimant's land any part of the value which might result from a consideration of its value as a

[225] Oliver v. City of Richmond, 165 Va. 538, 541, 178 S.E. 48 (1935), quoting from 10 R.C.L. 82.

[226] Ibid. at 542, quoting from 20 C.J., section 145.

necessary part of a comprehensive system of river improvement, nor the value of the property to the government for its particular use. . . .[227]

Another is that no compensation is to be allowed for value which is dependent on the riparian location of the property.

The case of United States v. Chandler-Dunbar Water Power Co.,[228] *deals conclusively with this question [claimant's property rights in the stream]. It arose on the St. Mary's River, the outlet of Lake Superior. The Chandler-Dunbar Company owned the uplands along the stream for about 2,500 feet, opposite which was a decided fall in the stream. Also under the laws of Michigan, it owned the bed of the stream to its center; it claimed a valuable water right in the stream. The Federal government, in improving the stream for public navigation, rendered useless this power. The Chandler-Dunbar Company filed its claim and secured in the lower court an additional value to its lands on account of this loss of the water power. The government contended on appeal that this was not a proper consideration in estimating the value of the property taken, and the Supreme Court sustained this contention. The Court of Claims in the case here correctly ruled that it could not take into consideration, in assessing the damages, the availability of the parcel appropriated for a site for a dam.*[229]

If the bed of a navigable stream is privately owned, the right of the federal government to make navigational improvements to the detriment of the rights of the owner of the bed is not affected. The Virginia court, quoting from Chandler-Dunbar, has said:

This title of the owner of fast land upon the shore of a navigable river to the bed of the river is, at best, a qualified one. It is a title which inheres in the ownership of the shore; and, unless reserved or excluded by implication, passed with it as a

227 Ibid. at 547, quoting from Thompson v. State, 204 App. Div. 684, 198 N.Y.S. 590.

228 United States v. Chandler-Dunbar Water Power Co., 229 U.S. 53, 33 S. Ct. 667, 57 L. Ed. 1063 (1913).

229 Oliver v. City of Richmond, 165 Va. 538, 547-48, 178 S.E. 48 (1935), quoting from Thompson v. State, 204 App. Div. 684, 198 N.Y.S. 590, 591.

shadow follows a substance, although capable of distinct ownership. It is subordinate to the public right of navigation and however helpful in protecting the owner against the acts of third parties, is of no avail against the exercise of the great and absolute power of Congress over the improvement of navigable rivers. That power of use and control comes from the power to regulate commerce between the States and with foregin nations. It includes navigation and subjects every navigable river to the control of Congress. All means having some positive relation to the end in view which are not forbidden by some other provision of the Constitution are admissible. If, in the judgment of Congress, the use of the bottom of the river is proper for the purpose of placing therein structures in aid of navigation, it is not thereby taking private property for a public use, for the owner's title was in its very nature subject to that use in the interest of public navigation.[230]

The same rule regarding the subordination of the rights of the riparian proprietors applies whether the right to make navigation improvements is being exercised by the State or by the federal government.

It has been argued that the same rule does not apply when the State is improving navigation as applies when the improvement is being made by the Federal government; that in the case at bar the proceedings are had under the Virginia Constitution and statutes, and compensation is authorized under them for damages to land even though no land is taken.

We think the answer to this contention is, that it is the character of the rights of the riparian owner in the flowing water in a navigable stream adjacent to his lands that is the test, rather than whether the improvement of navigation is being done by the United States or the State. His right, as we have seen, is subordinate to the improvement of navigation. In other words, where there is no actual taking of his property (and as to flowing water in a navigable stream he has no property right which does not yield to navigation), the owner is not allowed compensation for his consequential damage. . . .[231]

230Oliver v. City of Richmond, 165 Va. 538, 544-45, 178 S.E. 48 (1935), quoting from United States v. Chandler-Dunbar, 229 U.S. 53 (1913).

231Oliver v. City of Richmond, 165 Va. 538, 549, 178 S.E. 48 (1935).

There are several statutes which are related in some manner to navigation. Statutory regulation is provided for the use, operation, and equipment of vessels upon any public waters within the territorial limits of the State, the marginal sea adjacent to the State, and the high seas when navigated as a part of a journey from the shore of the State.[232] Enabling legislation exists which authorizes cities to cooperate with the United States for the improvement of navigability of streams,[233] and similar legislation authorizes counties, cities, or towns to cooperate in the accomplishment of federal river and harbor and flood control projects.[234] Statutes also provide protection for navigation aids.[235] These statutes are briefly outlined in Appendix V.

CONVEYANCE OF RIPARIAN RIGHTS

By Grant, Deed, or Sale

The conveyance of riparian rights may be accomplished with or without the transfer of the riparian land to which the rights originally attached. The general rule is that the rights pass with the title to the riparian land in the absence of an express reservation to the contrary.[236] However, it has been specifically recognized in Virginia that riparian rights can be severed from the land to which they were once appurtenant and dealt with separate and apart therefrom.

> *It is generally held that riparian rights may be separated from the ownership of the land to which they are appurtenant, either by a grant of such rights to another, or by a reservation thereof in the conveyance of the land. . . .*[237]

In the situation where the water right is conveyed and the land is retained, the grantor may place restrictions on the use of the water rights so conveyed.

[232] Va. Code, Ann., sections 62.1-166 to -86 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Va. Code Ann., sections 62-174.1 to -.19 (Supp. 1966).

[233] Ibid., sections 62.1-155 to -58 (now sections 62-117.8 to -.11).

[234] Ibid., sections 62.1-148 to -52 (now sections 62-117.1 to -7.5 (1950), as amended, (Supp. 1966)).

[235] Ibid., sections 62.1-187 to -89 (now sections 62-175 to -77 (1950)).

[236] Carpenter v. Gold, 88 Va. 551, 14 S.E. 329 (1892).

[237] Thurston v. City of Portsmouth, 205 Va. 909, 914, 140 S.E. 2d 678 (1965), quoting from 56 Am. Jur., Waters, section 288, at 740.

In the absence of specific restrictions in the grant of a water power the grantee may make such use of the water as he chooses, provided only that he does not thereby interfere with the rights of others, but the grantor may specifically restrict the use for which the water may be employed, and when this is done it is an effective limitation upon the rights of the grantee. . . There is no restriction as to place where water or power granted shall be employed or enjoyed unless specified in the conveyance or contract. . . .[238]

The restrictions that a grantor may place on a grantee normally are limited to the quantity of water to be used.

In a grant of a certain quantity of water or water power, or so much as may be sufficient for the operation of the particular plant or the conduct of a particular business, the specification of the purpose for which it is to be used, is usually taken as a measure of the quantity rather than as a limitation of the use, and the grantee is not bound to use it in the particular manner described, but may use it in a different manner, for a different purpose, or at a different place, or increase the capacity of his machinery, provided only that the quantity used is not increased.[239]

The bed of a watercourse, to the extent the grantor owns it, also passes with the conveyance of riparian land.

Riparian owners (on non-navigable streams) are presumed to own to the middle thread of the stream; and when they do own to the middle and convey by a deed calling for the stream as a boundary, they are conculsively presumed in law to convey to the middle, unless they expressly exclude that presumption by words in the conveyance. The presumption of ownership to the middle of the stream, however, is a rebuttable presumption, and

[238]Eicklen v. Fredericksburg Power Co., 133 Va. 571, 599, 112 S.E. 775 (1922), quoting from 40 Cyc. 751-753. See also Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 130 S.E. 408 (1925); Town of Gordonsville v. Zinn., 129 Va. 542, 106 S.E. 508 (1921).

[239]Eicklen v. Fredericksburg Power Co., 133 Va. 571, 599-600, 112 S.E. 775 (1922), quoting from 40 Cyc. 751-753.

yields to proof that the edge of the stream is the true boundary line. When this latter fact affirmatively appears, there can be no presumption that a deed calling for the stream was intended as a conveyance to the middle. A grantor is not presumed to intend to convey more than he owns.[240]

When land is conveyed with a watercourse as a boundary and metes and bounds are also given, the watercourse will control the boundary.[241]

Rights to damages for injury may also be transferred with riparian land. The court has held that one who purchases riparian land after the watercourse has been polluted, with knowledge of such pollution, is not estopped from bringing action.[242] The court also has held that the right to maintain an action for damages resulting from diversion of the water is assignable and that the purchaser of such damaged land has the right to recover damages. The measure of damages to which a purchaser or assignee is entitled is the actual decrease in the land value caused by the defendent's actions, regardless of the fact that the purchase price of the land was lowered due to the injury.[243]

Adverse Possession

Any "adverse possession" connection with riparian rights is necessarily related to lands which are themselves related to water in some way. The decisions on the matter have dealt mainly with marsh lands which are situated between high and low watermarks. In 1844 the court held that wild and uncultivated lands could not be made the subject of adverse possession while they remain completely in a state of nature.[244] A change in their condition would be necessary. The change in the condition must be such as to serve notice of an intent to appropriate the lands themselves and not merely the products of the land.[245] It has also been held that a small clearing

[240]Jennings v. Marston, 121 Va. 79, 85, 92 S.E. 821 (1917).

[241]Patterson v. Overby, 117 Va. 345, 84 S.E. 647 (1915).

[242]Virginia Hot Springs Co. v. Grose, 106 Va. 476, 56 S.E. 222 (1907).

[243]City of Lynchburg v. Mitchell, 114 Va. 229, 76 S.E. 286 (1912).

[244]Taylor v. Burnsides, 1 Gratt. (42. Va.) 165 (1844).

[245]Whealton v. Doughty, 112 Va. 649, 72 S.E. 112 (1911).

of land was insufficient to fulfill adverse possession requirements when the rest of the tract remains in a state of nature. Cattle wandering over the land is insufficient.[246] There must be some occupancy, cultivation or improvement so as to show open, hostile, notorious, exclusive, adverse, and habitual acts of control and/or ownership.[247] The permissive placing of fences and grazing of cattle; some hog grazing; and hunting, fishing, renting of boats with instructions not to let others use the boats without permission have all been held insufficient to create a right through adverse possession.[248]

The court has intimated that lands covered with water and subject to the ebb and flow of the tide should be treated the same as wild lands in a state of nature in considering the extent of occupancy and control which will satisfy the requirements of adverse possession.[249] If soil, which is subject to the ebb and flow of the tide, lies below low watermark, it is presumed to belong to the State. Therefore, adverse possession probably cannot lie against such soil, for adverse possession cannot be gained against the State or against public rights of the use of the waters.[250]

Prescription

Riparian rights in excess of those normally existing under the law can be obtained through prescription. The primary requirement for the establishment of a prescriptive right is adverse use and enjoyment for the full prescriptive period, which is 20 years in Virginia.[251]

The 20 years' use upon which a prescriptive right is based must be continuous. However, the continuousness of a use depends on the nature of the use. If a use of water to satisfy a certain need arises only at a given

[246]Turpin v. Saunders, 32 Gratt, (73 Va.) 27 (1879).

[247]Providence Forge Fishing and Hunting Club v. Miller Mfg. Co., 117 Va. 129, 83 S.E. 1047 (1915); Austin v. Minor, 107 Va. 101, 57 S.E. 609 (1907); Harman v. Ratliff, 93 Va. 249, 24 S.E. 1023 (1896).

[248]Woody v. Abrams, 160 Va. 683, 169 S.E. 915 (1933); Providence Forge Fishing and Hunting Club v. Miller Mfg. Co., 117 Va. 129, 83 S.E. 1047 (1915); Whealton v. Doughty, 112 Va. 649, 72 S.E. 112 (1911); Austin v. Minor, 107 Va. 101, 57 S.E. 609 (1907).

[249]Austin v. Minor, 107 Va. 101, 57 S.E. 609 (1907).

[250]Crenshaw v. Slate River Co., 6 Rand. (27 Va.) 245 (1828).

[251]Stokes v. The Upper Appomatox Co., 3 Leigh (30 Va.) 318 (1831); Nichols v. Aylor, 7 Leigh (34 Va.) 546 (1836); Cornett v. Rhudy, 80 Va. 710 (1885).

interval, the continuousness of the use will be determined with respect to use at that interval. This principle was applied in a case involving the diversion of water normally flowing along the tail-race of a mill to a waste race during repairs to the mill.[252]

Since prescriptive rights arise through presumption of a grant by the original owner, the adverse use must be peaceable and with the acquiescense of the owner. The presumption of grant through 20 years use may be rebutted by positive proof showing that the use was not acquiesced in but was contested.[253]

The use of water on which prescriptive rights are based must have the element of hostility. The presumption of a grant will not arise when water is used by permission or loan.[254] Neither does use of excess water under claim of grant by deed give rise to a prescriptive right.[255]

A riparian owner can acquire a prescriptive right to divert a watercourse against a lower owner but not against an upper owner.

> *A lower riparian owner cannot, by prescription, acquire, as against an upper riparian owner, the right to divert the water course, as the upper owner cannot be injured by such diversions and therefore has no legal gournd to object thereto. . . .*[256]

The prescriptive right to pollute the waters of the State is not recognized. The State Water Control Law states that no rights to continue existing pollution have been acquired by virtue of past or future pollution.[257]

[252]Kirk v. Hoge, 123 Va. 519, 97 S.E. 116 (1918).

[253]Nichols v. Aylor, 7 Leigh (34 Va.) 546 (1836).

[254]Coalter v. Hunter, 4 Rand. (25 Va.) 58 (1826); Nichols v. Aylor, 7 Leigh (34 Va.) 546 (1836).

[255]Stearn's Ex'or. v. Richmond Paper Mfg. Co., 86 Va. 1034, 11 S.E. 1057 (1890).

[256]Town of Gordonsville v. Zinn, 129 Va. 542, 563, 106 S.E. 508 14 A.L.R. 318 (1921), quoting from 30 Am. & Eng. Ency. of Law; 365 (2d ed.

[257]Va. Code Ann., section 62.1-16 (H 277, April 5, 1958, becomes effective Oct. 1, 1968; now Code, Section 62-12 (1950)).

Prescriptive rights can be acquired against individuals and corporations but not against the State[258] or the United States.

The role of prescription in water law is not limited in applicability to riparian rights on watercourses but also is applicable to rights in water from other sources. Its operation is basically the same regardless of the type of water involved.

Eminent Domain

Eminent domain condemnation can affect riparian rights, either indirectly by application to land to which water rights attach, or directly by application to water rights alone.

The powers of eminent domain can be exercised for several different purposes.[259] In addition to use for public purposes by the State and the various political subdivisions thereof, eminent domain can be used by public service corporations engaged in the development of the water power of the State,[260] by parties constructing mill dams,[261] and by individuals for acquiring drainage rights in certain situations.[262]

[258] Crenshaw v. State River Co., 6 Rand. (27 Va.) 245 (1828), See also, 93 C.J.S., Waters, section 163.

[259] Eminent domain proceedings are regulated by Code, section 25-46.1 thru 25-234 (1950), as amended, (Supp. 1966).

[260] Va. Code Ann., section 62.1-98 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-87 (1950)).

[261] Ibid., section 62.1-119 (now section 62-97).

[262] Va. Code Ann., sections 21-428 thru-432 (1960), as amended, (Supp. 1968).

EXCEPTIONS TO THE RIPARIAN DOCTRINE

Although the riparian doctrine generally governs the water rights in Virginia, there are at least two notable examples where legislation of the General Assembly and holdings of the Virginia Supreme Court of Appeals have created rights which appear in certain cases to be inconsistent with those existing under the normal riparian doctrine.

The first situation involves the mill dam acts where the first locator on a stream has a superior right to those locating subsequently thereon. The statute provides that:

> *No person shall by means of any such leave, draw the water from any mill pond of another, existing at the time of such leave, or do anything in conflict with any vested right in any water works erected on such watercourse.*[263]

A more complete statement of the law as expressed in the statute is contained in the words of the court:

> *We have to deal here with the natural right of two riparian owners to the use of the water of a stream. The right of any riparian owner to the use of the water of a running stream is a right inherent in the land as a right publici juris. And the right to the use of the water as a general rule is limited to such use as is not inconsistent with a like reasonable use by the other riparian owners on the same stream above and below. But in a controversy between the owners of two dams over the same stream, the proprietor who first erects his dam for a useful purpose has a right to maintain it, as against the proprietors above and below. And to this extent, prior occupance gives a prior right to such use. . . .*[264] *(emphasis added)*

The statute is not as significant as in the past since private generation of power is less prevalent in the state, but the question arises as to whether

[263] Va. Code Ann., section 62.1-124 (H 277 April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62.103 (1950).

[264] Mumpower v. City of Bristol, 90 Va. 151, 153; 17 S.E. 853 (1893).

the benefits conveyed by statute are transferable to those succeeding to the rights.[265]

The other rights created by the General Assembly which appear fixed and not subject to diminution according to the riparian doctrine cover certain waters of the James River.

To better understand these present-day rights, a historical approach to their development is necessary. A more detailed discussion of the development of the various water rights in the section of the James River from Bosher Dam to the terminus of James River and Kanawha Canal and a brief summary of the surviving agreements in effect are contained in Appendix VI.

In 1784, a company known as the James River Company was created by the Virginia legislature to construct a canal along the banks of the James River for the purpose of improving its navigation.[266]

The two sections of the 1874 Act which bear on the problem of water rights are twelve and thirteen.

> *And be it enacted, That the said president and directors, or a majority of them, are hereby authorized to agree with the proprietors for the purchase of a quantity of land, not exceeding one acre, at or near the places of receipt of tolls aforesaid, for the purpose of erecting necessary buildings; and in case of disagreement, or any of the disabilities aforesaid, or the proprietor being out of the state, then such land may be valued, condemned, and paid fore as aforesaid, for the purpose aforesaid; and the said company shall, upon payment of the valuation of the said land, be seized thereof in fee simple as aforesaid: And whereas, some of the places through which it may be necessary to conduct the said canals, may be convenient for erecting mills, forges, or other water works, and the persons, possessors of such situation, may design to improve the same, and it is the intention of this act, not to interfere with private property, but for*

[265]See information on milldams under section of this report concerned with obstructions to natural watercourses.

[266]11 Henning's Statutes, p. 450 (1784).

the purpose of improving and perfecting the said navigation;[267] *(emphasis added)*

> *Be it enacted, That the water or any part thereof, conveyed through any canal or cut made by the said company, shall not be used for any purpose but navigation, unless the consent of the proprietors of the land through which the same shall be led, be first had; and the said president and directors, or a majority of them, are hereby empowered and directed, if it can be conveniently done, to answer both the purposes of navigation and water works aforesaid, to enter into reasonable agreements with the proprietors of such situation, concerning the just proportion of the expenses of making large canals or cuts capable of carrying such quantities of water as may be sufficient for the purposes of navigation, and also for any such water works as aforesaid.*[268] *(emphasis added)*

In construing the language of Section 13, it would appear that reference, although not direct, is made to Section 12. The use of the words, "water works aforesaid," would appear to refer to the following language in Section 12:

> *[F]or erecting mills, forges, or other water works. . .*[269]

It would thus seem that there is support for the proposition that the James River Company was the recipient of power to make reasonable agreements concerning the use of the water in the canal in addition to the general purpose of navigation. Implied in the language is the limitation that such other uses of the water are subservient or inferior to the water necessary for navigation.

Support for this implied inference is found in several of the agreements executed by the James River Co. In the agreement between the James River Company and Peter J. Chevallie, made March 29, 1833, it is provided that the use of the waters granted "shall not impair the navigation

[267] Ibid., Section 12 at 459.

[268] Ibid., Section 13 at 459.

[269] Ibid., Section 12 at 459.

of the canal." In the deed of trust from the James River and Kanawha Company to Pegram et. al. turstees, January 1, 1842, and the trustees deeds from Pegram et. al., trustees, made November 16, 1842, to Warwick and Barksdale, the grant is made "subject to the navigation of the canal."

Further support is found in the language of the court:

> *Under these grants by the State board powers, rights, and privileges were vested in these two companies. They were given the right to build dams in the rivers and to divert its waters from the bed of the stream, not only for the navigation contemplated by the canal, but for many other purposes. The legislature, foreseeing that along the line of the canal and works to be constructed mills, forges and other enterprises could be advantageously erected where they could use the water power from the canals, vested in these companies the power and authority to build large canals capable of carrying all the water that might be necessary to meet such demands, and to dispose of the same to the proprietor of the adjoining lands upon such terms as they might agree upon. The only limitation put upon the right of these companies to divert the waters of James River and sell or lease the same to other parties was that it should not be done to an extent sufficient to impair the navigation contemplated by the canal.*[270] *(emphasis added)*

On March 16, 1832, an act[271] was passed incorporating the James River and Kanawha Company which succeeded to all of the rights of the original James River Company.

> *At the expiration of thirty days from the adjournment of the first general meeting of the stockholders as aforesaid, the whole interest of the commonwealth in the works and property of the present James river company, shall be, and the same is hereby transferred to the James river and Kanawha Company, hereby incorporated, to be held by them forever, for the sole use and benefit of the stockholders; and from thenceforward, the company hereby incorporated shall be entitled to*

[270] Old Dominion Iron and Nail Co. v. C. & O. Ry. Co., 116 Va. 166, 171–172, 81 S.E. 108 (1914).

[271] Virginia, Acts of Assembly, 1831-32, p. 73.

all the tolls, rents, and other emoluments, rights, privileges and immunities, which are now enjoyed by the James river company. . . .[272]

In 1879, the canal having been practically destroyed by a great freshet, the James River and Kanawha Company was authorized to transfer, upon certain terms and conditions, all of its rights, property and franchises to the Richmond and Alleghany Railroad Company.

> *Be it enacted by the general assembly of Virginia, That the James river and Kanawha company is hereby authorized to sell and convey all its works, property, and franchises to the Richmond and Alleghany railroad company. . .provided, that the contract. . .shall contain the following provisions and conditions. . . .*[273]

One of these conditions was related to water contracts which were to continue and be the obligation of successor company.

> *[T]hat the rate of dockage at Richmond shall not exceed the rate at present established by the James river and Kanawha company, and all existing contracts for water privileges along the entire line shall be respected and maintained at rates not exceeding the present rates, except in those cases in which they may be cancelled or altered by agreement, or extinguished by condemnation. It shall be the duty of the Richmond and Alleghany railroad company to maintain the present water supply of the docks, and of the canal, along its line, between Bosher's dam and tide-water, and along the Lynchburg level between the water works' dam (which shall be preserved) above Lynchburg, and the first lock below Lynchburg, and in the construction of its railroad it shall not so destroy or obstruct the present canal between Bosher's dam and tide water, or between the water works' dam above Lynchburg and the first lock below Lynchburg, as to lessen the present water supply.*[274] *(emphasis added)*

[272] Ibid., p. 77.

[273] Virginia Acts of Assembly, 1878-79, p. 118-119.

[274] Ibid, Clause 6, Sec. 1, p. 121-122.

The construction of the above quoted clause was the central issue in the case of Hurt & Son v. Myers.[275] Judge Lewis, speaking for the court said:

> *It is not enacted that all existing water privileges shall be continued as they are; but that "all existing contracts for water privileges**shall be respected and maintained at rates not exceeding the present rates," which means contracts executed, and binding on both sides, not future contracts, and still less contracts to be indefinitely continued at the option of the lessees. . . .*[276]

> *In respect to dockage at Richmond, the language is explicit, that the rate shall not exceed the rate established by the James River and Kanawha Company, at the date of the passage of the act. But the language, immediately following, in respect to water rates, is different. These the company is not forbidden to increase, except only where to do so would violate "existing contracts." This difference in phraseology is significant, and shows that the legislature intended to leave the matter of water rates a subject of contract between the parties, after then "existing contracts" had expired.*[277]

As late as 1937, the court was called upon to further interpret the language of the sixth clause of the first section of the Act of 1879. The plaintiff in the case sought to enjoin the Chesapeake and Ohio Railway Co. from terminating certain leases and discontinuing the water supply. They contended that by virtue of the language of Clause 6 of the Act of 1879, they had a vested private right to a continued supply of water from the canal independent of such leases. The court disposed of this argument with the following language:

> *It is true that the opinion said (83 Va. 167, at p. 193, 1 S.E. 911, at p. 913) that the provision requiring the railroad company to maintain its water supply at Richmond and at Lynchburg "was undoubtedly inserted in the interest of the*

[275] Hurt & Son v. Myers, 83 Va. 167, 1 S.E. 911 (1887).

[276] Ibid. at 192.

[277] Ibid. at 193.

*manufacturing establishments in and near those cities, *** " But there is no suggestion in this language that the provision reserved any private rights to any particular individuals. We think this requirement in the act was for the benefit of the public.*

If this be true, then the duties placed on the railroad company by this clause in the act of 1879, with respect to the Lynchburg canal, were public duties, and the rights insisted upon by the appellants are public rights, such as the right to use of water, electricity, telephone facilities, and the like, upon the execution of the usual contract therefor required by a public service corporation and the payment of the prescribed rate. But, as we have already seen, all public duties imposed upon this property have been terminated and this argument comes to naught.[278]

The court in Hurt and Son was concerned with rates related to "all existing contracts for water privileges." In discussing the language of the Act being interpreted, the court stated that it is not applicable to "future contracts." The court, in its choice of words, seemed to infer that there was authority for the Richmond and Alleghany Railroad Co. to enter into future contracts. The court would not have needed to use this language, "future contracts, and still less contracts to be indefinitely continued at the option of the lessees," if these types of contracts were precluded by the words of the statute. Nothing in the language would seem to limit the new contracts to those having contract water rights which had expired, thus adding a persuasive agrument that the successor in rights to the Richmond and Alleghany Railroad Co. has the privilege of making new contracts with third parties (those not holding rights on February 27, 1879, when the Richmond Alleghany Railroad Co. succeeded to the rights of the James River and Kanawha Company).

The Chesapeake and Ohio Railroad Company has now succeeded to the rights of the Richmond and Alleghany Railroad Company.

All of these rights, property and franchises acquired from the canal company by the Richmond and Alleghany Railroad Company have, by successive acts and conveyances, become

[278]John H. Heald Co., v. C. & O. Ry., 168 Va. 128, 134-135, 190 S.E. 325 (1937).

vested in the appellee, the Chesapeake and Ohio Railway Company, which company is clearly the grantee of the Commonwealth of Virginia of the water of James river, for certain purposes, and is not simply a riparian owner, entitled to an ordinary riparian owner's rights, upon a navigable stream. . . .[279] *(emphasis added)*

In 1914, the C. & O. Railway Company was made a party to a legal action arising out of its control and use of the water in a portion of the James River. The Old Dominion Iron and Nail Company, owner of an island, known as "Belle Isle," lying in James River within the corporate limits of the city of Richmond, asserted title to the fee in the land on either side of the island tc the thread of the stream flowing between the island and the mainland, and that by the ownership of such land and the riparian rights attached and appurtenant thereto it has the right to have the water of James River flow down the natural bed of the stream, and to the use of the water in the stream as it passes along without diminution or diversion. Old Dominion further asserted that, inasmuch as it holds its title under a grant from the Crown of England, its riparian rights must be determined by the laws of England in force at the time such grant was made. The court elected not to decide whether the complainant did in fact have a superior right at one time and chose to dispose of the case on the ground of laches–that if the rights claimed were superior, they had nevertheless been forfeited by failure to assert them at an ealier time.

[I]f the laws of England at that time gave the appellant riparian rights superior to those it now enjoys under the law of Virginia, it would not avail appellant in this case. It has been now nearly two hundred years since that grant was made. For more than one hundred and thirty years the James river has been controlled by the State of Virginia under and in accordance with her laws. By numerous statutes and recorded contracts with great works of internal improvement she has, during all of that time, repeatedly asserted her right to the navigable waters of the James and the soil under such waters, and has continuously through all of those years exercised her superior right to control and dispose of the same at her discretion. No authority need be cited in support of the conclusion that under

279Old Dominion Iron and Nail Co. v. C. & O. Ry., 116 Va. 166, 173, 81 S.E. 108 (1914).

such circumstances it is now too late for the appellant to claim that its riparian rights in James river are to be determined by the laws of England as established nearly two hundred years ago, rather than by those of Virginia as they now exist.[280] *(emphasis added)*

A companion case, Grant v. Chesapeake and Ohio Ry.,[281] arose about the same time as the Old Dominion Iron and Nail Co. case. Relying on the decision in the latter case, the court said:

Concerning the special claim to water-power on the south side of James river that the predecessors in title of appellant in time past may have had, we are of opinion that such claim has long since been lost by laches and lapse of time. For more than a half century they stood by and without objection witnessed the exclusive appropriation of the water of the river by the State, and the transfer of its rights therein successively to the James River Company, the James River and Kanawha Company, the Richmond and Alleghany Railroad Company, and the Chesapeake and Ohio Railway Company. They moreover saw contracts entered into with the city of Richmond for its present water supply, and such other changes in the condition and relation of the property and the parties as would render it inequitable at this time to permit the claim to be enforced, however meritorious it originally may have been.[282]

Title in the State of Virginia to the bed of that portion of the James River covered by the Old Dominion Iron and Nail Company case was again assailed in a boundary dispute which gave rise to the case of James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corporation.[283] The court said:

In Old Dominion Iron & Nail Works v. C. & O. R. R. Co., supra, the court confined its holding as to the right of riparian

[280] Ibid. at p. 171.

[281] Grant v. C. & O. Ry., 117 Va. 46, 84 S.E. 9 (1915).

[282] Ibid. at 47-48.

[283] James River and Kanawha Power Co. v. Old Dominion Iron and Steel Corp., 138 Va. 461, 122 S.E. 344 (1924).

owners on James river, and in the petition for the appeal in the instant case it is said that the waters and soil involved in that case are "the identical waters and soil involved in the instant case." Under these circumstances we shall confine what we have to say not only to James river, but to that part of the river in controversy in the instant case.

The plaintiff in error bases its claim to so much of the land as lies in the bed of the river, upon two grants from the Commonwealth; one issued to Beverly Smith in 1813 for twenty-four acres, and the other to Hall Neilson in 1845 for 107 3/4 acres, and traces its title to these two grants. This is an admission that the title to the bed of the river was in the Commonwealth at the time of the respective grants, and that previous grants to riparian owners did not extend to the thread of the stream, and this accords with the holding in Old Dominion Iron & Nail Works v. Ches. & O. R. Co., supra.[284]

Several other cases have arisen concerning the canal, but most of these have not related specifically to water rights. One other case deserving of mention involves the City of Lynchburg and their asserted right to have the waters of the canal available for dilution.

Prior to 1938, the City of Lynchburg, for a period of over twenty years, had nine storm and sanitary sewers emptying into the canal. The Railway Company sought to close the canal and the City instituted proceedings to prevent it. The theory of the city's case is that since the abandonment of the canal as a means of public transportation in 1879. The Chesapeake and Ohio Railway Company and its predecessor in title have held it as private property, which became subject to the city's right to acquire by prescription an easement to use it as an outlet for its sewers without a diminution of the flow of water through it.

The court held that, although the city may have acquired a prescriptive right to discharge into the canal, the city acquired by prescription no easement which placed upon the railroad any obligation actively to maintain in the canal a sufficient supply of water for the sole purpose of carrying off the city's sewage deposited therein. The court further held that so long as the flow of water was being maintained in the canal for a public purpose, the city could not acquire any right thereto by adverse use or prescription.

[284] Ibid. at 468.

All cases since the Old Dominion Iron and Nail Company case in 1914 have consistently held that the State of Virginia has in the past and does exercise dominion over that portion of the James River from Bosher Dam to tide water. Any right which may have been superior to those of the State has not been asserted in appropriate time as to be recognized. Other cases have dealt with statutory interpretation, but those being adversely affected have not sought to challenge the rights of the State to make the enactment.

Unresolved by current case law is the question of riparian rights above Bosher Dam. The unanswered question can be stated thusly: Does the statutory language in the Act of 1784 establish water rights in the James River which are superior to all riparian rights existing on the James River above Bosher's Dam?

The general riparian doctrine recognized in Virginia is to the effect that the use of water by one riparian proprietor must not be inconsistent with the uses of the other riparian owners who have equal rights. Thus, an upper riparian who later asserts his right to make a reasonable use of water may make available less water to a lower riparian who was prior in time and whose use was reasonable. It, therefore, appears that an upper riparian is under no obligation to curtail the use of water so as to insure a certain quantity of flow at Bosher Dam to meet outstanding contracts. The quantity of water could to be taken by the upper owner would be a question to be determined by the circumstances of the specific case.

The Chesapeake and Ohio Railway Company and its lessees assert that their preferential rights to waters in the James River diverted to the canal are not based on riparian concepts but are created by legislative mandate. They feel that the canal is being maintained by mandate of the legislature and leases are being entered into and perpetuated pursuant to the authorization of the legislature. To accept this argument is to imply from the wording of the statute that the legislature intended to carve out an exception to the general fabric of the riparian doctrine which has governed water rights in this area since Colonial times. The language of the statute is not conclusive and the historical background permits other permissible inferences.

The purpose of the original canal was to provide water transportation designed to open up other areas of the State to development and convenience. It never reached its potential because of the improved advantages of the railroads. The clear intent of the legislature, by its various acts, was

to preserve the existing industries which relied on canal water for supply or power. It is questionable whether the legislature in so doing intended to provide an advantage to the select few who derive title by virtue of authorization given the predecessor in title of the Chesapeake and Ohio Railway Company. It would seem that the legislature would not leave such a major departure from the basic water law doctrine of State to mere inference and not clearly enunciate it. A logical inference would be that the legislature only sought to preserve what was already developing and did not intent to preempt the right to use water in the James River in a manner inconsistent with the water doctrine prevailing in the remainder of the State. Support for this interpretation is found in the language of Section 12, of the original act passed in 1874, "and it is the intention of this Act, not to interfere with private property." Water rights have long been considered as property in this jurisdiction. This clause has never been interpreted by the courts but to construe the general language of the statute as carrying out an exception to the riparian doctrine negates the express intent of the legislature not to interfere with private property.

A discussion of water rights of the James River could not be complete without considering the language of the Old Dominion case. The court by express stipulation restricted its decision to a small portion of the James River.

> *[W]e will, therefore confine our consideration exclusively to the rights of the State in James river above tide water and between the termini of James River and Kanawha canal.*[285]

The court refused to recognize the water rights asserted by the appellant because the appellant and its predecessors in title had stood by in silence for a period of over 125 years and seen numerous acts passed by the legislature confering such rights to divert the water in the several successors of the James River Company without a word of protest against the right of the State to control and dispose of such water.

> *If appellant had ever possessed the rights it now asserts, a court of equity, under such circumstances of silence and acquiesence in the openly asserted rights of others, would not lend its aid to the destruction of the vast property rights and priv-*

[285]Old Dominion Iron and Nail Co. v. C. & O. Ry., 116 Va. 166, 170, 81 S.E. 108 (1914).

ileges that have become vested on the faith of the State's ownership and control of the waters of James river and its right to dispose of the same in its descretion.[286]

Although it may be agreed that large investments had been made in reliance upon these contracts, the firms involved are in no worse position than others who locate on Virginia streams knowing that their reasonable use of a quantity of water today may not be a reasonable quantity under tomorrow's circumstances. This uncertainty has been one of the more persuasive arguments for seeking modifications to the riparian doctrine.

To apply the doctrine of estoppel or laches, as expressed in the Old Dominion case, to riparians above Bosher's Dam would be to (1) expand decision of the court beyond its self imposed limits and (2) totally disregard one of the fundamental concepts in the riparian doctrine as recognized in Virginia.

A lower riparian owner cannot, by prescription, acquire, as against an upper riparian owner, the right to divert the water course, as the upper owner cannot be injured by such diversion and therefore has no legal ground to object thereto. . . .[287]

It would seem, therefore, that if the rights of the present upper riparians and their predecessors in title had not been impaired by the leases of water in the past, they had no legal grounds to object to the legislative action of the State. It seems inconceivable that due process has been accorded upper riparians if in one instance they are not permitted to assert a right against a lower riparian because the general law does not recognize that the right exists and then later to be denied relief because the nonexistant right was not asserted in due time.

It therefore appears that the uncertainty of the water rights of upper riparians on the James River will not be settled until such time as a Declaratory Judgement is sought or adverse litigants bring the question squarely before the Court of Appeals.

[286] Ibid. at p. 177.

[287] Town of Gordonsville v. Zinn, 129 Va. 542, 563, 106 S.E. 508 (1921), quoting from 30 Am. & Eng. Ency. of Law, p. 365 (2d ed.).

PERCOLATING GROUND WATER

Percolating ground water is all ground water which does not flow in a known and defined channel. The following descriptive passage is from Clinchfield Coal Corp. v. Compton:[1]

> *Percolating waters are those which ooze, seep or filter through the soil beneath the surface, without a defined channel, or in a course that is unknown and not discoverable from surface indications without excavation for that purpose. The fact that they may, in their underground course, at places come together so as to form veins or rivulets does not destroy their character as percolating waters. . . .*[2]

Thus, all underground waters will be treated as percolating, even though they may flow in well defined channels, when their courses are unknown and are not discoverable without excavation exposing them. These waters are treated as surface watercourses only when their existence can reasonably be inferred from the existing condition of the surface of the ground. Although the presumption that ground water is percolating can be overcome by proof that it flows in an underground channel, there does not appear to have been any decisions by the Virginia court which hold underground water to be other than percolating water.

The development of law of regulate the use of Virginia's percolating water has not been extensive. The court has, however, acknowledged the existence of two theories of percolating water rights.

> *The common law regarded the fee simple owner of the land as the owner of everything above and below the surface from the sky to the center of the earth, expressed in the maxim, Cujus est solum, ejus est usque ad coelum et ad inferos, and this doctrine is adhered to in England. . . .Under this doctrine, the owner of the land may make any use he pleases of underlying percolating waters, and may even cut them off maliciously without liability to his neighbor.*

[1] Clinchfield Coal Corp. v. Compton, 148 Va. 437, 139 S.E. 308 (1927).

[2] Ibid. at 446.

It is said that the earlier American cases followed this doctrine and some of them still do, but that the trend of modern opinion is in favor of the "reasonable use" rule which has come to be called the American rule. . . .The "reasonable use" rule does nor forbid the use of the percolating water for all purposes properly connected with the use, enjoyment and development of the land itself, but it does forbid maliciously cutting it off, its unnecessary waste, or withdrawal for sale or distribution for uses not connected with the beneficial enjoyment or ownership of the land from which it is taken[3]*. . . .*

The Virginia court has not been confronted with a choice between the absolute ownership and the reasonable use rule. Two early cases[4] seemed to uphold the absolute ownership theory, but the court has stated that this doctrine has not been adopted.

Miller v. Black Rock Spring Co[5]*. . . .is an ideal case of percolating water, and its interception was for domestic purposes, which was authorized on any theory of the case; but the English theory of the absolute ownership of percolating water was there approved. It was said, however, in the course of the opinion, that whether there would be liability on the defendant if cutting off the supply of percolating water was attributable to malice or negligence on the part of the defendant was a question not before the court. The facts of that case did not necessitate a choice between the English and the "American rule" as the interception of the water was warrented by either. That case was quoted with approval in Heninger v. McGinnis. . .for the proposition that the owner of the surface is owner of the underlying percolating waters. Here, again, the doctrine of "reasonable use" was not involved.*[6]

[3]Ibid. at 451-452.

[4]Miller v. Black Rock Springs Improvement Co., 99 Va. 747, 40 S.E. 27 (1901); Heninger v. McGinnis, 131 Va. 70, 108 S.E. 671 (1921).

[5]Miller v. Black Rock Springs Improvement Co., 99 Va. 747, 40 S.E. 27 (1901).

[6]Clinchfield Coal Corp. v. Compton, 148 Va. 437, 453-454, 139 S.E. 308 (1927).

The court in this case also noted that it did not have to make a choice between the two rules, and that it would consider the question de novo if presented at a later time.

One of the most recent Virginia cases concerning percolating water rights still leaves the question as to choice of rules unanswered. In C & W Coal Corp. v. Salyer,[7] the mining operations of the coal company caused the spring of an adjoining landowner to go dry. After holding the waters involved to be percolating, the court stated:

> *[T]he water is subject to the law applicable to percolating waters, and no liability in the absence of negligence, attaches to the corporation for diverting or cutting the underground stream while engaged in its mining operation .*[8]

Although the final determination of which percolating ground water doctrine will be adopted in Virginia must await a definite decision by the court, it appears that a form of the reasonable use doctrine will apply. The court has stated that the trend of modern opinion is in favor of the reasonable use rule.[9] The court's apparent attitude toward malice and waste in the use of the percolating waters of the state seems to indicate that the reasonable use rule will be adopted. The issue has not been passed on directly, but the court has made statements which indicate that malice and waste will not be permitted.[10]

A policy of preventing waste of the percolating water of the State would be consistent with certain legislative enactments. A law has been enacted which states that waste of water should be prevented.[11] Another statute attempts to prevent waste of ground water by requiring that unused artesian wells be capped.[12]

[7] C & W Coal Corp. v. Salyer, 200 Va. 18, 104 S.E. 2d 50 (1958).

[8] Ibid, at 22.

[9] Miller v. Blackrock Springs Improvement Co., 99 Va. 747, 40 S.E. 27 (1901).

[10] Ibid.; C & W Coal Corp. v. Salyer, 200 Va. 18, 104 S.E. 2d 50 (1958).

[11] Va. Code Ann., section 62.1-11 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-9.2 (Supp. 1966)].

[12] Va. Code Ann., section 10-117.1 (1964 Repl. Vol.).

Pollution of percolating waters apparently has never been given extensive consideration by the Virginia court. In one case involving pollution,[13] the court held that no liability accrued to the corporation causing the pollution because the pollution resulted from a rightful use of the corporation's property. Little information exists concerning this subject; however, it should be noted that the State Water Control Law is applicable to". . .all water, on the surface and under the ground[14]. . . .and it would appear that a person or corporation discharging pollutants into the groundwaters of the state will be required to obtain a certificate in compliance with that law.

There is room for expansion and development of the body of law which regulates the use of the percolating ground water of the state. The rights concerning many uses of water which have been legally defined for situations where the source of the water is a watercourse have been given little or no legal consideration in the case where the water involved is percolating water.

At present, the only general legal principle concerning the use of percolating water which has been established with any degree of certainty is that any reasonable, legitimate use of one's land which interferes with the flow of percolating waters to another's land produces no liability. The principle has been recognized in a group of cases[15] arising out of the destruction of springs caused by the reasonable use (mining operations) of adjoining land.

Although most of the allocation of percolating ground water is determined by the common law, private legislation is now finding its way into the statutes in an effort to resolve local disputes. During the 1966 legislative session, the following law was passed:

> *No county having a population of more than seventeen thousand but less than seventeen thousand two hundred or any*

[13] Oakwood Smokeless Coal Corp. v. Meadows, 184 Va. 168, 34 S.E. 2d 392 (1945).

[14] Va. Code Ann., section 62.1-15 (4) [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-11 (4) (1950), as amended (Supp. 1966)].

[15] C & W Coal Corp. v. Salyer, 200 Va. 18, 104 S.E. 2d 50 (1958); Couch v. Clinchfield Coal Corp., 148 Va. 455, 139 S.E. 314 (1927); Clinchfield Coal Corp. v. Compton, 148 Va. 437, 139 S.E. 308 (1927).

county having a population of more than thirty one thousand three hundred but less than thirty one thousand four hundred or city having a population of more than twelve thousand but less than thirteen thousand shall prior to June thirty, nineteen hundred sixty eight, drill or cause to be drilled for its use, directly or indirectly, any deep water well in such county or city without first obtaining the consent of the governing body of the county or city in which such well is to be drilled. For the purpose of this section, a deep water well shall be one of three hundred fifty feet or more in depth. The provisions of this section shall not apply to wells in existance or wells contracted for or which are in the process of being constructed prior to March one, nineteen hundred sixty six.[16]

16Va. Code Ann., section 15.1-33 (Virginia, Acts of Assembly, 1966 session, chapter 248, p. 424).

DIFFUSED SURFACE WATER

The term "diffused surface water" is normally applied to that water which spreads over the surface of the ground without confinement in a bed or banks. The Court has set forth the following definition of "surface water:"

> *[S]urface water. . .is defined to be that which is diffused over the surface of the ground, derived from falling rains and melting snow, and continues to be such until it reaches some well defined channel. . . .*[1]

Most legal emphasis has been placed on surface water in connection with the landowner's right to protect his property from such water. Virginia purports to follow the "common enemy" doctrine in this regard.

> *Where the common law is in force, as in this State, surface water is considered a common enemy, and the courts agree that each landowner may fight it off as best he may. He may obstruct or hinder its flow, and may even turn it back upon the land of his neighbor, whence it came. This results from the dominion the law gives to him over his land.*
>
> *His right to it extends beneath the surface to the centre [sic] of the earth, and above it to the skies. He is entitled to the free and unfettered control of it above, upon, and beneath the surface, and can not be held liable for any injury which its reasonable use and enjoyment may cause to other lands in interrupting the flow of surface water. He may change the surface of his own land, or errect buildings or other structures upon it, and thus restrain or divert the surface water which may accumulate on adjacent lands from falling rains and melting snows, without being made liable therefor to their owners. . . .*[2]

However, Virginia has not adhered strictly to the "common enemy" doctrine. The court has subjected the doctrine to some extensive modifications.

> *This right in regard to surface water may not be exercised wantonly, unnecessarily, or carelessly; but is modified by that golden maxim of the law, that one must so use his own property as not to injure the rights of another. It must be a reasonable use of the land for its improvement or better enjoyment, and the right*

[1] Howlett v. City of South Norfolk, 193 Va. 564, 568; 69 S.E. 2d 346 (1952).

[2] Norfolk & W. R.R. v. Carter, 91 Va. 587, 592 22 S.E. 517 (1895).

must be exercised in good faith, with no purpose to abridge or interfere with the rights of others, and with such care with respect to the property that may be affected by the use or improvement as not to inflict any injury beyond what is necessary, Where the exercise of the right is thus guarded, although injury may result to the land of another, he is without remedy. . . .[3]

In addition to the above modifications, there are limitations on the rights of a property owner to free his land of surface water to the injury of others.

The right thus modified, has also its exceptions. One exception is that the owner of the land can not collect the water into an aritficial channel or volume and pour it upon the land of another to his injury. The right to fend off surface water does not extend that far. . . .[4]

The following passage sets forth the court's reasoning behind the above limitation:

[A] landowner cannot collect surface water into an artificial channel or volume, or precipitate it in greatly increased or unnatural quantities upon his neighbor to the substantial injury of the latter. This is true although no more water is collected than would have naturally flowed upon the property in a different condition for it is evident that, while a given piece of land may receive a large amount of surface water without injury thereto when it flows gently thereon from natural causes, yet when collected and discharged in considerable volume at a given point, it may become very destructive and injurious.[5]

Still another limitation is set forth in the following quotation:

Another exception to the right. . . is that the owner of the land can not interfere with the flow of surface water in a natural channel or watercourse. Where the water has been accustomed to gather and flow along a well defined channel, which by

[3] Ibid. at 592-93.

[4] Ibid. at 593.

[5] Third Buckingham Community, Inc. v. Anderson, 178 Va. 478, 486, 17 S.E. 2d 433 (1941), quoting from 27 R. C. L. sec. 79 at 1152.

frequent running it has worn or cut into the soil, he may not obstruct or divert it to the injury of another. . . .[6]

Although Virginia does purport to follow the common enemy doctrine, it is apparent that a property owner is in fact extremely limited to his right to interfere with the flow of surface water, espicially where injury to another is involved.

One situation in which a property owner normally may rely on the common enemy doctrine is in the construction of buildings on his property.

Although there is authority to the contrary, it has been generally held, either pursuant to the common-law rule or as an exception to the civil-law rule, that the owner of a lot in a city or town may make changes or alterations in the surface thereof essential to its enjoyment regardless of the effect on the flow of surface waters, provided he has not been negligent; . . . [7]

In Harris Motor Co. v. Pulaski Funiture Co.[8] the court said that the denial of the right of a property owner to construct a building on his land in the normal and customary manner would destroy the rule that surface water is a common enemy which each owner may fight off as best he can. But the court added that it did not mean to imply that negligent erection of a building would not produce liability. The primary principle upon which the determination of liability is based is whether the actor practically could have avoided the injury in whole or in part without undue hardship.[9]

Railroad companies and municipalities have frequently been involved in litigation concerning the flow of surface water. In the case of railroads, the general principle involving surface waters are usually applicable, but the court had to consider some special problems which arise due to the special nature of some railroad construction. Municipalities present special problems because of the sovereignty which is attached to them as governmental entities.

[6]Norfolk & W. R.R. v. Carter, 91 Va. 587, 593-594, 22 S.E. 517 (1895); See section concerned with natural watercourse law for definition of a natural watercourse.

[7]Mason v. Lamb, 189 Va. 348, 356, 53 S.E. 2d 7 (1949), quoting from 67 C.J., Waters, sec. 292, at 869. See also Harris Motor Co. v. Pulaski Funiture Co. 151 Va. 125, 144 S.E. 414 (1928).

[8]Harris Motor Co. v. Pulaski Funiture Co., 151 Va. 125, 144 S.E. 414 (1928).

[9]McGehee v. Tidewater Ry., 108 Va. 508, 62 S.E. 356 (1908); Raleigh Court Corp. v. Faucett, 140 Va. 126, 124 S.E. 433 (1924); See:, "Note: Surface Water Law in Virginia," Va. Law Review, Vol. 44, No. 1, p. 135.

The majority of surface water litigations involving railroads have dealt with embankments. The court has held that these disputes are to be treated as if they were disputes between private individuals. The court, after explaining the general rule concerning surface waters, made the following statement concerning railroads in particular:

> *And this right is possessed by a railroad company in respect to its right of way as well as by any other owner of real estate. It enjoys the same priviledges as any other owner of land, no greater, but no less.*[10]

Railroads have been held to have a duty to supply reasonably adequate means of escape for surface water, even when the water was not flowing in a well defined channel worn or cut into the soil. The question of whether the railroad adequately fulfilled this duty is a question of fact to be submitted to the jury.[11]

Most disputes involving municipalities have arisen due to damage to property resulting from street construction or improvement. The general rule is that adjoining property owners are not entitled to compensation for surface water damage which results as an incident or consequence of the municipality's power to determine what grades are necessary for its streets; however, the municipality is liable for damages which result from the negligent construction or improvement of its streets.[12]

> *[A] city, in adopting a plan for the improvement of its streets, or other public works, acts in a governmental capacity, but in the construction and maintenance of such improvements, it acts in a ministerial or proprietory capacity, and is laible for damages caused by its negligence. . . .*[13]

The question of whether a municipality was negligent in the construction or improvement of a street is a question of fact to be determined by a jury after consideration of the reasonableness of the provisions made by the municipality for drainage.[14]

[10] Norfolk & W. R.R. v. Carter, 91 Va. 587, 592, 22 S.E. 517 (1895).

[11] McGehee v. Tidewater Ry., 108 Va. 508, 62 S.E., 356 (1908).

[12] Smith v. City Council, 33 Gratt. (74 Va.) 208 (1880).

[13] Howlett v. City of South Norfolk, 193 Va. 564, 567, 69 S.E. 2d 346 (1952); See also, Hoggard v. City of Richmond, 172 Va. 145, 200 S.E. 610 (1939); City of Norfolk v. Hall, 175 Va. 545, 9 S.E. 2d 356 (1940). See also Town of Farmville v. Wells, 127 Va. 528, 103 S.E. 596 (1920).

[14] Town of Farmville v. Wells, 127 Va. 545, 103 S.E. 596 (1920). See also Powell v. Town of wytheville, 95 Va. 73, 27 S.E. 805 (1897).

Although the case law involving surface water is concerned with the disposal of the water rather than the use of it, there is a statutory provision for the capture and impoundment of surface water.

> *Diffused surface waters may be captured and impounded by the owner of the land on which they are present and, when so impounded, become the property of that owner. Such impoundment shall not cause damage to others.*[15]

This statute makes the water the property of the impounder, but there are no interpreting court decisions on the matter as yet. However, one apparent restriction is the limitation concerning the interference with surface water collected into a channel worn into the soil.[16]

[15]Va. Code Ann., section 62.1-105 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-94.2 (Supp. 1966)].

[16]Norfolk & W. R.R. v. Carter, 91 Va. 587, 22 S.E. 517 (1895).

OTHER WATER SOURCES

Underground Watercourses

The legal principles applicable to underground watercourses are almost identical to those which apply to surface watercourses. The primary difference concerns the requirements for establishing the existence and location of an underground watercourse.

> *If the underground water flows in a stream with a well defined channel, and its existance, location and course is known or knowable from external facts, then the same rules apply as if the stream were upon the surface.*
>
> *'The distinction between rights in surface and subterraneous streams is not founded on the fact of their location above or below ground, but on the fact of knowledge, actual or acquirable, of their existence, location and course,. . . .'*[1]
>
> *In order to charge the owner of the surface with liability for disturbing the flow of an underground stream, its existence, location and flow must in some way be made to appear from the surface of the earth; and the appearance must be such only as would be reasonably discoverable by men of ordinary powers and attainments. No resort to scientific opinion is necessary.*[2]

The court has set forth a guide as to how the existence of an underground stream may be known. Surface depressions extending in a line on either side of a spring of considerable volume and a stream which sinks into the ground and then reappears some distance away are two of the methods of determining the existence of the underground stream.[3] Without this proof of the existence of an underground watercourse, all ground water is assumed to be percolating.[4]

Tidal Waters

The general principles of the law applicable to the rights in tidal waters are primarily the same as those concerning water rights in publicly owned watercourses. However, due to the different physical natures of these two

[1] Clinchfield Coal Corp. v. Compton, 148 Va. 437, 447, 139 S.E. 308 (1927).

[2] Ibid. at 449.

[3] Ibid.

[4] Ibid. at 448.

types of water, the details of certain aspects of the law relating to tidal waters are somewhat different. In the case of watercourses, much of the law is related to consumptive water uses, but in the case of tidal waters, almost all of the emphasis is on nonconsumptive uses. Therefore the principles that exist to regulate diversion and other similar aspects of water rights in watercourses will have no application to tidal waters. At the same time, the legal principles concerning certain other water rights are expanded and more completely developed as they apply to tidal waters.

The tidal waters are owned by the State;[5] therefore they are subject to control by the State which is limited only by the rights granted to the United States in the Constitution:[6] With the exception of the public right to navigation, all rights in the tidal waters arise by grants from the State and are held subject to the State's proprietary powers of control.[7]

The grants which are made in the exercise of the State's proprietary rights in the tidal waters are of several types. The major uses authorized by the State include the discharge of polluting materials into these waters, fishery operations, the use of the beds of these waters and port operations.

POLLUTION

The pollution of the tidal waters is under the control of the State Water Control Board, which also regulates pollution of watercourses (discussed in a previous section). In addition, the Sanitation Districts Law of 1938[8] prohibits the discharge of polluting matter into the waters of a sanitation district created by Law.[9] Another statute having bearing on pollution prohibits the discharge of oil into the navigable tidal waters of the State.[10]

The principles of the common law which still serve to protect private rights from injury by pollution are somewhat different from those relating to the pollution of watercourses.

[5]McCready v. Virginia, 94 U.S. 391 (1876); Taylor v. Commonwealth, 102 Va. 759, 47 S.E. 875 (1904); Newport News S. & D. E. Co. v. Jones, 105 Va. 503, 54 S.E. 314 (1906); City of Hampton v. Watson, 119 Va. 95, 89 S.E. 81 (1916); Darling v. City of Newport News, 123 Va. 14, 96 S.E. 307 (1918); Commonwealth v. City of Newport News, 158 Va. 521, 164 S.E. 689 (1932); Avery v. Beale, 195 Va. 690, 80 S.E. 2d 584 (1954).

[6]Commonwealth v. City of Newport News, 158 Va. 521, 164 S.E. 689 (1932).

[7]Darling v. City of Newport News, 123 Va. 14, 96 S.E. 307 (1918); City of Hampton v. Watson, 119 Va. 95, 89 S.E. (1916).

[8]Virginia, Code sections 21-141 to -223 (1960), as amended, (Supp. 1966).

[9]Ibid., section 21-218 (1960).

[10]Ibid., section 62.1-195 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-194 (Supp. 1966)].

There is however, a marked and well established distinction between the pollution of a small non-navigable stream and the pollution of large tidal, navigable bodies of salt water, for the reason that in the first case the bed of the stream and the waters are owned by the riparian owners, while in the latter case it is well settled that the bed of the navigable, tidal salt water and the waters themselves are owned and controlled by the State, for the use and benefit of all the public, subject only to navigation. It is for the State to say what uses shall be made thereof and by whom, subject always to the right of the public, and for the State, through the legislative branch of the government, to say how much pollution it will permit to be emptied into and upon its waters, so long as the owners of the land between low water and high water are not injured, ...[11]

Thus, pollution of tidal waters, in order to give rise to a remedy under the riparian doctrine, must cause damage to property above low water mark. In accord with this principle, the court has held that damage to oyster beds below low water mark produces no liability.[12] However, pollution which causes offensive and disagreeable odors that damage riparian rights constitutes a nuisance and is unlawful.[13]

FISHING

The right of fishery in the tidal waters is an incident to the proprietory rights of the state, and is, therefore, subject to absolute control and regulation by the Legislature. The court has recognized the State's right:

[T]he right of fishery in tidal waters in an incident of the jus privatum of the State, and is not an inherent and inseparable incident of its jus publicum; and the State legislature, in the absence of any constitutional provision on the subject, has the right to take away such right or authorize, permit or suffer its tidal waters or their bottoms to be used for purposes which impair or even destroy their use for purposes of fishery, and may lease, or sell to private persons portions of its tidal bottoms with the right to use them for private purposes to the exclusion of the use of the waters thereover for purposes of fishery. . . .[14]

[11]City of Hampton v. Watson, 119 Va. 95, 98, 89 S.E. 81 (1916).

[12]Darling v. City of Newport News, 123 Va. 14 96 S.E. 307 (1918); City of Hampton v. Watson, 119 Va. 95, 89 S.E. 81 (1916).

[13]G. L. Webster Co. Inc., v. Steelman, 172 Va. 342, 1 S.E. 2d 305 (1939)

[14]Commonwealth v. City of Newport News, 158 Va. 521, 552, 164 S.E. 689 (1932).

Statutory provisions which regulate the right of fishery (including shellfish) in the tidal waters of the State are included in sections 28.1-1 through 28.1-79 of the 1950 Virginia Code.

BED RIGHTS

The rights concerning the use of the beds of tidal waters are quite similar to those that exist in the case of publicly owned watercourses. As in the case of public watercourses, the private ownership of property and the exclusive rights of the use that depend on ownership extend to low water mark.[15] Beyond low water mark, many rights of use are shared by the riparian owner with the general public.

The possibility of the existence of some of the public or common lands discussed in the section concerning rights in the beds of watercourses complicates the issue of ownership of the land between low and high water mark on tidal waters. The Act of 1819 which originally extended boundaries to low water mark specifically preserved the public right of fishing, fowling, and hunting on the lands that has been "used as a common."[16] These common lands were exempted from grant until an act in 1866 authorized their sale, and one sale at least was made thereunder.[17] An act in 1873 repealed the 1866 act but made no reference to lands used as common. It provided that all the ungranted beds of bays, rivers, creeks, and shores of the sea were to remain the property of the Commonwealth,[18] and this provision is still a statement of the existing law[19] today. Since the law now makes no reference to lands used as a common but refers to ungranted beds of bays, rivers, creeks, and shores of the sea, it can apply to the land between low and high water marks only if "shores of the sea" is defined to be this strip of land.[20] When this definition is applied, the boundary of lands lying behind such "common" lands at present does not extend to low water mark.

The court has found it necessary to establish certain principles to be followed in extending the boundaries of seaboard property from high to low

[15] Va. Code Ann., Section 62.1-2 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-2 (1950), as amended, (Supp. 1966)].

[16] Miller v. Commonwealth, 159 Va. 924, 951, 166 S.E. 557 (1932).

[17] Embrey, op. cit., pp. 204, 266. This sale was for 5,254 acres in Princess Ann County.

[18] Embry, op. cit., pp. 204-05.

[19] Va. Code Ann., section 62.1-1 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-1 (1950), as amended, (Supp. 1966)].

[20] "Shores of the sea" is so defined in French v. Bankhead, 11 Gratt (52 Va.) 136, 160 (1854).

water mark. The court has established that property lines which are straight for some distance before reaching high water mark continue in a straight line from high water mark to low water mark, unless proved to the contrary. In the event that a gut or drain intersects the extension of the boundary line from high water mark to low water mark, the boundary of property is determined by whether the gut or drain is bare at ordinary low water.[21] If the gut or drain is dry, the property extends to ordinary low water mark; if not, it terminates at the gut or drain.

The rights regarding the use of the beds of the tidal waters beyond low water mark are basically the same as those regarding the use of the beds of the public watercourses. The riparian owners still have certain rights beyond low water mark not possessed by the public. These rights include the right of access to the line of navigation,[22] the right to accretions,[23] the right to dredge deposits of sand or gravel which extend beyond low water mark,[24] and the right to priority of location for their duck blinds.[25] The beds of the tidal waters are subject to being granted by the State for private use as are the beds of the public watercourses.[26]

One of the most important types of grants made in these beds are those made for shellfish planting purposes. The State has recognized the importance of this use of the tidal beds, and both the court and the General Assembly have developed extensive legal principles to govern and regulate this use.

The use of the beds of the tidal waters for shellfish planting is regulated by a permit system operated by the Commission of Fisheries[27] through which individuals or corporations can have certain areas of bed assigned to them for private use to the exclusion of all others. Shellfish planting and propagation in the natural oyster beds, rocks, and shoals of the State as defined by law or in any other beds which have not been assigned according to law is unlawful.

> *It shall be unlawful for any person to stake in or use or continue to use or occupy for the purpose of propagating or*

[21] Whealton v. Doughty, 112 Va. 649, 72 S.E. 112 (1911).

[22] Cordovana v. Vipond, 198 Va. 353, 94 S.E. 2d 295 (1956).

[23] Steelman v. Field, 142 Va. 383, 128 S.E. 558 (1925).

[24] Va. Code Ann., sections 62.1-190 to -93 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-178 to -81 (1950)].

[25] Va. Code Ann., section 29-85 (1964).

[26] Ibid., sections 62.1-3 to .1-4 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-2.1 to -3.1 (Supp. 1966)].

[27] Va. Code Ann., sections 28.1-108 to -118 (1964), as amended, (Supp. 1966).

planting oysters or shells any natural oyster bed, rock, or shoal, as defined by law, or any bottom which has not been assigned to him according to law, or any public clamming or scalloping grounds which have been set aside as such. The inspector for that district or any other officer of the Commission of Fisheries, shall require any such person to remove all stakes, watchhouses, or other obstructions from the natural beds, rocks, or shoals or from any bottom which has not been assigned to him according to law; failure to remove such stakes or other obstructions within ten days of the notice in writing is received by said person shall constitute a separate and additional unlawful act and violation of this title of the Code of Virginia, and the stakes and other obstructions shall be removed by the inspector or other officer of the Commission at the cost of the person unlawfully placing or having placed said stakes or other obstructions.[28]

The natural oyster beds, rocks, and shoals are defined by a survey (known as the Baylor survey) made in pursuance of an 1892 act of the General Assembly. This survey embraces all the natural oyster beds, rocks and shoals of the State and is conclusive evidence of their boundaries.[29] The Commission of Fisheries may reestablish, relocate, and remark all lines of the survey which cannot be otherwise relocated because of the loss or destruction of marks which formerly existed. Baylor survey charts and plats are available for purchase by the public from the Commission of Fisheries.[30]

Statutory provisions which regulate the shellfish planting assignments give special consideration to riparian owners. Such owners meeting certain qualifications may be assigned 1/2 acre beyond the low water mark to plant shellfish. There is no cost to the owner for this right. The right to plant the assigned 1/2 acre is an exclusive right connected with the land, and as such, is not severable from the land.[31]

The 1/2 acre of shellfish planting grounds granted each riparian owner must be located in a reasonable manner so as not to interfere with the rights of others. The court has held that where there is a conflict between the statutory right to locate this 1/2 acre and a previous lease by the State

[28] Ibid., section 28.1-111 (1964).

[29] Ibid., section 28.1-100, as amended, (Supp. 1966).

[30] Ibid., section 28.1-101.

[31] Ibid., section 28.1-108.

to locate an artesian well in the bed of a navigable stream, the 1/2 acre must be located so as not to interfere with the well if the 1/2 acre could be located elsewhere equally beneficially.[32]

With certain specified exceptions, the remainder of the public beds of the tidal waters not assigned to riparian owners is subject ot assignment to any eligible applicant.[33] A lease from the State under the shellfish planting laws gives the holder the exclusive right to use the property for shellfish planting and propagation, but he may not use it for any other purpose. In the court's words:

> *[T]he lease [under the Virginia oyster law] is made only "for the purpose of planting and propagating oysters thereon," and it is for this purpose alone that the planter is authorized to use and occupy such ground– that is to say, that while any citizen might have taken oysters therefrom before the grant, afterwards he only may do so and all others are excluded from either planting or taking oysters from such ground during his term; this marks the limit of his right, for there is nothing to indicate that any other public or private right is withdrawn, limited or curtailed. He does not take a fee simple title, nor can he use the property for any other purpose except for that stated in the statute, and hence every other right theretofore in the public is preserved. Nor is there any language in the statute indicating any intent to destroy or impair any of the ancient rights of the riparian owners.*[34]

The holder of a shellfish planting lease takes his rights subject to certain rights of others to use the beds of tidal waters. One such superior right is the right of a riparian owner to have access to the line of navigation. The leased planting area is to be relocated if the riparian owner desires and does build docks, warves, etc., that cross the planting area.[35]

Another such superior right is the right of a municipality to drain their waste into the tidal waters unless otherwise prohibited by law. The court has held that damage to oyster beds resulting from such drainage is not a violation of the private rights of the person holding the lease.[36] A consistent decision was reached in a 1918 case where the following statement was made:

[32]Taylor v. Commonwealth, 102 Va. 759, 47 S.E. 875 (1904).

[33]Virginia, Code, section 28.1-109 (1950), as amended, (Supp. 1966).

[34]Darling v. City of Newport News, 123 Va. 14, 18-19, 96 S.E. 307 (1918).

[35]Va. Code Ann., section 28.1-118 (1964).

[36]City of Hampton v. Watson, 119 Va. 95, 89 S.E. 81 (1916).

[T]he oyster planter takes his right to plant and propagate oysters on the public domain of the Commonwealth in the tidal waters, subject to the ancient right of the riparian owners to drain the harmful refuse of the land into the sea, which is the sewer provided therefor by nature; . . . . [37]

It also has been held that the right to plant oysters in the public waters is inferior to the right of a shipbuilding company to carry out dredging and filling operations incidential to its charter powers. The result was reached when an oyster bed was leased and located in front of the Newport News Shipbuilding and Drydock Company. The court held that the shipbuilding company, in causing injury to the oyster bed by its dredging operations, created no liability. The company had prior and superior rights.[38]

Shellfish operations are controlled by special provisions of the Virginia Code. These sections concern seasons, harvesting methods, areas, and other related aspects.[39]

PORTS

The general control and supervision of the State's ports are under the jurisdiction of the Virginia State Ports Authority, a corporate body created by statute.[40]

The Authority exercises the following rights and discharges the following duties subject to the regulation and/or control of the United States government over the navigable waters of the State;

(a) To seek to effect a port co-ordination of the water terminals of the several cities within the ports of this State and their administration, and to promote a spirit of cooperation among these cities in the interest of the ports as a whole.

(b) To initiate and further plans for the development of the ports of this State and to keep informed as to the present and future requirements and needs of the ports of this State.

(c) To encourage and facilitate the creation of boards of municipal port commissioners within the ports of the State, and to cooperate and advise with such cities and towns and aid in the development of the several ports within the State, along progressive and constructive lines.

[37] Darling v. City of Newport News, 123 Va. 14, 21, 96 S.E. 207 (1918).

[38] Newport News Shipbuilding and Drydock Co. v. Jones, 105 Va. 503, 54 S.E. 314 (1906).

[39] Va. Code Ann., sections 28.1-1 to -226 (1964), as amended (Supp. 1966).

[40] Va. Code Ann., sections 62.1-128 to -47 [H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-106.1 to -106.19 (Supp. 1966)].

(d) To seek to secure the improvement of navigable tidal waters within the State, where, in its opinion, such imporvements are economically justificable.[41]

The Authority has the power to perform any act or function which will be beneficial toward the development and improvement of the harbors and seaports of the State, thereby increasing commerce, foreign and domestic.[42]

In order that coordination between cities and towns containing port facilities be attained, the act creating the Ports Authority authorizes the governing bodies of the cities and towns located on navigable tidal waters of the State to appoint boards of municipal port commissioners which may be delegated any or all of the authority of such cities and towns, respectively, with regard to the ownership, operation, and management or control of the port facilities within such cities and towns.[43]

Another statute related to the ports of the State is the act regarding federal water resource development projects.[44] The purpose of this act is the implementation of the federal act regarding these projects. The following items are to which any county, city, or town may irrevocably bind themselves as an act of local cooperation regarding such projects:

(1) To provide, free of cost to the United States the fee simple title to lands, perpetual and/or temporary easements, rights-of-way and any other interest in lands for cut-off bends, the laying of pipe lines, errection of dikes, sluiceways, spillways, dams, drains, deposit of dredged materials, and for other purposes;

(2) To alter existing structures on such areas;

(3) To simulataneously dredge designated areas not covered by the federal project when and where required;

(4) To construct and maintain public warves and public roads leading thereto;

(5) To make contributions in money or property in lieu of providing disposal areas for dredged materials;

(6) To hold the United States safe and harmless against claims for damages arising out of the project or work incident thereto;

(7) To remove sewer pipes and submarine cables;

[41] Ibid., section 62.1-133 (now sections 62-106.6).

[42] Ibid., sections 62.1-134, -135 (now sections 62-106.7, 106.8).

[43] Ibid., section 62.1-132 (now section 62-106.5).

[44] Ibid., sections 62.1-148 to -152 [now sections 62-117 to -117.5 (1950), as amended, (Supp. 1966)].

(8) To construct and maintain marine railways for the public use; and

(9) To provide or satisfy any other items or conditions of local co-operation as stipulated in the congressional document covering the particular project involved.

This section shall not be interpreted as limiting but as descriptive of the items of local co-operation, the accomplishment of which counties, cities and towns are herein authorized to irrevocably bind themselves; it being intended to authorize counties, cities and towns to comply fully and completely with all of the items of local co-operation as contemplated by Congress and as stipulated in the congressional acts or documents concerned.[45]

Statutory provision is also made for the control of vessels using the ports and other waters of the State. This statute requires the use of identification numbers of certain types of motorboats and specifies certain lights and equipment and regulates the operation of motorboats.[46] Additional information can be found in Appendix V.

Lakes

The definition of a lake is similar to that of a watercourse. The primary difference in these bodies of water is the current which is characteristic of a watercourse but does not substantially exist in lakes.[47] Artifically created reserviors are not included in this section, but are discussed in the section relating to artifically confined water.

The amount of Virginia law applicable to lakes is small, because this type of water is relatively scarce in the State. Those general legal principles normally applying to lakes are basically the same as those for watercourses.[48]

One legal principle developed specifically for application to lakes is that concerning the right to use the surface.

In the case of inland lakes where the titles of the several riparian owners include the land covered by water, they may, as a general rule, together with their lessees and licensees, use

[45] Ibid., section 62.1-149 [now section 62-117.2 (Supp. 1966)].

[46] Ibid., sections 62.1-166 to -86 (now sections 62-174.1 to -174.19).

[47] 93 C. J. S., Waters, section 103.

[48] Ibid., section 104.

the entire surface of the lake for boating and fishing, so far as they do not interfere with the reasonable use of the water by other riparian owners. . . .[49]

The court has held that the rule of common use does not apply in a situation where ownership of the bed of the lake is not based on riparian rights, but rather on deeds to definite and specific portions of the lake. The court quoted from Annot., 57 A. L. R. 2d 569, 592 as follows;

> *In cases where various parts of the soil under a private lake are owned by different persons, and in which it does not appear that ownership was based on riparian rights, it has generally been held that each owner has exclusive rights to the use of the surface of the water over his land, or at least that the owner of a larger portion can exclude from it the owner of a small protion.*[50]
>
> *We hold that the complainants have exclusive control and use of the waters above their portions of the bed of the pond, and that they have the right to erect a fence on their boundary line across the pond to prohibit others from boating, fishing and trapping on their property.*[51]

Statutory regulations regarding the regulation of commercial and pleasure boats are included in Appendix V.

Springs

There is no separate and distinct body of law which applies solely to springs. Because of their physical nature, the applicable law is a combination of both surface and ground water doctrines. The law applicable to the water while it is "upstream" from the spring can be considerably different from the law which is applicable to the same water after it passes from the Spring.

The rights of the owner of a spring in its flow of water as against upper land owners from whose property the water flows depends on the nature of the underground flow. This flow can take the form of either an underground watercourse or percolating ground water.

If the flow leading to a spring takes the form of an underground watercourse, the upper land owner is entitled to a reasonable use of the water

[49] Improved Realty Corp. v. Sowers, 195 Va. 317, 323, 78 S.E. 2d 588 (1953). See also Wichkouski v. Swift, 203 Va. 467, 469, 124 S.E. 2d 892 (1962). Both the above cases quote with approval from 22 Am. Jur., Fish and Fisheries, section 21.

[50] Wichouski v. Swift, 203 Va. 467, 470, 124 S.E. 2d 892 (1962), quoting from 57 A.L.R. 2d 569, 592, section 10.

[51] Ibid. at 471.

only,[52] a relative matter dependent on the circumstances of each individual situation.

If the flow to a spring does not take the form of an underground watercourse, the rules of the percolating ground water doctrine are applicable. The development of this doctrine is incomplete, but certain of its aspects which relate to springs have been given consideration by the court.

One of the most important principles concerning the rights to the continuance of flow from a spring is that a reasonable, legitimate use of property which destroys an adjoining landowner's spring supplied by percolating water produces no liability. Although this principle has been held to apply to any reasonable use of property,[53] it has been developed primarily in a group of cases dealing with the destruction of springs by mining operations on the adjoining land.[54]

However, the court has indicated that one mining coal beneath land whose surface is owned by another is liable for damages to a spring when the damage is through failure to support the surface property.

> *"The owner of the coal is liable to the surface owner if a spring is ruined through failure to support the surface properly, but not where the injury to the spring is caused by the mining operations when the support to the surface is sufficient."*[55]

The rights of a spring owner to use its water against a lower property owner are dependent on the nature of the downstream flow. This downstream flow may take any of several forms. The water may flow on the surface in a defined channel as a natural watercourse, it may spread out over the land and flow as diffused surface water, or it may go underground and take the form of either an underground watercourse or per-

[52] Miller v. Black Rock Springs Improvement Co., 99 Va. 747, 40 S.E. 27, 86 Am. St. Rep. 924 (1901).

[53] Couch v. Clinchfield Coal Corp., 148 Va. 455, 139 S.E. 314 (1927).

[54] Clinchfield Coal Corp. v. Compton, 148 Va. 437, 139 S.E. 308, 55 A. L. R. 1376 (1927); Couch v. Clinchfield Coal Corp., 148 Va. 455, 139 S.E. 314 (1927); Oakwood Smokeless Coal Corp. v. Meadows, 184 Va. 168, 34 S.E. 2d 392 (1945); C. & W. Coal Corp. v. Salyer, 200 Va. 18, 140 S.E. 3d 50 (1958).

[55] Stonegap Colliery Co. v. Hamilton, 119 Va. 271, 296-97, 89 S.E. 305 (1916); See also, Kerr v. Clinchfield Coal Corp., 169 Va. 149, 157, 192 S.E. 714 (1937). Both cases quote from Gumbert v. Kilgore, 6 Cent. Rep. 406.

colating ground water. The applicable law in any particular situation will be that which applies to the general category of flow into which the given flow falls. The court has resolved rights in all these forms of flow except the one involving diffused surface water flow from a spring.

If the flow is in the form of a surface watercourse, the court has held that the water of the spring itself is to be treated the same as the water of the watercourse.

> *Though the diversion of the water is made from a spring, yet it appears that the spring is a source of the stream. Therefore, a diversion of the water from the spring is nevertheless a diversion of the stream.*[56]

When the water of the spring passes back into the ground, ground water law will apply. If the water flows from the spring in a marked channel and then goes by an underground channel, reappearing in such a manner that it is identifiable, the owner of the spring will be limited to a reasonable use of the water in the spring, and he will not be allowed to interfere with the natural flow of the water beyond this reasonable use. However, if the water disappears wholly on the spring owner's property, and reappears on other property only as seepage, or if the water cannot be later identified with that of the spring, the owner of the spring may dispose of the water as he so desires.[57]

[56]Town of Purcellville v. Potts, 179 Va. 514, 522, 19 S.E. 2d 700 (1942), quoting from Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535 (1913).

[57]Henninger v. McGinnis, 131 Va. 70, 108 S.E. 671 (1921).

ARTIFICALLY CONFINED WATER

The law that applies to artificially confined water differs somewhat from that which is applicable to water in its natural state. Some types of confinement reduce water to private property, and the laws that regulate its use while in the natural state are, therefore, limited in applicability. The laws of personal property have an important part in regulating the use of such water, and the rights that attach to it are often established by contract. The extent of the difference between the law applicable to artificially confined water and that applicable to water in its natural state is dependent on the nature of the artificial confinement. Water can be artificially confined in (1) ponds and artificial lakes, (2) artificial channels and drains, and (3) water and sewer works.

Ponds and Artificial Lakes

The legal rights associated with ponds and artificial lakes are determined by the source of the impounded water. When the source of the water is a natural watercourse, the rights in the impounded waters are governed by the rules of law applicable to the rights in the watercourse. Thus, the owner of land on which such a pond is located is not the owner of the water and is entitled only to a reasonable use thereof.[1] When the source of the water is diffused surface water, the rights in the impounded waters are more absolute since such waters are the private property of the landowner.[2]

Artificial Channels and Drains

The law concerning water in artificial channels is considerably different from that applicable to water flowing in a natural watercourse. The nature of the difference is indicated by the following passage from a case involving the water flowing in a waste race of a mill.

> *The natural corporeal right in question [to the uninterrupted flow of water in a channel] is possessed by riparian owners of land on natural channels of watercourses only. Such right does not exist in the water flowing in an artificial channel. The right, of those owning land bordering upon or*

[1] 93 C. J. S., Waters, section 145.

[2] Virginia, Code, section 62.1-105 (H 277, April 5, 1968, becomes effective October 1, 1968; (now section 62-94.2 (Supp. 1966)).

through which artificial channels pass, to the use of the water flowing therein, is not a natural right, nor a corporeal right, but an incorporeal right, which can be acquired only by grant, express or implied, or by prescription. . . .[3]

The principle that no riparian rights attach to water in a canal has been consistently upheld in Virginia. There have been a number of cases to come before the court of appeals involving rights in such water, and the only rights which have been recognized have been those based on contracts or franchises.[4]

Construction of artificial channels and other drainage works on or through land owned by others requires special legal authorization. There are several methods by which such authority can or has been obtained. At an early period in Virginia history, when navigation was of greater importance as a means of transportation, certain canal construction was authorized by direct act of the state legislature. An example of such a canal was one constructed along the banks of the James River. An act passed as early as 1784[5] authorized the creation of a special company to construct this canal.[6] Another means of obtaining the right to construct a canal is through the provisions of the Milling Act. This act permits the construction of a canal in connection with a milldam.[7] It is discussed in the section of this report dealing with obstructions in natural watercourses.

Acquisition of Drainage Rights

Individual landowners may acquire rights to drain their land through that of another by applying to the circuit court of the county or the

[3]Kirk v. Hoge, 123 Va. 519, 532, 97 S.E. 116 (1918).

[4]See, e. g., John H. Heald Co. v. C&O Ry., 168 Va. 128, 190 S.E. 325 (1937); Johnson v. Lake Drummond Canal and Water Co., 125 Va. 139, 99 S.E. 771 (1919); Hurt & Son v. Myers, 83 Va. 167, 1 S.E. 911 (1887).

[5]11 Hen. Stat. 450.

[6]The authority vested in this company and its successors by the state is discussed in Old Dominion Iron and Nail Co. v. C&O Ry., 116 Va. 166, 81 S.E. 108 (1914).

[7]Va. Code Ann., section 62. 1-116 (H 277, April 5, 1968, becomes effective October 1, 1968; now Code section 62-95, (1950).

corporation court of the city in which the whole or a part of the other land lies. If the court thinks the drainage requested is proper, it issues an order appointing five commissioners who must be freeholders, any three of which may go upon the land and ascertain and report what damages may result from the proposed drainage. The commissioners also may inquire into the mode of drainage planned by the applicant and determine if it be proper.

If the requested leave is granted, the applicant must pay or secure to the satisfaction of the parties any compensation ascertained by the commissioners and all of the costs of the proceeding.[8]

Drainage Projects Law

Special drainage projects can be established for the drainage of wet, swamp, or overflowed lands. Such projects are established by the circuit courts of Virginia when the terms and conditions of the Drainage Projects Law are satisfied.

The creation of a drainage project begins with the preparation of a petition which must be signed by 51 per cent or more of the owners who own 51 per cent or more of the land within a proposed project. When such a petition is filed with the clerk of the circuit court of any county in which a part of the lands is located, the clerk issues a summons to be served on all the landowners who have not joined in the petition, and whose lands are affected or included in the proposed drainage district to show cause why the project should not be undertaken. After determining the sufficiency of the petition, the circuit court shall appoint a board of viewers. The board shall consist of three interested resident freeholders of the proposed project who have been elected by a majority of the petitioners.

The preliminary establishment of a drainage project is based primarily on a report by the board of viewers. This report follows an examination of the affected land and sets forth the practicality and probable benefits of the proposed project. After a hearing on the report of the viewers, the court makes a decision concerning the preliminary establishment of the project.

If the circuit court makes such a preliminary establishment, the board of viewers may make a complete survey and the necessary plans and specifications to be filed with its final report. The board also has the duty of assessing the damages and benefits that will result from the project. If the court is of the opinion that the cost of construction together with the assessed damage is

[8]Virginia, Code, sections 21-428 to -432 (1960).

not greater than the benefits and increased value which will accrue to the lands, it confirms the final report of the board of viewers and declares the project to be finally established.

Lands benefited by the drainage project are assessed in direct proportion to the benefits received. These assessments constitute a lien upon the lands assessed with the payment thereof, second only to the state, county and district taxes and levies.[9]

Soil Conservation Districts Law

The Virginia Soil and Water Conservation Commission, created by the Soil Conservation Districts Law, is the agency of the State responsible for exercising the powers and performing the duties established by this law. The Commission's duties include, among others, the coordination of and assistance to the various soil and water conservation districts organized under the Soil Conservation Districts Law.

The creation of a soil and water conservation district begins with a petition to the Commission by a majority of the owners of land lying within the limits of a proposed district, which a majority of owners must also own a majority of acres of land within the limits of such proposed district. After a hearing, the Commission may deny the petition or hold a referendum to determine the practicality and feasibility of the proposed district. With the results of referendum as a guide, the Commission determines whether the district should be created, provided, however, that an affirmative answer cannot be given unless at least 2/3 of the votes cast in the referendum were cast in favor of the creation of the district.

The soil and water conservation districts organized under the provisions of this law constitute governmental subdivisions of the state and are public bodies corporate and politic. They have the power to develop comprehensive programs and plans for the conservation of soil resources and flood prevention. This power includes the right to formulate regulations governing the use of lands within the district. When these regulations are prescribed in ordinances adopted pursuant to the provisions of the Soil Conservation Districts Law, they have the force and effect of law in the district and are binding and obligatory upon all occupiers of lands within such district. These regulations may include the following: provisions requiring certain engineering operations, including the construction of terraces, terrace outlets, check dams, dikes, ponds, ditches, and other necessary structures; provisions

[9] Ibid., sections 21-292 through 21-426, (1960) as amended (Supp. 1966).

requiring observance of particular measures of cultivation; specifications of cropping programs and tillage practices to be observed; provisions for other the retirement from cultivation of highly erosive areas; and provisions for other measures which may assist in soil conservation.

Watershed improvement districts can be established within soil and water conservation districts when it is found that soil conservation will be promoted thereby. A watershed improvement district established under the provisions of this law has all the powers of the soil and water conservation district or districts in which it is situated. In addition, the law provides for a special tax which can be levied in a watershed improvement district under certain circumstances.[10]

City Public Facilities District Law

The City Public Facilities District Law[11] applies to any city having a population of more than 50,000, but less than 61,000 according to the last preceding United States census and a land area of less than 70 square miles, but more than 50 square miles.

This law authorizes the creation of certain taxing districts in cities meeting the qualifications and confers upon the governing bodies thereof power to provide certain facilities and services therein. As used in this act, "facility" or "service" means the dredging and/or bulk heading of any river, stream, creek, marsh, or other low-lying area for the convenience or improvement which may be deemed necessary or advisable for promoting and furthering health, safety or general welfare of the public in the district.

The necessary funds for carrying out the purposes for which a district is created can be raised through the issuance of bonds by the governing body of the city in which the district is located. In order to pay the charges incident to the establishment, maintenance, or operation of any facility or service provided by a district, the governing body of the city may levy taxes on property in the district subject to local taxation or levy assessments against property owners making use of such service or facility. Levies or assessments made for this purpose become a lien on the property next in succession to city taxes.

[10] Ibid., sections 21-1 to -112.21 (1960).

[11] Ibid., section 21-427.1 (includes the City Public Facilities Law by reference to Virginia, Acts of Assembly, chapter 414 (1956).

Water and Sewer Works

Since water supply and sewerage systems are so intricately related to public health, their operation is closely regulated by state law. The general supervision and control over all such waterworks in the state and the waters contained therein is exercised by the State Board of Health.[12] All sewerage systems are under the general supervision of the State Department of Health and the State Water Control Board jointly.[13]

Statutory control over public water supplies in general is given by the Public Water Supply Law.[14] This law makes the operation of public water supply systems without a written permit from the State Board of Health a punishable offense. Such permits are issued after application is made to the Board, if the proposed supply appears not to be prejudicial to the public health. If investigation reveals that a public water supply is a menace to health, the Board has authority to issue an order requiring such changes in the source of the water supply, the water works, or in the method of purification as it seems necessary. Permits issued by the Board may be specified to run for a certain definite period only, and every permit issued by the Board is revocable upon proper notice at any time it is shown by investigation that the water furnished is no longer safe for drinking or domestic use, or that the capacity of the water works in inadequate.

General statutory control over sewerage systems is provided by the State Water Control Law,[15] which is discussed in the section of this report devoted to the legal aspects of the pollution of natural watercourses. The primary control which this law exerts over the operation of sewerage systems is the requirement that discharges of sewage into the water of the state must be authorized by a certificate from the State Water Control Board.

There are several different statutes which provide authorization for the establishment and operation of water supply systems, sewerage systems or both types of systems jointly. Each of these laws enables the authority and responsibility for providing certain services to the residents of definite areas to be placed in a special body or organization. The laws are somewhat

[12] Va. Code Ann., section 62. 1-46 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, section 62-47 (Supp. 1966));

[13] Ibid., section 62.1-31 (now section 62-39 (1950)).

[14] Ibid., sections 62.1-14 to -44.1 (now sections 62-43 to -61 (1950)).

[15] Ibid., sections 62.1-45 to -63 (now sections 62-10 to -42, as amended, (Supp. 1966)).

different in the areas to which they are applicable, the types of services which can be provided, and the nature and form of the administrative agency.

Countries, Cities, and Towns

The general laws conferring powers upon the counties, cities, and towns of Virginia give them power and authority to establish and operate sewage systems and water supply systems, or to contract with private companies for these services.

The governing body of the county, city, or town which operates its own sewage or water supply system is responsible for the administration of the system. These governing bodies have the authority to make the necessary financial arrangements, including the selling of bonds; to set charges for persons using the services provided; and to establish rules and regulations regarding the operation and use of the systems, provided that the general restrictions and limitations of the state law regarding these matters are not exceeded.[16]

Public Facilities District Law

The Public Facilities District Law[17] authorizes the creation of certain districts in any county having a population density of more than 500 but less than 1,000 per square mile, and a land area of less than 70 but more than 30 square miles, or in any county having a land area of more than 30 square miles but less than 85 square miles, all according to the last preceding United States census. Also included are counties adjoining a county having a population of more than 1,000 inhabitants per square mile, which county contains an urbanized fringe of a city containing more than 500,000 inhabitants. Districts created under this law can provide the following facilities or services: sewer systems, water supply system, garbage collection system, parks, malaria control, drainage system, swimming pools, recreation areas, heating system, gas system, police protection, light systems, sidewalks, curbs and gutters, fire protection service, power systems, alleys, streets, and any other convenience or improvement deemed necessary or advisable for promoting, protecting, and furthering the public health, safety, and walfare.

[16] Va. Code Ann., sections 15.1-236 to -256 (1964), as amended (Supp. 1966).

[17] Ibid., section 21-427 (1960), as amended, (Supp. 1966) (includes the Public Facilities District Law by reference to Virginia, Acts of Assembly, chapter 93 (1946) as amended by Acts of Assembly, chapter 363 (1952)).

The powers and duties conferred or imposed by this act can be exercised and performed by the board of supervisors or other governing body of the county in which a district created under this act is located. The powers and authority of this governing body include the power to issue bonds, the power to levy taxes and assessments upon all real property in a district, and the power and authority to perform any other act needed to further the safety, health, and general welfare of the public in a district.

Virginia Water And Sewer Authorities Act

This act provides the political subdivisions of the state with the right to create water authorities, sewer authorities, sewage disposal authorities, a garbage and refuse collection and disposal authority, or any combination of parts thereof.

The governing body of a political subdivision, defined in the act as a county, municipality, and any institution or commission of the state, or the governing bodies of two or more of these subdivisions, can signify their intention to create such an authority by ordinance or resolution. This ordinance or resolution must be followed by a public hearing and under certain conditions, by a referendum. If the State Corporation Commission finds that the proceedings are conducted according to law and estimated costs and rates of proposed projects are fair and equitable, it issues a certificate of incorporation or charter and thereupon the authority is deemed to have been lawfully created.

An authority created under the provisions of this act is considered to be an instrumentality exercising public and essential governmental functions to provide for the public health and welfare and is given the necessary powers to accomplish its purposes. The powers of each authority are exercised by five members, or not less than one member from each participating political subdivision, selected in the manner and for the terms, not to exceed four years, provided by the ordinance or resolution creating the authority. Since each authority is a corporate body, it can sue and be sued, but it cannot pledge the faith and credit of the state or of any political subdivision thereof in its financial transactions.[18]

Sanitary Districts

Under the provisions of this act, the circuit court of any county or the corporation court of any city, upon proper petition, may make an order

[18] Va. Code Ann., sections 15.1-1239 to -1270 (1964).

creating a sanitary district or districts in and for the county or city. The final establishment of the district and the final determination of its boundaries are decided at a public hearing at which any interested person can answer the petition and make defense thereto.

The control of a sanitary district lies in the governing body of the county or city in which it is located. The services which can be provided in such a district by the governing body include motor vehicle parking lots, water supply, drainage, sewerage, garbage disposal, heat, light, power, gas, sidewalks, curbs, gutters, streets and street name signs, fire fighting systems, community buildings, and other recreational facilities. Sanitary districts are special taxing districts for the purposes for which created, and the governing body can levy an annual tax upon the property in the district subject to local taxation if necessary.[19]

Sanitation Districts Law of 1938 -- Tidal Waters

A sanitation district established under this law can include any integral body of territory within which are situated waters affected by the ebb and flow of the tide, provided that the boundaries of such a district meet certain specific conditions.

The initial step in the creation of such a district is the presentation of a petition complying with the requirements of this law to the circuit court of any county or the corporation court of any city which is included in whole or in part in the proposed district. The court thereupon makes an order filing the petition and fixing a day for a public hearing by such court on such petition.

If, upon such hearing, the court is satisfied that the allegations of the petition are sustained, the petition conforms to the law, the property in the proposed district will be benefited by the creation of the district, the public interest served, and the public health protected by such creation, it makes an order requiring the opening of a poll to determine the sense of the qualified voters of the proposed district. The district is legally established if a majority of the voters voting at the election vote in favor of the creation of the district.

Each district created under this law is known as a "commission." Each commission constitutes a corporation and a political subdivision of the state, established as a governmental instrumentality to provide for the

[19]Ibid., sections 21-113 to -140.2 (1960), as amended, (Supp. 1966).

public health and welfare. Each district has a board or commission, consisting of five residents of the district appointed by the governor to manage and control the functions, affairs, and property of the corporation; and to exercise all of the rights, powers, and authorities and perform all of the duties conferred or imposed upon the corporation.

The purpose of every commission is the relief of the tidal waters of the district from pollution. In order to carry out this purpose, each commission is given all the necessary powers to collect and dispose of sewage from the district. When facilities reasonably sufficient for the disposal of sewage have been provided by a commission for a part or parts of a district, and such part or parts have been bounded and described in a proper notice; no county, city, town, other public body or person can discharge into the tidal waters of that part or parts of the district any sewage, industrial wastes or other refuse which may cause or contribute to pollution.[20]

The provisions of this law are nearly identical to the provisions of the Sanitation Districts Law of 1938. The difference is that the 1938 law is applicable to territory within which are located tidal waters, and the 1946 law is applicable to territory within which are situated rivers, creeks, or other watercourses not affected by the ebb and flow of the tide.[21]

[20] Ibid., sections 21-141 to -223.

[21] Ibid., sections 21-224 to -90.

REMEDIES FOR INFRINGEMENT OF WATER RIGHTS

Two basic remedies for the infringement of water rights are actions at law for damages[1] and equity actions for injunctions.[2] The appropriate remedy in an individual case is determined by the particular circumstances of that case. Actions for damages are the most common type of relief, with injunctive relief being reserved for cases of continuing trespass or special cases for which there is no adequate remedy at law (the classical reason for equity jurisdiction).

In determining whether or not an injunction will be granted, the court weighs the injury that may accrue to one or the other party and to the public if the injunction is granted or refused. Where the granting of the injunction will cause the defendant to suffer injury excessively out of proportion to the injury suffered by the plaintiff, or if a serious detriment to the public would result, the injunction may properly be denied and the parties left to settle the matter in a law action.[3]

In many water rights cases, the injury incurred is continuous or recurrent. As a general rule of law, all damages must be recovered in one action when the act causing the injury is permanent and at once productive of all the damage which can ever result from it.[4] However, in some cases of doubt concerning the permanency of the injury, the right to bring successive actions has been upheld.[5]

> *In all cases of doubt respecting the permanency of the injury the courts are inclined to favor the right to bring successive actions. Otherwise, the effect would be to give the defendant, because of his wrongful act, the right to continue the wrong; a right equivalent to an easement. A right in land cannot be thus acquired. On the other hand, such a principle would involve*

[1] Virginia Hot Springs Co. v. McCray, 106 Va. 461, 56 S.E. 216 (1907).

[2] Akers v. Mathieson Alkali Works, 151 Va. 1, 44 S.E. 492 (1928).

[3] Akers v. Mathieson Alkali Works, 151 Va. 1, 144 S.E. 492 (1928).

[4] Virginia Hot Springs Co. v. McCray, 106 Va. 461, 56 S.E. 216 (1907).

[5] Wright v. City of Richmond, 146 Va. 835, 132 S.E. 707 (1926); Norfolk & W. Ry. v. Allen, 118 Va. 428, 87 S.E. 558 (1916); Virginian Ry. v. Jeffries, 110 Va. 471, 66 S.E. 731 (1909); American Locomotive Co. v. Hoffman, 108 Va. 363, 61 S.E. 759, 128 Am. St. Rpts. 953 (1908); Southside R. R. v. Daniel, 20 Gratt (61 Va.) 344 (1871). See also, 2 Wood Nuisances, section 869 (3d ed.).

the injustice of compelling the defendant to pay for a perpetual wrong, which he would perhaps put an end to at once on the adjudication that the erection is a nuisance.[6]

Statute of Limitations

A remedy which exists for the infringement of a water right will be lost if the injured party fails to take timely action.[7] The Virginia statute of limitations on such actions is five years.[8] It starts to run at the time the cause of action accrues to the injured party.[9] The cause of action arises at the time the injury actually occurs, regardless of the time the act which causes the injury is performed.[10]

Undoubtedly where there is a permanent structure, causing immediate damage to real estate, the cause of action at once arises, but where the damage to the real estate arises from a cause not then immediately effective, then a different principle is applicable and the cause of action does not arise until the injury can be shown. The reason and justice of this is perfectly apparent, for a plaintiff who merely feared ultimate damage to his property under such circumstances would invite defeat if he only relied upon his fears and was unable to prove any actual damage. So the courts have formulated the general rule thus: Whenever any injury, however slight it may be, is complete at the time the structure is completed, the cause of action then accrues; but whenever the structure is not legally injurious there is no cause of action until such injurious consequences occur, and it accrues at the time of such consequential injury. If the act complained of is perfectly lawful, so far as concerns the person who

[6]Norfolk & W. Ry. v. Allen, 118 Va. 428, 438, 87 S.E. 558, 561 (1916), quoting from Sutherland, Damages (3d ed). Sec 1039 at 3034.

[7]Virginia Hot Springs Co. v. McCray, 106 Va. 461, 56 S.E. 216 (1907).

[8]Va. Code Ann., section 8-24 (1957).

[9]G. L. Webster Co. v. Steelman, 172 Va. 342, 1 S.E. 2d 305 (1939); Virginia Hot Springs Co. v. McCray, 118 Va. 428, 87 S.E. 558 (1916).

[10]G. L. Webster Co. c. Steelman, 172 Va. 342, 1 S.E. 2d 305 (1939); City of Portsmouth v. Weiss, 145 Va. 94, 133 S.E. 781 (1926); Southern Ry. v. Leake, 140 Va. 438, 125 S.E. 314 (1924); Southern Ry. v. Watts, 134 Va. 503, 114 S.E. 736 (1922); Worley v. Mathieson Alkali Works, 119 Va. 862, 89 S.E. 880 (1916); Norfolk & W. Ry. v. Allen, 118 Va. 428, 87 S.E. 558 (1916); McKinney v. Trustees, 117 Va. 763, 86 S.E. 115 (1915); Virginia Hot Springs Co. v. McCray, 106 Va. 461, 56 S.E. 216 (1907).

alleges such an injury to his property, the cause of action does not accrue until he can show that such injury has been sustained....[11]

Mitigation of Damage

A person injured by the infringement of his water rights has the duty to mitigate the damage by the exercise of ordinary care. An instruction to a circuit court jury, subsequently approved by the court of appeals, stated:

> *The court instructs the jury that it is the duty of a person injured by the wrongful act of another to take such reasonable precautions to prevent increase of injury as would be taken by a reasonable man under the circumstances; and if the jury believe from the evidence that the plaintiff failed to take such precautions and that the injury which the jury may believe from the evidence the plaintiffs have suffered was thereby increased, the defendants are not responsible in damages for the amount of such increased injury. . . .*[12]

The burden of showing that the actions of the plaintiff increased the injury incurred is upon the defendant.[13]

In a case involving the diversion of a watercourse, the court discussed the limits of the duty of an injured reparian owner to minimize his damages:

> *The owner of property is not obliged to so use his own property that another may not injure it. If an injury is merely threatened, no action lies for the threat, and the property owner is under no obligation to attempt in advance to minimize the results of a wrong which may never be inflicted. If the injury is intermittent and recurrent, entire damages cannot be recovered in a single action, as the injury may never be repeated, and for that reason there is not duty resting upon the party injured to attempt to minimize its consequences. But where the injury is permanent in its character and continuous in its*

[11] Southern Ry. v. Leake, 140 Va. 438, 441, 125 S.E. 314 (1924).

[12] Arminius Chemical Co. v. Landrum, 113 Va. 7, 19-20, 73 S.E. 459, 38 L. R. A. (n.s.) 272, Am. Cas. 1913D, 1075 (1912).

[13] Ibid. at 20.

consequences, entire damages may be recovered in a single action, and the duty rests upon the injured party to minimize its consequences if it can be done at moderate expense and by the exercise of ordinary care. . . .[14]

In City of Richmond v. Cheatwood,[15] plaintiff's land was flooded on two occasions due to defendant's obstruction of a natural watercourse. The defendant contended that the plaintiff was not extitled to recover for the damages arising from the second flooding because he (plaintiff) did not build a retaining wall after the first flood in anticipation of another flood. The court held that one who has been injured does have the duty to mitigate that injury, but that he is not bound to anticipate and provide against further injuries.

[14]Norfolk & W. Ry. v. A. C. Allen & Sons, 122 Va. 603, 610, 95 S.E. 406 (1918).

[15]City of Richmond v. Cheatwood, 130 Va. 76, 107 S.E. 830 (1921).

RECOMMENDATIONS

The suggested recommendations point out deficiencies in the area of water rights and their adjudication. Feasible alternatives proposed are general in nature and are not designed to indicate specific legislation.

I. The law should recognize the interrelationships between water in the different phases of the hydrologic cycle.

When water falls to earth in the form of rain, some of its flows overland until it becomes part of lakes and streams, some infiltrates into the earth and becomes groundwater, and some immediately evaporates and passes back into the atmosphere. The completion of the hydrologic cycle requires that substantially all of this water eventually be returned to the atmosphere by evaporation, but the water is available for use while in its various phases prior to evaporation.

Sources of Usable Water - The primary sources of usable water are overland flow, confined bodies of surface water, and groundwater. Although these sources of water may appear to be independent of one another at any instant, it is evident that the supply of water from any one source ultimately has some connection with the supply in the other sources. For example, water cannot be withdrawn indefinitely from the groundwater reservior without some effect on nearby bodies of surface water, nor can overland flow be captured continuously without affect on bodies of surface water.

Recognition of Interrelationships - Law which does not recognize the interrelationships between the various phases of the hydrologic cycle does not have a sound logical basis. Consider the situation where groundwater is being pumped close to a natural watercourse. Heavy pumping of the well might have a significantly larger impact on the water available to a lower riparian than the use being made by an upper riparian. The courts in adjudicating the right to pump would be making an allocation of surface water because of the interrelationship of the phases of the hydrologic cycle, but water law which makes no recognition of these relationships would not have preceived the impact of the decision. Therefore, a realistic and meaningful regulation of rights in water requires that the applicable legal principles be cognizance of the physical laws involved.

II. There is need for a State agency to administer water rights.

The definition of water rights and the settlement of conflicts traditionally has been the duty of the courts of the State. With the increase in the number of such conflicts arising out of greater demand for

water and the more crowded court dockets, this system of water rights adjudication is rapidly becoming inadequate, and there is need for revision.

Establishment of Agency - The establishment of a agency with authority for resolving such conflicts could do much to alleviate the situation and promote efficiency. Conflicts could be resolved quickly by water law specialists. Consultation with the agency could be made compulsory before the parties to a conflict resorted to court action, or provision could be made so that courts could refer special problems to this agency for recommendations. Of course, appeal from the decisions of the agency to the courts of the State would always be available.

Emergency Powers of Agency - Special emergency powers could be bestowed upon this agency so that in time of critical shortage of water complete control of water rights could be vested in the agency for some limited period of time specified by statute. Such control would allow available water to be apportioned during these periods and much confusion and conflict avoided.

Relationships with Other Agencies - The statute creating such an agency should spell out practical and administratively feasible connections between the new and previously existing agencies. It is difficult to see how the planning aspect of water resource development and the effecting of a State water policy can be separated from the day-to-day administration of water rights. Therefore, the operations of the two agencies involved would have to be closely related if the two functions were not performed by the same agency. A formal association between this proposed agency and the State Water Control Board also would be necessary because the quantity and quality aspects of water use are not independent of one another.

Change in Nature of Water Rights - The creation of such an agency would not mean a radical departure from the basic nature of existing water rights. The control exercised by such an agency over the quantity aspects of water use could be comparable to the control exercised by the State Water Control Board over the quality aspects of water use.

III. A permit system would greatly facilitate the administration of water rights.

A permit system enacted in conjunction with legislation establishing the above proposed agency would allow a more efficient administration of water rights. At any given time, the agency in charge would know the number and nature of all major water uses and would therefore be

in a superior position to make administrative decisions to protect existing and allowing future water uses to be consistent with the available water resources.

Vested Water Rights - Vested water rights would automatically qualify for permits. This provision would be necessary in order that a Constitutional question be avoided. Minor uses of water such as those for domestic purposes and those under a certain specified amount could be exempted from the licensing requirement and allowed to exist without a permit.

Future Water Rights - Permits for future water uses could be conditioned on availability of water. Enforcement of this feature would require some modification of the common law concept concerning future water rights. At present the ownership of riparian land implies the existance of a water right which cannot be lost by non-use. Since the operation of a permit system must be based on the knowledge of all water rights existing at any given time, such a system cannot operate if these previously underclared rights are allowed to ripen into actual water uses at any time so desired by the landowners. This difficulty could be avoided by including a provision in the statute establishing the permit system which states that all water rights not in actual use at a certain time would be lost unless declared within a specified length of time. Such a provision might raise a Constitutional question, but if it were enacted and upheld by the courts, much of the confusion and insecurity of the present system could be eliminated. This insecurity is one of the basic weaknesses of the present system and is, therefore, a major reason why change seems desirable.

Beneficial Use Concept - Beneficial use should be the basis and the measure of all water uses authorized by permits. The criteria for the determination as to what constitutes beneficial use would be established by the authorizing legislation. Application of the criteria to the individual case would be by the agency. The right of appeal to the courts of the state would be open to any aggrieved party. The concept of beneficial use should not be restricted by the concept of "riparian" and "nonriparian" land. To deny nonriparian uses of water which are otherwise reasonable and beneficial solely on the basis that the use is "nonriparian" appears illogical and not in the interest of the most beneficial use of the State's water resources.

Duration and Alteration of Permits - Permits could be issued for a certain specified length of time or could have indefinite duration. However, provision should be made so that the terms of a permit could be amended or the permit revoked for good cause. The power to revoke would be desirable where beneficial use was not being made of

the water. Loss of the water right in such cases would not have to be automatic, but the law should make provisions for revoking such permits where there is an unsatisfied demand for water.

Priories - Provisions should be made in the legislation for the establishment of priories of use. The expanding economy of the State may dictate that priories be established between domestic, argicultural, and industrial uses. Eminent domain proceeding might be allowed to permit the condeming of a lower use for a higher one. Priorities should not be considered mandatory as part of the proposed permit system but provision for instituting them should be available.

IV. The rights concerning inter-basin transfers of water should be determined.

If the proposed administrative agency were to be established, it could decide this issue on the basis of the nature and effects of such transfers on an individual basis. In the absence of such an agency, the determination should be made by other means. Although such transfers would not be allowed by a strict application of the principles of the riparian doctrine which defines water rights, these transfers presently do exist and are likely to increase in the future. Their legal status should be determined while they are relatively few in number and before more water users become dependent thereon. Inter-basin transfers appear to be a logical solution to certain problem situations where adequate water is not available and should receive favorable legal consideration. However, such transfers should not be allowed to the extent that water rights in basins from which water is taken would be destroyed. Any recognition of the right to make inter-basin transfers should therefore be accompanied by legal provision for the protection of water rights in the watersheds of origin.

V. The ownership of the beds of the waters of the State and of certain lands bordering these waters should be defined.

The effect of the land grants made by the Crown of England and by the State after independence is not completely understood in all cases. The exact effect of much of the State's early land legislation is not clear. As indicated in the section of this report dealing with rights in the beds of state waters, the State supreme court has considered this issue on several occasions but has never resolved it completely. It appears that a thorough study into this matter and a final determination of this ownership would be desirable.

VI Rights in groundwater should be developed more fully.

Percolating groundwater rights are in a somewhat undefined state. Liability has never been imposed on a landowner for a use of percolating water or a use of property which consequently affected the movement of such water onto the land of an adjoining owner. The courts have indicated that interference with the supply of this water could conceivably result in liability, but they have not indicated the basis for such liability in the absence of proof that the interference was maliciously perpetrated. The absence of well defined rights in this type of water is inconsistent with the detailed nature of rights in certain other types of water (such as natural watercourses) and may be considered a basic weakness in the State's system of water law. One possible method of developing the doctrine of groundwater law is by means of a direct application of surface water law where feasible. Legislation creating a permit system, for example, could be applicable to both surface and groundwater.

VII. The over-all effect of any proposed water resource legislation on the total body of water law should be considered before its enactment.

Piecemeal legislation to solve specific problems should be avoided because of the increased possibility of its being inconsistent with the basic water policy of the State. Modification of the water laws of the State should be undertaken on a comprehensive basis.

APPENDIX I

AGENCIES AND ORGANIZATIONS HAVING AUTHORITY WITH RESPECT TO WATER RESOURCES

State Water Control Board. - Five members, appointed by the Governor, subject to confirmation by the General Assembly, constitute the Board (621-20). It exercises general supervision over the administration and enforcement of the State Water Control Law, the purposes of which are to safeguard the clean waters of the State from pollution, to prevent any increase in pollution, and to reduce existing pollution (62.1-14).

Among other duties, the Board is authorized and directed to study all problems concerned with pollution and its prevention, to establish standards of quality for waters, to conduct research to discover methods of preventing pollution, to issue certificates for the discharge of wastes, and to issue directives concerning pollution abatement (62.1-27).

Department of Health. - The State Board of Health has general supervision and control over all water supplies and waterworks in the State insofar as the sanitary and physical quality of waters furnished may affect the public health (62.1-46). The Board is charged with examining water supplies, advising authorities when requested concerning water supply, issuing permits for supplying water for domestic purposes, and requiring changes in the source of supply or other alterations deemed necessary (62.1-47 to -62). The Commissioner appoints the seven members of each commission created to manage a sanitation district on non-tidal waters (21-237) and establishes health standards for the taking and marketing of fish, shellfish, and crab meat (28.1-176).

State Corporation Commission. - The control and regulation of the development of the waters of the State under the water power development act is vested in the State Corporation Commission which licenses the construction and use of dams for generating hydroelectric energy (62.1-82; 62.1-85). It has been held that the State Corporation Commission had no jurisdiction to grant permission to erect a dam across a nonnavigable river not affecting water borne interstate commerce. (Acts 1928, c. 424, Sec. 1).– Garden Club of Virginia v. Virginia Public Service Co., 153 Va. 659, 151 S.E. 161.

The Commission issues certificated of incorporation for water authorities and sewer authorities (15.1-1246). It also enforces requirements concerning the location of installations, such as railroad bridges and overhead

wires, so as not to obstruct the navigation of any watercourse or impair or endanger its use by anyone entitled to such use (56-32; 56-362; 56-466).

Before the first day of May each year the Commission receives a report from each public service corporation in the State, which is in the business of furnishing water or heat, or light and power, listing all of its property as of the first day of the preceding January (58-607). It regulates the rates and services of such companies (56-232 to -49) and orders priorities in times of shortage (56-250).

Virginia Ports Authority. - The Authority has the duty to initiate and further plans for the development of the ports of the State. It has the powers of a body corporate and is charged with many duties to be carried out for port development (62.1-128 to -47).

Commission of Fisheries. - The Commission makes rules and regulations for commercial fishing in all tidal waters below the fall line, assigns oyster planting grounds to riparian owners and others, and licenses bathing areas in some cases (28.1-3; 28.1-108; to -09 28.1-118.1).

Commission of Game and Inland Fisheries. - Three of this Commission's responsibilities are of interest here. It is authorized to control hunting and fishing rights for all impounded water areas resulting from power development and to establish reserves (29-12). It is responsible for administering the law concerning fish ladders at dams (29-151). The Commission also administers the provisions of statute concerning motorboat operation (62.1-168).

Potomac River Basin Commission. - The Interstate Commission on the Potomac River Basin consists of three representatives of Maryland, Pennsylvania, Virginia, West Virginia, the District of Columbia, and the United States. It exists due to a compact entered into for the creation of the Potomac Valley Conservancy District, consisting of the drainage area of the Potomac River and its tributaries, in an effort to coordinate and expedite the abatement of pollution in the streams of the District. It collects and disseminates information, cooperates with appropriate agencies, and makes pertinent recommendations (62.1-65).

Virginia's three representatives, appointed by the Governor, constitute the Potomac River Basin Commission of Virginia (62.1-66).

Ohio River Valley Water Sanitation Commission. - The Ohio River Valley Water Sanitation District was created by a compact between the

affected states entered into for the purpose of abating existing pollution and controlling future pollution of the streams in the Ohio drainage basin. Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia are the signatory states. The Ohio River Valley Water Sanitation Commission consists of three commissioners from each state and three representing the United States government. Additional state representation is provided by members of committees.

This Commission has greater power than that for the Potomac River in that, in addition to functions which are similar, it may issue orders concerning the abatement of pollution to offending municipalities, corporations, or persons (62.1-71).

The three commissioners from Virginia are appointed by the Governor, subject to confirmation by the General Assembly, from the membership of the State Water Control Board (62.1-73).

Highway Commission. - Some of the functions of this agency affect water resources. The Commission may acquire ferries, and the necessary facilities, which form connecting links in highways and may grant or withhold permission to erect certain bridges over navigable waters (32-209; 33-221).

The Commissioner has the right to acquire such rights in oyster grounds as may be necessary and may take, or authorize the taking of, road materials from waters in which title to the bed is in the Commonwealth (28.1-115; 33-69). He also acts on plans of public service corporations for the alteration, closing, or obstruction of a highway or a stream (56-32).

Counties, Cities, and Towns. - The counties, cities, and towns of Virginia may acquire, own, and operate their own water works, gas works, electric plants, and other public utilities (15.1-292). They may, either alone or in combination, signify the intention to create a water authority or a sewer authority (15.1-1241). They may adopt resolutions joining in petitions for the creation of a proposed sanitation district for the relief of the waters of the district from pollution and the consequent improvement of conditions affecting the public health (21-153; 21-169; 21-236; 21-249) .Counties may construct, maintain, and operate water supply, sewage, garbage removal and disposal, heat, light, fire fighting equipment, power and gas systems, and sidewalks for the use and benefit of the public in a sanitary district after the creation of the district (21-118). [NOTE: The Public Facilities District Law gives wider authority to selected counties (21-427)].

The governing body of any county, city, or town may agree to the fulfillment of the requirements for local cooperation necessary to the accomplishment of river and harbor or flood control projects of the United States as expressed in official federal documents provided the project will accrue to the general or special benefit of such county, city, or town (62.1-148). Cities situated on navigable streams also have the power to cooperate in federal navigation projects (62.1-155).

Courts. - A circuit court may by itself or in conjunction with other circuit courts contract for clearing water courses of obstructions (62.1-6). It may establish a stream or a canal as a lawful fence (8-870). Upon proper petition and after a public hearing it may create a sanitary district (21-113; 21-114) as well as establish a drainage district (21-292). An obstruction to navigation caused by a wharf, pier, or bulkhead may be abated by a circuit court (62.1-165). These courts are empowered to grant leave to establish a ferry (33-176) and to grant or withhold leave to an individual to build a dam in a watercourse upon his own or another's property or dig a canal (62.1-116). There are limitations on the power of courts to grant leave to erect dams (62.1-8). Circuit courts and corporation courts may accept petitions, make orders, hold hearings, and perform other functions with respect to the creation of sanitation districts (21-144; 21-227).

Department of Conservation and Development. - The Director is charged with establishing within the Department of Conservation and Development the Divisions of Forestry, Geology, Parks, Industrial Development, and Planning and Water Resources through which he exercises appropriate powers and duties (10-8.1). The Board of Conservation and Development acts in the capacity of an advisor to the Director (10-12).

Normally the functions of the Director are performed by the commissioners of the separate division, two of which are mentioned in the following sections.

Division of Water Resources. - For the Director of the Department of Conservation and Development, the Commissioner of Water Resources gathers and disseminates information relative to the water powers and industrial advantages and resources of the State, and opportunities for industrial enterprises or commercial power plants; promotes the development and utilization of the water powers and other resources of the State; seeks investors and the establishment of manufactories or other enterprises within the State; and cooperates with State, federal, and private agencies for the utilization of the natural resources of the State (10-116).

For the purpose of investigating the water power and industrial interests and resources of the State a comprehensive water power survey of the State is authorized and directed. It will be of such character as a study of our water power resources may suggest and used to determine the location and extent of the water powers of the State suitable for development for industrial purposes, commercial power plants, or other profitable uses. Cooperation with State and federal agencies is contemplated (10-117).

All evidence which is taken with reference to conserving the water supply of the State is preserved and a report, including conclusions and recommendations, is made to each session of the General Assembly. From time to time matters of interest are published for public distribution (10-115).

Division of Geology. - Insofar as direct references in the Code to water resources are concerned the State Geologist is responsible for an examination of the streams and water powers of the State with special reference to their development for manufacturing enterprises, an examination of the water supplies of the State with special reference to the sinking of deep or artesian wells, the preparation of special maps to illustrate the resources of the State, the preparation of special reports on the geology and natural resources of the State, and arranging with the proper federal officials for cooperation in topographic, geologic, and hydrographic work (10-93).

He prescribes what information is to be furnished to him by drillers of wells (10-98).

Reports are made to the General Assembly and special reports are prepared for suitable distribution (10-94; 10-95).

Advisory Council on the Virginia Economy. - The Governor appoints forty five members of the Council from the State at large so as to represent agriculture, industry, and commerce. Seven additional members represent designated State agencies (10-127).

The Council acts in an advisory capacity and makes its recommendations on matters relating to the Virginia economy to the Governor and to the Director of Conservation and Development (10-131).

There are seventeen committees, including the Committee on Water Resources, which have been created by the Council to prepare studies for and make recommendations to the Council.

APPENDIX II

SUMMARY OF STATUTES CONCERNING POLLUTION

State Water Control Law.[1]

62.1-14. Title and purpose of law.

62.1-15. Definitions.

62.1-16. Expression of State's right to control pollution.

62.1-17. Statement of public policy regarding waste discharges or other quality alterations of State waters.

62.1-18. Relationship between State Water Control Law and existing law.

62.1-19. Continuation of State Water Control Board.

62.1-20. Number, appointment, and terms of members.

62.1-21. Qualifications of members.

62.1-22. Compensation and expenses of members.

62.1-23. Meetings and quorum.

62.1-24. Records of proceedings at meetings; special orders, standards, policies, rules, and regulations.

62.1-25. Inspections and investigations by the Board.

62.1-26. Chairman and Executive Secretary of Board.

62.1-27. Powers and duties of Board.

62.1-28. Regulation of industrial establishments existing on July 1, 1946 (quoted in text).

[1]Virginia, Code, sections 62.1-14 to -44.1 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-10 to -42 (1950), as amended, (Supp. 1966).

62.1-29. Regulation of new or expanded industrial establishments (quoted in text).

62.1-30. Regulation of other wastes. (1) Any owner who handles, stores, distributes or produces other wastes as defined in section 62.1-15 (9), any owner who causes or permits same to be handled, stored, distributed or produced or any owner upon or in whose establishment other wastes are handled, stored, distributed or produced shall upon request of the Board install facilities approved by the Board or adopt such measures approved by the Board as are necessary to prevent the escape, flow or discharge into any State waters when the escape, flow or discharge of such other wastes into any State waters would cause pollution of such State waters.

(2) Any owner under this section requested by the Board to provide facilities or adopt such measures shall make application therefor to the Board. Such application shall be accompanied by a copy of pertinent plans, specifications, maps, and such other relevant information as may be required, in scope and detail satisfactory to the Board.

(3) The Board shall review the application and the information that accompanies it as soon as practicable and make a ruling approving or disapproving the application and stating the grounds for conditional approval or disapproval. If the application is approved, the Board shall grant a certificate for the handling, storing, distribution or production of such other wastes. If the application is disapproved, the Board shall notify the owner as to what measures the owner may take to secure approval.

62.1-31. Sewerage systems under joint supervision of Board and Department of Health.

62.1-32. Regulation of sewage discharges existing on July 1, 1946. Upon the request of the Board any owner who, on July first, nineteen hundred forty-six, was discharging or permitting to be discharged sewage into or adjacent to the waters of the State shall within thirty days after such request apply to the Board for a certificate to continue such discharge of sewage of substantially the same volume and strength as during the twelve months preceding. In making the application, the owner shall furnish such information as may reasonably be required by the Board including: (1) Total population served by the sewerage system, (2) the industrial wastes admitted to the sewerage system, and (3) the type of treatment plant. The Board is authorized to issue such certificate for an indefinite period; provided, however, the certificate may be revoked at any time when it is found on investigation that there has been an increase in the strength or volume of the sewage as discharged into or adjacent to any State waters, or the Board has reason to believe an increase is contemplated. If no

satisfactory progress is made by the owner toward the reduction of pollution the Board may require the holder of the certificate to file reasons therefor or may in the case of refusal to comply with recommendations deemed reasonable by the Board revoke the certificate issued to such owner and issue a special order. No certificate shall be issued by the Board authorizing the discharge of untreated sewage which would result in the pollution of the clean State waters.

The Board is authorized to designate any area within the State or State waters as a polluted area due to existing sewage discharge in such area and each owner who contributes to the pollution of such waters in the area shall be subject to all the provisions of this chapter; provided, however, that as to such area or State waters so declared to be a polluted area the Board may, in lieu of issuing an individual certificate to each owner therein, issue a special certificate as to the pollution caused by the owners in such area and the certificate may be granted to the appropriate authority of the political subdivision or subdivisions in which such owner resides. Any such certificate shall be subject to all the terms and conditions of this chapter and shall apply only to existing sewage discharge. For good cause shown, the Board may revoke or amend any certificate in whole or in part as to any owner or group of owners in the area covered by such certificate.

62.1-33. Regulation of new or altered sewage discharges. Every owner intending to construct a new sewage system or sewage treatment works designed to serve more than 400 persons or to extend or change materially any existing system or works which serves more than 400 persons shall file in duplicate with the State Department of Health a copy of plans, specifications and such other information as may reasonably be required, in scope and detail satifactory to the Department.

The Department shall thereupon notify the Board that it has received the plans and other data. If the plans involve facilities from which there is or is to be a discharge to State waters, the Board shall advise the Department of the standards of quality applying to such State waters.

The Department shall then review the plans without delay and file with the Board one copy and a report in which the plans are approved or disapproved. If they are not approved, the report shall state what modifications, if any, or changes will be required for approval.

The Board shall review the plans and the report from the Department and make a ruling approving or disapproving the plans and stating the grounds for conditional approval or disapproval. If they are approved, the Board shall grant a certificate authorizing construction of the facilities.

Nothing in this section shall limit the power of the Board and the Department in the control of sewerage systems or sewage treatment works serving less than four hundred persons.

62.1-34. Board's right of entry to obtain information, etc.

62.1-35. Information to be furnished to Board.

62.1-36. Private rights not effected by issuance of certificate by Board.

62.1-37. Enforcement by injunction.

62.1-38. Right of aggrieved party to review.

62.1-39. Petition for rehearing.

62.1-40. Proceedings on petition for rehearing.

62.1-41. Review by circuit or corporation court.

62.1-42. Appeal to Virginia Supreme Court of Appeals; Attorney General to represent Board.

62.1-43. Pollution, violation of certificate, or failure to cooperate with Board declared unlawful.

62.1-44. Penalties.

62.1-45. Pollution from boats.

Sanitation Districts Law of 1946.[2]

21-287. No county, city, town or other public body, or person shall discharge, or suffer to be discharged, directly or indirectly into any waters of the district any sewage, industrial wastes or other refuse which may or will cause or contribute to pollution of any waters of the district, provided, that this provision shall be applicable only to such part or parts of the waters of a district as shall be bounded and described in a notice, published in a newspaper or newspapers having, in the aggregate, general circulation in all of the counties and cities within which or bordering upon which such part or parts of the waters of the district are located, to the effect that the commission has provided facilities reasonably sufficient in its opinion for the disposal of sewage, which by discharge from public sewer systems might cause or contribute to pollution of the bounded and described part or parts of such waters, and the at pollution of the same is forbidden by law. Such a notice

[2]Virginia, Code, sections 21-224 to -190 (1964), as amended, (Supp. 1966).

shall constitute prima facie evidence of the existence of facilities sufficient for the disposal of such sewage. The provisions of this section shall not prohibit the disposal of sewage and industrial wastes in the manner in which the same is now being disposed of, or in any other reasonable manner, by any county, city or town, no part of which constitutes a part of any district, or by any person in any such county, city or town, no part of which constitutes a part of any district.

Fish Law.[3]

29-153. It shall be unlawful to use fish berries, lime, giant power, dynamite, or any other substance for the destruction of fish, or knowingly cast any noxious substance or matter into any watercourse of this State by which fish therein or fish spawn may be destroyed, or to place or to allow to pass into the watercourses of the State any sawdust, ashes, lime, gas, tar, or refuse of gas works, injurious to fish; provided, however, that Giles, Bland and Franklin counties are exempt from the prohibition of permitting sawdust to be put in their watercourses when a saw mill is run in connection with a grain mill, and permanently located in a stream of water used as power toward the operation of the mill, and provided, further, that the sawdust pollution from such operation is not sufficient to destroy fish or fish spawn, and provided, however, in the waters of Piney river and its tributaries in the counties of Amherst and Nelson, it shall not be unlawful to run sawdust in those portions of the stream not inhabited by trout. Any person violating any of the provisions of this section shall, on conviction thereof, be fined for each offense not less than twenty-five nor more than two hundred and fifty dollars, and be imprisoned in jail until the fine is paid, but not exceeding thirty days, except that any person convicted of destroying fish by means of dynamite or other explosives shall be punished by a fine of not less than two hundred dollars nor more than five hundred dollars, or, in the discretion of the court of jury, by confinement in jail not to exceed ninety days, or by both such fine and imprisonment.

The owner of lessee of any property on which fish are destroyed by means of dynamite or other explosives shall be entitled to recover liquidated damages in the amount of one hundred dollars from any person convicted of destroying fish by such means.

Miscellaneous Offenses.[4]

[3]Ibid., sections 29-148 to -53 (1964).

[4]Ibid., sections 62.1-194 to -95 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-182 to -91 (1950), as amemded, (Supp. 1966)).

62.1-194. Casting garbage, etc. into waters. Except as otherwise permitted by law, it shall be unlawful for any person to cast, throw or dump any garbage, refuse, dead animal, trash, carton, bottle, container, box, lumber, timber or like material, or other debris or noxious substance or matter into any of the waters of this State. Every such act shall be a misdemeanor. Every law enforcement officer of this State and its subdivisions shall have authority to enforce the provisions of this section.

62.1-194.1. Obstructing or contaminating State waters. Except as otherwise permitted by law, it shall be unlawful for any person to dump, place or put, or cause to be dumped, placed or put into, upon the banks of or into the channels of any State waters any object or substance, noxious or otherwise, which may reasonably be expected to endanger, obstruct, impede, contaminate or substantially impair the lawful use or enjoyment of such waters and their environs by others. Any person who violates any provision of this law shall be guilty of a misdemeanor and upon conviction be punished by a fine of not less than one hundred dollars nor more than five hundred dollars or by confinement in jail not more than twelve months or both such fine and imprisonment. Each day that any of said materials or substances so dumped, placed or put, or caused to be dumped, placed or put into, upon the banks of or into the channels of, said streams shall constitute a separate offense and be punished as such.

In addition to the foregoing penalties for violation of this law, the judge of the circuit court of the county or corporation court of the city wherein any such violation occurs, whether there be a criminal conviction therefor or not shall, upon a bill in equity, filed by the attorney for the Commonwealth of such county or by any person whose property is damaged or whose property is threatened with damage from any such violation, award an injunction enjoining any violation of this law by any person found by the court in such suit to have violated this law or causing the same to be violated, when made a party defendant to such suit.

62.1-195. Discharge of oil in certain waters. (1) The following words, as used in this section, shall have the following meanings, unless the context otherwise requires:

(a) "Oil" means any petroleum product or derivative.

(b) "Person" means any individual, association, firm or corporation.

(c) "Waters" means navigable tidal waters.

(d) "Vessel" means any boat, ship, barge, or other floating conveyance, however powered.

(2) Except in case of emergency imperiling life or property, or unavoidable accident, collision or stranding, and except as otherwise permitted by any lawful regulation, it shall be unlawful for any person to

discharge, or suffer, or permit the discharge from any vessel of oil by any method, means or manner into, upon or under the navigable tidal waters of the State. Pursuant to such regulations which may be prescribed under federal laws or regulations, any lawful body of the State having jurisdiction of the ports of this State is authorized and empowered to regulate the discharge of oil from vessels in such quantities, under such conditions and at such times and places as in its opinion will not be deleterious to health or seafood, or a menace to navigation, or dangerous to persons or property engaged in commerce on such waters, and for the loading, handling and unloading of oil. Such body may cooperate with any agency of the federal government in the enforcement of this section.

(3) Any person who violates paragraph (2) or any regulation prescribed in pursuance thereof, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding two thousand five hundred dollars and not less than five hundred dollars, or by imprisonment not exceeding one year and not less than thirty days, or by both such fine and imprisonment, for each offense. And any vessel (other than one owned and operated by the State of Virginia or the United States) from which oil is discharged in violation of paragraph (2) or any regulation prescribed in pursuance thereof, shall be liable for the pecuniary penalty specified in this section and the penalty shall constitute a lien on such vessel.

The provisions of this section shall be deemed to supplement and not to replace the provisions of section 62.1-194.

Potomac River Basin Commission.[5]

62.1-64. Authorization for execution of compact with the States of Maryland and West Virginia, the Commonwealth of Pennsylvania, and the District of Columbia.

62.1-65. Form and terms of compact.

Article I. Number of members; meetings; rules and regulations; records; quorum.

Article II. Powers and duties of Commission. The Commission shall have the power and its duties shall be:

(A) To co-ordinate, tabulate, and summarize technical and other data now available, or as shall become available in the future from any source, on the pollution of the streams of the Conservancy District and on the character and conditions of such streams, and to prepare reports thereon

[5]Ibid., sections 62.1-64 to -69 ((now sections 62-62 to -67 (1950)), as amended (Supp. 1966)).

annually and at such other times as may be deemed advisable by the Commission.

(B) To supplement existing information and data, and to secure new data by such investigations, analyses, or other means as may be necessary to secure adequate information on the character and condition of the streams of the Conservancy District as they now exist or may be affected by the future discharge of sewage and industrial and other wastes into the stream.

(C) To cooperate with the legislative and administrative agencies of the signatory bodies, or the equivalent thereof, and with other interested commissions and similar organizations for the purpose of promoting uniform laws, rules or regulations for the abatement and control of pollution of streams in the Conservancy District.

(D) To disseminate to the public information on the aims and purposes of the Commission and on the harmful and uneconomical results of stream pollution, through the issuance of bulletins, ciruclars, correspondence, literature and reports.

(E) To cooperate with other organizations engaged in fact-finding and research activities on the treatment of sewage and industrial wastes or other wastes, and if deemed advisable, to institute and conduct such research and fact-finding activities.

(F) To make and, if needful from time to time, revise and to recommend to the signatory bodies, reasonable minimum standards for the treatment of sewage and industrail or other wastes now discharged or to be discharged in the future to the streams of the Conservancy District, and also, for cleanliness of the various streams in the Conservancy District.

Article III. Financial considerations.

Article IV. Agreement.

Pursuant to the aims and purposes of this compact, the signatory bodies mutually agree:

1. Faithful cooperation in the abatement of existing pollution and the prevention of future pollution in the streams of the Conservancy District.

2. The enactment of adequate and, insofar as is practicable, uniform legislation for the abatement and control of such pollution.

3. The appropriation of biennial sums on the proportionate basis as set forth in Article III.

Article V. When compact to become effective.

Article VI. Withdrawal from compact.

62.1-66. Creation of Potomac River Basin Commission of Virginia

62.1-67. Appointment, terms, and qualifications of members.

62.1-68. Expenses of members.

62.1-69. Duties of Potomac River Basin Commission of Virginia.

Ohio River Valley Water Sanitation Commission.[6]

62.1-70. Authorization for Governor to execute Ohio River Valley Water Sanitation Compact.

62.1-71. Form and terms of Compact; Signatory states consist of Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee, West Virginia, and Virginia.

Article I. Agreement.

Each of the signatory states pledges to each of the other signatory states faithful cooperation in the control of future pollution in and abatement of existing pollution from the rivers, streams, and waters in the Ohio River Basin which flow through, into or border upon any of such signatory states, and in order to effect such object agrees to enact any necessary legislation to enable each such state to police and maintain the waters of that basin in a satisfactory sanitary condition, available for safe and satisfactory use as public and industrial water supplies after reasonable treatment, suitable for recreational usage, capable of maintaining fish and other aquatic life, free from unsightly or malodorous nuisances due to floating solids or sludge deposits, and adaptable to such other uses as may be legitimate.

Article II. Creation of Ohio River Valley Water Sanitation District.

Article III. Creation of the Ohio River Valley Water Sanitation Commission.

Article IV. Commission to consist of three commissioners from each signatory state and three commissioners representing the United States government.

Article V. Officers of Commission; quorum; records; reports.

Article VI. Waste treatment required.

It is recognized by the signatory states that no single standard for the treatment of sewage or industrial wastes is applicable in all parts of the district due to such variable factors as size, flow, location, character, self-purification, and usage of waters within the district. The guiding principle of this Compact shall be that pollution by sewage or industrial wastes originating within a signatory state shall not injuriously affect the various uses of the interstate waters as hereinbefore defined.

All sewage from municipalities or other political subdivisions, public or private institutions, or corporations, discharged or permitted to flow into these portions of the Ohio River and its tributary waters which form

[6] Ibid., sections 62.1-70 to -79 (now sections 62-67-1 to -.10 (1950)).

boundaries between, or are contiguous to, two or more signatory states, or which flow from one signatory state into another signatory state, shall be so treated, within a time reasonable for the construction of the necessary works, as to provide for substantially complete removal of settleable solids and the removal of not less than forty-five per centum of the total suspended solids; provided that, in order to protect the public health or to preserve the waters for other legitimate purposes, including those specified in Article I, in specific instances such higher degree of treatment shall be used as may be determined to be necessary by the Commission after investigation, due notice and hearing.

All industrial wastes discharged or permitted to flow into the aforesaid waters shall be modified or treated, within a time reasonable for the construction of the necessary works, in order to protect the public health or to preserve the waters for other legitimate purposes, including those specified in Article I, to such degree as may be determined to be necessary by the Commission after investigation, due notice and hearing.

All sewage or industrial wastes discharged or permitted to flow into tributaries of the aforesaid waters situated wholly within one state shall be treated to that extent, if any, which may be necessary to maintain such waters in a sanitary and satisfactory condition at least equal to the condition of the waters of the interstate stream immediately above the confluence.

The Commission is hereby authorized to adopt, prescribe and promulgate rules, regulations and standards for administering and enforcing the provisions of this article.

Article VII. Compact does not limit the powers of signatory states to impose additional conditions or restrictions within their jurisdiction.

Article VIII. Commission to conduct survey of territory in district and make a comprehensive report for the prevention or reduction of stream pollution therein.

Article IX. Orders of Commission.

The Commission may from time to time after investigation and after a hearing, issue an order or orders upon any municipality, corporation, person, or other entity discharging sewage or industrial waste into the Ohio River, or any other river, stream or water, any part of which constitutes any part of the boundary line between any two or more of the signatory states, or into any stream any part of which flows from any portion of one signatory state through any portion of another signatory state. Any such order or orders may prescribe the date on or before which such discharge shall be wholly or partially discontinued, modified or treated or otherwise dispose of. The Commission shall give reasonable notice of the time and place of the hearing to the municipality, corporation or other entity against which such order is proposed. No such order shall

go into effect unless and until it receives the assent of at least a majority of the commissioners from each or not less than a majority of the signatory states; and no such order upon a municipality, corporation, person or entity in any state shall go into effect unless and until it receives the assent of not less than a majority of the commissioners from such state.

It shall be the duty of the municipality, corporation, person or other entity to comply with any such order issued against it or him by the Commission, and any court of general jurisdiction or any United States district court in any of the signatory states shall have the jurisdiction, by mandamus, injunction, specific performance or other form of remedy to enforce any such order against any municipality, corporation or other entity domiciled or located within such state or whose discharge of the waste takes place within or adjoining such state, or against any employee, department or subdivision of such municipality, corporation, person or other entity; provided, that such court may review the order and affirm, reverse or modify the same upon any of the grounds customarily applicable in proceedings for court review of administrative decisions. The Commission or, at its request, the Attorney General or other law enforcing official, shall have power to institute in such court any action for the enforcement of such order.

Article X. Signatory states agree to appropriate for salaries, office, and other administrative expenses.

Article XI. When Compact to become effective.

62.1-72. Signature by Governor to bind Commonwealth of Virginia to terms and conditions of Compact.

62.1-73. Appointment and removal of Virginia members of Commission.

62.1-74. Powers of Commissioners; duties of State officers, department, etc. concerning purposes of Compact.

62.1-75. Powers granted to Commission are supplemental and not limiting.

62.1-76. Expenses of members.

62.1-77. Officers and employees; meetings.

62.1-78. Chapter effective in due course, upon signature of Governor.

62.1-79. Appropriations by the State to carry out purposes of Compact

APPENDIX III

STATUTES APPLICABLE TO OBSTRUCTION

Water Power Development (Dams in Navigable Watercourses and Hydro-electric Dams).[1]

62.1-80. Delcaration of public policy (quoted in text).

62.1-81. "Waters of the State" defined (quoted in text).

62.1-82. Control and regulation by State Corporation Commission; riparian rights not affected except through exercise of eminent domain and payment of just compensation (quoted in text).

62.1-83. Dams across waters of the State. No person, firm, association or corporation, private or municipal, proposing to construct or reconstruct any dam across or in the waters of the State, as defined in section 62.1-81, or a dam in any rivers or streams within the State when such dam is for the purpose of generating hydro-electric energy for use or sale in public service, shall begin the construction or reconstruction of any such dam unless and until the provisions of this chapter shall have been complied with, and every such dam shall in every respect be subject to the provision of this chapter and such other general laws of the State as may be applicable thereto. Nor shall any dam constructed or reconstructed after July first, nineteen hundred thirty-two, in any waters, rivers or streams within the State, without a license under this chapter, be utilized at any time for the purpose of generating hydro-electric energy for use or sale, directly or indirectly, in public service, unless and until licensed or permitted so to do by order of the State Corporation Commission, after hearing, and finding that the public interest will be thereby promoted or will not be detrimentally affected.

62.1-84. What "dam" includes.

62.1-85. License required to construct dam; application. The construction or reconstruction of any such dam as is mentioned in section 62.1-83 shall not be begun until the person, firm, association or corporation,

[1] Virginia Code, 62.1-80 to -103 (now section 62-68 to -94 (1950), as amended (Supp. 1966)).

private or municipal, proposing to construct or reconstruct the same shall first obtain a license so to do from the State Corporation Commission. The application for such license shall be filed with the Commission and in it all the essential facts shall be stated to enable the Commission to pass upon its merits. A copy of such application shall also be filed by the applicant with the Director of Conservation and Economic Development within ten days after filing such application with the State Corporation Commission. Each application for license shall be accompanies by such maps, plans and other information as may be necessary to give a clear and full understanding of the proposed scheme of development, and of dams, generating stations or other major structures, if any, involved therein.

62.1-86. Notice of hearing on application.

62.1-87. Proceedings at hearing. At such public hearing the applicant and any other interested person, firm, association or corporation shall be given an opportunity to present facts, evidence and argument for and against the granting of the application.

62.1-88. Determination and investigation by Commission. Before acting upon any application, the Commission shall weigh all the respective advantages and disadvantages from the standpoint of the State as a whole and the people thereof and shall make such investigation as may be appropriate as to the effect of the proposed construction upon any cities, towns and counties and upon the prospective development of other natural resources and the property of others.

62.1-89. When license granted (quoted in text).

62.1-90. Rejection of application; requiring applicant to modify plans. If the Commission be of the opinion, from the evidence before it, that the prospective scheme of development is inadequate or wasteful or that the applicant is financially unable to construct and operate the proposed dam and works, or that it is prejudicial to the public interest, the Commission may require the applicant to modify the plans for the development in such manner as may be specified by the Commission or the Commission may reject the application.

62.1-91. Terms and conditions of license (quoted in text).

62.1-92. Priority of location or appropriation; notice to owners of existing developments. No priority of location or appropriation shall be

recognized by the Commission in its consideration of any application for a license, under this chapter, except that in case of an application for a license for any reconstruction or enlargement of any existing development, the owner of such development shall be entitled to priority over any other applicant for a license for the construction of a development which would materially affect such existing development, and every such applicant for a license under this chapter shall give notice of his application within ten days after filing of the same with the State Corporation Commission to every other person, firm, association or corporation owning any other development which might be affected thereby, whose application for a license under this chapter would be entitled to priority if such application were filed. In case of conflict between two or more applicants, the Commission may grant the license to such applicant as it may seem best in the light of the considerations herein specified.

62.1-93. Time for construction of proposed dam and works.

62.1-94. Duration of licenses; acquisition of developments by State. All licenses granted under the provisions of this chapter shall remain in effect for a period of fifty years from and after the date of granting thereof. From and after the expiration of such terms of fifty years the licensee, its successors and assigns, shall hold the property and rights acquired under the authority of this chapter under an indeterminate license, which shall continue until such property and rights have been purchased by the State, or until the same have been acquired by the State by due process of law; provided that the right of the State to take over, maintain and operate any development licensed under this chapter at any time by condemnation proceedings, upon payment of just compensation, is hereby expressly reserved.

62.1-95. Value of license not to be estimated in valuation for rate making, etc.; intangible water power value.

62.1-96. Transfer or assignment of license.

62.1-97. Proceedings on violation of terms of license or of provisions of chapter or regulations. In event of violation by the licensee of any of the terms of a license, or for the purpose of remedying by injunction, mandamus or other process any act of commission or omission by the licensee in violation of any of the provisions of this chapter, or of any lawful regulation or order promulgated in pursuance thereof, the Attorney General of this State shall, upon request of the Commission, institute proceedings in the Circuit Court of the City of Richmond in the name of the Commonwealth at the relation of the Commission for the purpose of

compelling the licensee to comply with the provisions of the license or of this chapter, or for the purpose of revoking the right of the licensee to proceed further under the license, or similarly as to a specified portion or portions of the development which is under license. The court shall have jurisdiction over all of the above mentioned proceedings and shall be empowered to issue and execute all necessary process and to make and enforce all writs, orders and decrees to compel compliance with the lawful orders and regulations of the Commission and to compel the performance of any condition imposed under the provisions of this chapter. If a decree is entered by the court revoking the right of the licensee to proceed further with the development under license, or similarly with respect to a specified portion or portions of the development under license, the court is empowered to sell at public sale to the highest responsbile bidder the property and rights of the licensee used or useful in connection with such development or such specified portion thereof, to distribute the proceeds to the parties entitled thereto and to make and enforce such further or other orders and decrees as equity and justice may require. At such sale or sales the vendee shall succeed to the rights and privileges of the licensee with respect to such development or such specified portion thereof and shall perform all the duties of the licensee under the license and assume all such outstanding obligations and liabilities of the licesnee as the court may seem equitable in the premises.

62.1-98. Right of eminent domain of public service corporations (quoted in part in text).

62.1-99. Water power developments constructed or acquired prior to certain date.

62.1-100. Rules of Commission; reports; employment of experts, etc.

62.1-101. Licenses not affected by alteration, amendment, or repeal of chapter.

62.1-102. Alteration or amendment of license. The provisions, terms, and conditions of any license may be altered or amended at any time by mutual consent of the licensee and the Commission, to the extent such alteration or amendment is not in conflict with the then existing law of the State.

62.1-103. Jurisdiction of United States. Nothing contained in this chapter shall be so construed as to interfere with the exercise of

lawful jurisdiction of the government of the United States, or its duty constituted agencies, over the waters of the State as herein defined.

Impoundment of Surface and Flood Waters.[2]

62.1-104. Definitions: Commissioner, impounding structure, watercourse, riparian land, riparian owner, average flow, diffused surface waters, flood waters, court.

62.1-105. Impoundment of diffused surface waters.

62.1-106. When flood waters may be captured and stored by riparian owners (quoted in text).

62.1-107. Application for leave to store flood waters; notice to interested persons and to State Water Control Board.

62.1-108. Time and place of hearing on petition for leave; parties at hearing.

62.1-109. Commissioner to examine petition and report to court (quoted in part in text).

62.1-110. Court to hear and determine issues; reference to commissioner in chancery.

62.1-111. When leave not granted; terms and conditions; appeals (quoted in text).

62.1-112. When leave shall expire.

62.1-113. Consent by Commonwealth as to use of bed of watercourses to which it has ittle.

62.1-114. Exceptions to application of chapter.

62.1-115. Use of water stored.

[2] Ibid., sections 62.1-104 to -15 (now sections 62-94.1 to -.12 (Supp. 1966)).

The Milling Act.[3]

62.1-116. Application for leave to build or raise dam across or in watercourse, cut canal, etc. A person having upon lands owned by him on a watercourse, or proposing to build on such lands, a water mill, or other machine, manufactory, or engine, useful to the public, and desiring leave to erect a dam across, or in such watercourse (whether he own the lands on either side of the watercourse at the point where such dam is to be erected or not), or to cut or enlarge a canal through lands above or below, or to raise a dam which may have been erected under an order of court, or the owner of any such water mill, machine, manufactory, or engine, located on a watercourse, having the right to the use of such watercourse for the operation of his mill, machine, manufactory, or engine, and desiring leave to construct a work on or through the lands of another for the purpose of confining the watercourse within its customary channel or restoring it thereto where it has been diverted therefrom not more than three years by floods or other natural causes, may apply for such leave to the circuit court of the county wherein such mill, machine, manufactory, or engine stands, or is proposed to be built.

62.1-117. Notice required.

62.1-118. Appointment of commissioners; time of meeting. On proof of the notice, the court shall, by its order, appoint five disinterested freeholders of such county, as commissioners (any three of whom may act), whose duty it shall be to meet on a certain day to be specified in the order, at the lands on which the mill, machine, manufactory or engine stands, or it proposed to be built, or the work aforesaid is proposed to be constructed, or if they fail to meet on that day, on such subsequent day as they may designate, notice of which shall be given to the parties interested in the manner prescribed by the preceding section; and after they have met, they may adjourn from day to day until their business is completed.

62.1-119. Oath of commissioners; duties; report. The commissioners, before entering upon their duties, shall take an oath faithfully to perform the same, and thereupon shall proceed to inquire and ascertain, if the leave be granted, whether the mansion house of any person, or the outhouses, yard, garden, or orchards thereto belonging, will be overflowed

[3]Ibid., sections 62.1-116 to -27 (now sections 62-95 to -106 (1950)).

or taken; whether and in what degree ordinary navigation and the passage of fish will be obstructed; whether by any, and if any, by what means such obstruction may be prevented; and whether the health of the neighbors will be annoyed by the stagnation of the waters or otherwise. They shall also circumscribe so much of the lands, not owned by the applicant, as may be necessary for the canal, dam, or work to be constructed as aforesaid, not being (beyond what is in the bed of the watercourse) more than one acre for a dam, nor more than one hundred feet in width for a canal, and shall ascertain what will be a just compensation therefor. Any lands which will probably be overflowed or deprived of water, or otherwise injured by such canal or dam, or be injured by the construction of the work aforesaid, shall likewise be examined by them, and they shall ascertain what will be a just compensation to the several owners thereof, for the damage to the same respectively. All of which matters the commissioners shall set forth in a report, which they shall make out, sign, and return to the court by which they were appointed.

62.1-120. When further notice required. If, by such report, or otherwise, it appear that any person to whom notice has not been given, will sustain damage, notice shall be given to him, in the manner prescribed by section 62.1-117 to show cause why the applicant should not have the leave desired.

62.1-121. When new commissioners appointed. If good cause be shown against the report, or the commissioners report their disagreement, or fail to report within a reasonable time, the court may, in any such case as often as seems to it proper, appoint other commissioners and the matter be proceeded in as before prescribed.

62.1-122. When court to refuse or grant leave; when granted, what terms imposed (quoted in part in text).

62.1-123. Rights of applicant on payment of damages.

62.1-124. Such leave not to affect vested rights (quoted in text).

62.1-125. Time within which applicant must erect or rebuild works, consequence of failure.

62.1-126. Forfeiture by tenant of works damaged or destroyed, and unrestored; right of remainderman or reversioner.

62.1-127. Prosecution or action for unforeseen damages (quoted in text).

APPENDIX IV.

HISTORY OF OWNERSHIP OF LAND LYING BETWEEN HIGH AND LOW WATER MARK AS SUMMARIZED FROM MILLER V. COMMONWEALTH[1]

1. The lands between high and low watermarks, herein referred to as tidelands, were primarily vested in the Crown at the time of the English colonization of Virginia. The King could grant these lands to private persons for private purposes if he so desired, but the presumption was that he had not done so. In the absence of such grants, the people had the use of this strip of land for navigation, fishing, and presumably, fowling.

2. Where a grant called for the sea or tidal bay or river as a boundary, it was construed to relate only to the high watermark, unless the grant expressly or impliedly indicated the intention to be the low watermark.

3. For the tidelands to pass under a grant from the Crown, they must be included within the grant boundaries, the same as the highlands, because land did not pass as appurtenant to land at common law – only the use of adjacent lands would so pass.

4. Where grants reached tidal waters either at high or at low watermark, unless a contrary intention clearly was shown, the grantee thereby acquired certain riparian rights, such as access to the navigable parts of the water body, this right of use being appurtenant to the lands acquired from the Crown.

5. Grants of such lands thereafter carried the presumption that the grantor did not intend to separate his highlands from his tidelands. Where these grants were bounded by tidal waters, and in the absence of any intention to the contrary, the low watermark was construed as the boundary.

6. The foregoing apparently were the common law rules concerning grants of land during and after the Revolution, unless and until changed by the competent authority. The court relied upon numerous authorities, especially Farnum and Gould.

7. The London Company, until its charter was forfeited in 1624, or the Crown and the Colonial Government thereafter, had powers to pass title to the tidelands. But apparently such grants never were made except where

[1]Miller v. Commonwealth, 159 Va. 924, 166 S.E. 557 (1932).

the boundaries of certain parcels crossed tidal rivers and creeks. For these parcels, good title was passed to the tidelands. These grants were recognized by the Act of 1819 and subsequent legislation.

8. There were a few grants extending only to one edge of the tidal waters but these occur only in the Yorktown and Hampton areas and were made during 1716 to 1729. There appear to have been a few grants where the courses and distances included tidal marsh lands. A very few of these tended to rebut the presumption that the adjacent highlands extended only to high watermarks. These later instances seem to have been exceptions to the general rule of the common law.

9. The grants made in the colonial period were based upon certain "rights" -- meaning that if the grantee rendered certain services or incurred certain obligations on behalf of the Colony, such as in bringing about colonization, he was entitled to some special type of right. These were called "head," "treasury," or "military" rights and entitled the grantee to a certain acreage of land. But this acreage was not described and set apart from the vacant and unappropriated lands. Each acreage was to be selected by the grantee. This system was incorporated into the general land grant law of the Commonwealth enacted in 1779. It has remained as a basis of the land grant statutes to the present, according to the court.

10. These rights related to a certain acreage which had to be surveyed and marked off before a patent would issue. If the boundaries exceeded that acreage, another might locate his acreage there, claim the surplusage, and procure a patent for it. But there seems to have been a custom to allow the grantee, whose patent included a surplusage, to procure additional rights for that portion. This apparently was later provided by statute. Thus, the original grantees had certain preferences before another was permitted to acquire the surplusage.

11. Land was held in free and common socage, as previously stated, subject to an annual rent except in the case of adventurers and planters who came over at their own expense and, thus, were exempted.

12. The relatively low value tidelands were assessed the same rents per acre as the more productive highlands. Thus, the patentees located their lands with few exceptions above the high watermark. This tends strongly to support the presumption, above outlined, that at common law, the lands below high watermark did not pass with grants of the highlands.

13. The General Assembly allowed a year for the owner of the highlands to secure patents to adjacent tidelands before allowing others to patent them. 2 Hen 300 (1672), 3 Hen. 101 (1705), 3 Hen. 517 (1710), 10 Hen. 61 (1779). 11 Hen. 371 (1784).

14. Thus, it is concluded that under the common law rules, the lands between high and low watermarks did not pass with grants, the boundaries of which bordered upon tidal waters.

15. The court then goes on to review the Act of 1672, 2 Hen. 456, the Robert Liny case, in which the Assembly made the declaration and order that every man's right by reason of this patent extends to low watermark. It points out that the judgment in the cases which refer to this act were not based upon it, nor were the determinations in those cases as to the nature, force, and effect of the act necessary to the decisions. The court cities Comm. v. Garner, Groner v. Foster, Waverly Imp. Co. v. White, Taylor v. Comm., Whealton v. Doughty, and Steelman v. Field. Apparently this act was declaration of opinion of the then existing law without having the force and effect of the enactment of law.

16. The order therein entered was not included in any other codification to the time of the Revolution. Presumably, if the act had been a valid subsisting enactment, it would have been codified during that period. Furthermore, the Act of 1819 did not recognize previous enactments on the subject. The 1679 Act might have been a recognition of certain claims while the Act of 1819 may have been legislative conformation of these. However, these claims were not sufficient to vest title without the enactment of 1819.

17. The court then goes on to indicate the nature of the "common" or "common lands" prevailing during the colonial period, as the basis for considering the effect of the Acts of 1780, 1792, and 1819 which granted or reserved lands on tidal waters. One type consisted of common lands granted to four boroughs or cities. Another consisted of grants for certain particular plantations. Both of these grants of common lands were made on instructions of the London Company. But the number and locations are not now ascertainable. There were other lands set apart for certain hundreds (or towns), and there were common lands set apart at Old Fort Comfort and Cape Henry.

18. The court points out that Embrey and the court found no legislation authorizing sale of common lands prior to the establishment of the land office in 1779. But there appear to have been certain lands along the

shores of the tidal waters which had come to be used as public seining places. From the foregoing, the court turned its attention then to the statutes enacted by the General Assembly having a bearing upon the question in issue.

19. From 1776 to 1779, it was indicated there was no general statute to authorize the granting of lands to private persons. But in 1779, the Assembly passed the act establishing the land office and providing for the granting of waste and unappropriated lands, 10 Hen. 50 (1779), and an act adjusting and settling titles of claimants to unpatented lands, 10 Hen. 35 (1779). According to the court, this land grant system remains in force to the present. The former was limited to "waste and unappropriated lands" and, thus, by implication excluded any lands not falling within the meaning of these words, other than those reserved for any nation or tribe of Indians.

20. The court then goes on to point out the Assembly did not provide a definition of "waste and unappropriated lands", but that it would seem clear that lands expressly appropriated for use of the government or lands used for that purpose were not included within the term "waste and unappropriated lands."

To clarify the situation regarding the "common lands" the Assembly passed the Act of 1780 which (1) excepted out of the Act of 1779 these lands in the eastern part of the Commonwealth which had previously been designated as a common for the use of the people or (2) though they expressly had not been designated as a common, had actually been used by the people as a common and recognized as such. These were lands used as common on tidal waters only and had no general reference to the lands between the high and low watermarks. They did not refer to the lands used as common for fishing and hunting. The former use of the term is in a restricted sense -- the later in a broader sense. A reservation of adjacent lands between high and low watermarks is an implied rather than an expressed reservation. Garrison v. Hall, 75 Va. 150, 160, 161, 10 Hen. 226 (1789).

21. In 1792 the Assembly passed an act reducing into one the previous acts on this general subject and repealing all previous acts. It especially provided in Section 6 that lands on Chesapeake Bay, the sea-shore or the shores of rivers and creeks and the bed of any river or creek in the eastern parts of the Commonwealth which have remained ungranted by the former government and which have been used as a common to the people were excepted out of the act. Thus, the Act of 1780 is enlarged. Lands reserved in the Act of 1780 and the beds of any river and creek in the eastern parts of the Commonwealth used a common to all the people were thereby reserved. In 1802 the Assembly made a similar reservation

of such lands for the western parts of the Commonwealth. These acts remained in force until January 1, 1820.

22. On February 16, 1819, the Assembly passed an act, effective April 1, 1819, which extended the boundaries of private lands bordering on tidal waters to ordinary low watermark and vested fee simple title in the owners, provided that this did not (1) affect any creek or river or part thereof contained within a lawful survey, as previously noted, or (2) prohibit people from fishing, fowling, and hunting on these shores used as a common or (3) repeal section 6 of the Act of 1792 which dealt with the previous common lands and beds of rivers and creeks used as a common. The Act of 1780 and section 6 of the Act of 1792 apply only to grants issued after the respective dates of their passage. Thus, the court did not need to construe the portion of the Act of 1819 which was identical with section 6 of the Act of 1792. It left undefined the words "any bed of any river or creek" as used in that section 6.

23. The court goes on to say that the Act of 1819, vesting fee simple title in adjacent landowners down to the ordinary low watermark, carried with it exclusive rights to use these lands and the waters covering them at high tide. Subject to the rights of the public to use the waters for the purposes of navigation to certain extents and under certain limitations. The exception is that if any such grant were to include lands lying between low and high watermarks then used as a common, the public was to continue to have and enjoy the rights of fishing, fowling, and hunting thereon. The Act of 1819 was a grant to every person owning land bounded by a tidal water under a grant theretofore or thereafter issued and such grantees could not thereafter be deprived by any subsequent legislation of any of the rights so granted, except when needed for public use and then only under eminent domain proceedings.

24. The court points out that since that time important changes have taken place in the Acts of 1780 and 1819 and it expressed no opinion concerning the effect of the Act of 1819 upon grants made after May, 1780 or the effect of subsequent acts.

APPENDIX V

STATUTES RELATED TO NAVIGATION

Motorboats and Water Safety.[1]

62.1-166. Declaration of State policy concerning the use, operation, and equipment of vessels.

62.1-167. Definitions: vessel, motorboat, owner, waters of this State, person, operate, commission.

62.1-168. Commission of Game and Inland Fisheries to administer chapter; Motorboat Committee; funds for administration.

62.1-169. Identification numbers required.

62.1-170. Application for numbers; fee; renewal of certificate; displaying; reciprocity; change of ownership; loss of certificate; presumption from possession of certificate; conformity with United States regulations; award of certificates; records; transfer of interest, abandonment, etc.; change of address; unauthorized numbers; dealers and manufacturers' certificates and numbers.

62.1-171. Authorization for a placing of markers in waters of the State used for public swimming areas.

62.1-172. Classification and required lights and equipment; rules and regulations.

62.1-173. Exemption from numbering requirements.

62.1-174. Boat liveries.

62.1-175. Muffling devices.

62.1-176. Operating boat or manipulating water skis, etc., in reck- manner or while intoxicated, etc.

[1]Virginia, Code, sections 62.1-166 to -86 (H 277, April 5, 1968, becomes effective Oct. 1, 1968; now Code, sections 62-174.1 to -.19 (Supp. 1966)).

62.1-177. Duty of operator involved in collision, accident, or other casualty; reports inadmissible as evidence.

62.1-178. Furnishing information to agency of United States.

62.1-179. Water skis, surfboards, etc.

62.1-180. Motorboats and skis prohibited in waters of the State marked for public swimming areas.

62.1-181. Regattas, races, marine parades, tournaments, or exhibitions.

62.1-182. Local regulation.

62.1-183. Regulations to conform with Chapter 8, Article 1, of Title 29.

62.1-184. Enforcement of law; vessels displaying coast guard inspection decal.

62.1-185. Penalties.

62.1-186. Operation of watercraft by manufacturers, dealers, etc.

Improvement of Navigability of Streams.[2]

62.1-155. Cooperation by cities on navigable streams with United States.

62.1-156. Power of cities to give assurances to United States. In order to execute the purposes and objectives declared in section 62.1-155, the cities therein defined shall have the power to give assurances to the United States of America that they will:

1. Furnish or cause to be furnished free of cost to the United States, when and as required by its duly authorized representatives, lands, easements and rights-of-way and spoil or dredged material disposal areas, unrestricted in disposal elevations, for the shore disposal of material to be initially dredged and for future maintenance of such improvements within and without such cities;

2Ibid., sections 62.1-155 to -58.

2. Furnish or cause to be furnished, when and as so required, permits or easements for ingress to and egress from highways to such shore disposal areas, and permits or easements to construct pipeline trestles across oyster and clamming grounds and to lay dredge pipelines across lands adjacent to such shore disposal acreas within and without such cities;

3. Subject to all applicable laws, secure such releases or permits, either or both, as may be required, holding and saving the United States, its contractors and assigns free from any and all claims for damages to public or privately owned oyster and clamming grounds resulting or attributable to the accomplishment of the initial dredging or subsequent maintenance of such improvements, either or both;

4. Secure such releases or permits, either or both, as may be so required, holding and saving the United States, its contractors and assigns free from any and all claims (a) for damages resulting from any change in the natural course of such rivers, (b) damages resulting from blasting operations in the removal of rock or changes in ground water levels. and (c) for costs resulting from provision and operation of any bridges or ferries that may be necessary for furnishing connection between the mainland and any islands created by channel cutoffs;

5. Relocate or cause to be relocated, at no cost to the United States, when necessary, roads, bridges, waterfront structures, sewerage, water supply, storm drainage, electric power, and other utility facilities within and without such cities, except those which the United States has theretofore permitted to be constructed in, under or over such rivers;

6. Construct, maintain, expand and operate such terminal facilities within such cities which may be required to accomodate prospective foreign and domestic commerce expected to develop from the improvement of the channel of such rivers, the extent of such facilities to be mutually agreed to by the council of such cities and the duly authorized representatives of the United States; and

7. Contribute funds to the United States necessary to construct, extend and maintain mooring or berthing areas immediately adjacent to river terminals of such cities when necessary because of expansion of such terminal facilities.

62.1-157. Power of cities to bind themselves to perform or execute assurances.

62.1-158. Claims for damages to oyster and clamming grounds.

Federal Water Resources Development Projects. [3]

62.1-148. Resolutions and ordinances assuring local cooperation.

62.1-149. Items of cooperation to which localities may bind themselves. Such resolutions and ordinances may irrevocably bind such county, city or town:

(1) To provide, free of cost to the United States the fee simple title to lands, perpetual and/or temporary easements, rights-of-way and any other interest in lands for cut-off bends, the laying of pipe lines, erection of dikes, sluiceways, spillways, dams, drains, deposit of dredged materials, and for other purposes;

(2) To alter existing structures on such areas;

(3) To simultaneously dredge designated areas not covered by the federal project when and where required;

(4) To construct and maintain public wharves and public roads leading thereto;

(5) To make contributions in money or property in lieu of providing disposal areas for dredged materials;

(6) To hold the United States safe and harmless against claims for damages arising out of the project or work incident thereto;

(7) To remove sewer pipes and submarine cables;

(8) To construct and maintain marine railway for the public use; and

(9) To provide or satisfy any other items or conditions of local cooperation as stipulated in the congressional document covering the particular project involved.

This section shall not be interpreted as limiting but as descriptive of the items of local cooperation, the accomplishment of which counties, cities and towns are herein authorized to irrevocably bind themselves; it being intended to authorize counties, cities and towns to comply fully and completely with all of the items of local cooperation as contemplated by Congress and as stipulated in the congressional acts or documents concerned.

62.1-150. Acquisition of lands.

62.1-151. Ratification of former resolutions and ordinances.

62.1-152. Liberal construction of law.

[3] Ibid., sections 62.1-148 to -52 (now sections 62-117.1 to -7.5 (1950), as amended, (Supp. 1966)).

Protection of Aids to Navigation.[4]

62.1-187. Punishment of offenses relating to buoys, beacons, or day marks.

62.1-188. Lien for cost of repairing or replacing buoy, beacon, or day mark.

62.1-189. Anchoring on range of range lights.

[4]Ibid., sections 62.1-187 to -89 (now sections 62-175 to -77 (1950)).

APPENDIX VI[1]

HISTORICAL DEVELOPMENT OF WATER RIGHTS IN THE JAMES RIVER AND KANAWHA CANAL

The Chesapeake and Ohio Railway Company (hereinafter called the Railway Company), owns and controls the James River and Kanawha Canal in and near Richmond, Virginia, from its source in James River at Bosher's Dam to its existing eastern terminus. A map prepared by the Department of Public Utilities, City of Richmond, shows the Canal from Bosher's Dam to Robert E. Lee Bridge.

The Canal is divided into two main sections, namely; the upper level extending from its source in James River to the City Pump House, near Mile Post 3, and the lower, or Richmond level, extending from said Pump House to its eastern terminus.

The flow of water into the Canal is regulated at the head gates at Nine Mile Lock. When there is plentiful water supply in the river, the Canal carries 900 to 1,000 cfs; and all the water coming down the river in excess of that amount flows over Bosher's Dam. During periods of prolonged droughts, the Canal at times takes all the water that flows down the river, which has been as little as 450 cfs. During such periods the Railway Company endeavors to maintain the pond back of Bosher's Dam at the crest elevation of the dam by regulating the headgates to admit no more water into the canal than the quantity flowing down the river.

All the water from the upper level passes through the City Pump House or over the spillway at the Pump House into the lower or Richmond level.

There are three wasteways on the lower, or Richmond level, namely:

(1) At Haxall where attendants are on duty at all times, and where the Richmond level of water is regulated. The gates in this wasteway are opened to drain the Canal when necessary;

(2) A small gate at Burnt Mill, east of Mile Post 2; and

(3) At Vepco's Park Station Plant. This wasteway is large enough to carry off practically all the water flowing in the Canal and is

[1]Based on information and maps provided through courtesy of the City of Richmond officials and the legal staff of the C. & O. Railway Co.

equipped with a butterfly valve which operates automatically to control the water level in the lower end of the Canal. A signal system at the Haxall gates is activated by a float valve near this wasteway in event trouble occurs and the Canal water rises too high at that location. All the wasteways discharge into the river.

The City, at its cost and expense maintains, Bosher's Dam and the bed and banks of the upper level of the Canal, including the feeder canal. The Railway Company maintains, at its cost and expense, the Richmond level of the Canal.

Prior to 1940, the Canal flowed eastwardly from its existing end and to Gallego Mills (on 12th Street), and also through the 9th Street arm to locks along Byrd Street and thence to 13th Street, from whence it flowed to the City Dock at 17th Street. The portion of the water that passed through Gallego Mills was reused under water rights owned by the firm of Sloan and Wortendyke.

Under the terms of an agreement, dated April 22, 1940, among the City of Richmond (hereinafter called the City) and Virginia Electric and Power Company (hereinafter called Vepco), the City agreed to permit the Railway Company, subject to approval by the State Corporation Commission, to fill the portion of the Canal from the east end of Tredegar to Gallego Mills and the Canal arm to 10th Street. The City agreed to construct certain sewers made necessary by the closing of that portion of the Canal, and the Railway Company and Vepco agreed to supply water from the forebay at Vepco's 12th Street Plant to the City Dock by constructing a 42-inch flume from said forebay to the Canal wall at 13th Street.

Resume of Agreements and Leases Conveying Water Rights, and other Agreements Relative to the Water Rights.

Tredegar Company

The predecessors of the Tredegar began acquiring rights to use water in the Canal as early as 1798 and by 14 instruments, the last of which was 1869, acquired the right to use 122.36 cfs. In 1933, the Chesapeake and Ohio Railway Company instituted proceedings in Law and Equity Court against Tredegar, Albemarle, and the City alleging that Tredegar was entitled to use between 122 to 123 cfs., but that it used three times more water than it was entitled to. Tredegar claimed the right to use all of the water it had been using, specifically claiming the right to use 400 cfs. The Gallego Mill (East of 17th Street) then had certain rights to the water in the

Canal, and was also made a party to that proceeding, for in a suit brought by Warner Moore against the C. & O. Railway Company to establish Gallego's water rights in the Canal, it was decided in May 1933, that Gallego had the right to use 173 cfs. under a 4 1/2 foot head. This right was subsequently extinguished by arrangement between Gallego and the Railway Company. However, the Railway Company asserted in the suit against Tredegar, Albemarle, and the City that if Tredegar was entitled to the amount of water claimed, then the amount it uses, plus the amount Gallego was entitled to use, plus the amount which Albemarle and the City were entitled to use, would be more than could be brought down the Canal as it existed for years and more could be brought down the Canal as it existed when the several grants and contracts to use the water were made. The Railway Company further alleged that in the proceeding that Albemarle and the City were confining their use of water to the quantity called for in their contracts, namely Albemarle, 84 cfs., and the City, 88 cfs. Inasmuch as there is no assertion that the City, Albemarle, or Gallego were violating their water contracts, the proceeding was abated as to them and the controversy resolved itself into one between the Railway Company and Tredegar.

On January 1, 1937, the Railway Company and Tredegar resolved their differences and, by agreement of that date, Tredegar obtained the right to use 300 cfs. Section 10 of said agreement contains a covenant by Tredegar that it would not use the water, or any part thereof, elsewhere than upon the premises occupied by Tredegar at the date of the agreement, and that it would not sell, assign or sublease the same, or any part thereof, for use elsewhere without the written consent of the Railway Company.

During the mid-1950's, Albemarle Paper Manufacturing Company merged with the former Tredegar Iron Works, which was founded in 1836 in Richmond, and acquired its property between the Canal and the river and its perpetual right to water from the Canal to 300 cfs.

Albermarle Paper Manufacturing Company

The predecessors of Albermarle first acquired the right to use water in the Canal in 1888. By four subsequent agreements, this right was extended; and, by agreement of July 1, 1921, the quantity was increased to 84 cfs. Apparently, by this agreement the time limitation was lifted, and it was provided that the Albermarle obtained the rights to use 42 cfs. and an additional 42 cfs. so long as the Chesapeake and Ohio Railway Company is willing for Albemarle to use such increased quantities, the Railway Company reserving the right at any time at its option, to limit the amount of water to 42 cfs. and no more. Since 1921, the Railway Company has allowed Albemarle to use 84 cfs., for in its proceeding against

Tredegar in 1933, to which Albemarle was made a party, the Railway Company alleged that Albemarle was entitled to use 84 cfs. Albemarle has been obligated to pay the Railway Company a specified amount per annum for the use of 84 cfs.; but, if Albemarle is limited to a lesser amount, its obligation is reduced.

On April 1, 1958, a new agreement and lease, between the Railway Co. and the Albemarle Paper Manufacturing Company, was entered into which granted Albemarle the right to draw off from the Canal, at its existing intake on the Richmond level, 84 cfs. of water, and prescribes rates of payment therefor and certain conditions pertaining to the use of the water. The Agreement and Lease will terminate March 31, 1968, unless sooner terminated for reasons set out in the Agreement.

Virginia Electric And Power Company (Vepco)

Subsequent to May 1933, the Railway Company acquired the water rights of Gallego Mills and the secondary rights of Sloan and Wortendyke--173 cfs. -- and with it terminated the last of the water rights east of 7th Street. The Railway Company desired to close the Canal and basin east of 7th Street, but the obligation of the Railway Company to supply water to the City Dock existed. Water supplied for the Dock was conveyed along the Canal and through the basin to 13th Street, thence through a flume to the Dock.

On January 21, 1939, the Railway Company and Vepco entered into a 999-year lease, commencing January 1, 1939. This agreement leases to Vepco 173 cfs and whatever other and further amounts of water it may have in the Canal over and above the then existing contractual obligations and all quantities that may thereafter become available. The Railway Company agreed not to renew any of the existing leases, except Albemarle's and except as it may be bound so to do by the terms of existing leases.

The Lease covered, among other things:

(a) Furnishing of water for the City Dock from Vepco's 12th Street Plant.

(b) Construction of Vepco's hydro-electric power plant (Park Station) on the Richmond level, the location to establish the point of use of Vepco's water rights.

(c) The construction (at Park Station), at the expenses of the Railway Company, a wasteway with capacity of at least 900 cfs., Vepco to use said wasteway as may be necessary to prevent

the Canal water level at the point of use from rising above a specified elevation.

(d) If Vepco ever acquired at least 275 cfs. of the Tredegar water rights, Vepco would reimburse the Railway Company for the amount it paid for said wasteway, less depreciation.

(e) In the event Vepco becomes the sole lessee or owner of all the water rights on the Richmond level of the Canal, Vepco, upon the request of, but without cost to, the Railway Company, will assume the operation of the regulation (wasteway) gates at Haxall.

On February 27, 1953, the Railway Company and Vepco entered into a supplementary agreement to the lease dated January 21, 1939. It recited that the Railway Company desired to equip three of the six manually operated gates at Haxall for electrical operations and to install an audible-visible alarm system at Haxall to be activated, by a device in the float chamber at Park Station, if the Canal at Park Station began to flood. The installations were to be made at the Railway Company's expense; but inasmuch as the aforesaid Lease of January 21, 1939, contained a provision that, under certain conditions, Vepco would take over the operation of the Haxall gates, this agreement was necessary to include the new installation as Vepco's responsibility, in event it took over the operation of the gates.

City Of Richmond

By agreement of March 3, 1880, the City acquired from a predecessor of the Chesapeake and Ohio Railway Company (James River and Kanawha Company) the right to use some of the water in the Canal. The agreement recited that the City desired"... to erect pumping works for increasing the supply of water in its reservior, . . . and to use water from the Canal. . . for furnishing this supply and power at said pump works." This agreement provided that in order to supply the increased quantity of water, Bosher Dam could be raised 4 feet and its width increased to that necessary, and raceways should be constructed on the tow path side beside of the canal at the feeder from the Bosher Dam and on the berm side of the locks between Bosher Dam and the 3-mile lock and at the 3-mile locks (the site of the pump house at Byrd Park west of the Boulevard Bridge). The agreement further provided that water used in the pump works might be 283 cfs. with the privilege of using as an extension of the pump works required, a minimum capacity of 705 cfs., which rights were to be perpetual. The agreement further provided that water used by the City shall be returned to the first level of the Canal, and that the James River and Kanawha Company would assume all the responsibility for its proper disposition as to the rights of others

(which now include Tredegar, Albemarle and Vepco). The agreement further provided that the City should do all the work contemplated at its expense and that Bosher's Dam and the line of the Canal from the dam to the pump house at Byrd Park shall be perpetually kept in repair by the City, except locks and their appurtenances, houses and fences of all kinds, bridges, and maintenance of the tow path.

The agreement further provided that its purpose was to confer upon the City the privileges of increasing its water supply and that nothing in it should impose on the City any obligation to avail itself of the privileges granted.

Pursuant to the agreement, the City erected the pump works at Byrd Park, and subsequently water in the first level of the Canal (East of Byrd Park plant) was allowed to back up upon some of the machinery in the pump works. The City sought relief from this damage in certain litigation in the Circuit Court. To settle the matter, the City and the Railway Company entered into a contract in May, 1890, whereby the Railway Company obtained the right to raise the water in the first level of the Canal 2 1/2 feet above the original zero mark established at or before the pump works were erected. This contract recited that inasmuch as a larger supply of water in the first level of the Canal will result for use for manufacturing purposes, ". . . the said City shall have the right at any time or times to use all the water for pumping purposes at said pump works, which the Railway Company is legally entitled to and which it may be possible to bring down the Canal from Bosher's Dam. . .provided that if questions arise as to the right of the Railway Company to take from the river at Bosher's Dam more water than is called for in the contract. . .dated May 3, 1880, the City shall not use such excess until it first determines said question and establishes its right under that of the Railway Company to such excess." This contract further provided that no right, interest, or power granted or reserved in the contract of March 1880, should be surrendered or nullified, except as therein specified, and the contract of March, 1880 shall continue in full force and effect except as modified. The effect of these provisions was that the water used in the pump works at Byrd Park might be 283 cfs. and the City could use, as an extension of the pump works required, a maximum quantity of 705 cfs., but the City could also use all the water the Railway could take legally from the river at Bosher's Dam and could convey through the Canal from Bosher's Dam, for pumping purposes at the pump works; provided if at any time the right of the Railway Company to take more water from the river at Bosher's Dam than 705 cfs. was questioned, the City could not use the excess, until it first established the right of the Railway Company to take the excess water from the river.

When the pump works were constructed at Byrd Park a raceway was also constructed which drew the entire flow of the Canal from the top of the 3-mile lock at the site of the pump house at Byrd Park and conducted it through the City's pumps and thence by means of tailraces and a spillway for surplus water back into the Canal just below the pump works.

The contract of 1880 seems to have contemplated that all of the water diverted from the Canal should be returned to the Canal, although it recites that the City desired to use a portion of the water was not returned to the Canal, but was entirely diverted and impounded in the City's reservoirs and supplied to consumers. This was a comparatively trivial proportion of the flow, less than 10 cfs. At any rate the contract of 1890 seems to limit the use of water in the Canal for pumping purposes at the pump works.

The agreement dated October 17, 1902, between the Railway Company and the City, covers construction of the City's settling Basins near Mile Posts 4 and 5, including construction of the dam at the easterly end of Williams Island. The City's water supply is taken from the river at this dam and carried into the settling basin through a flume.

In 1908 or 1909 the first filter plant was constructed on the north bank of the river some distance above the pump works. A flume was constructed from this plant and run under the Canal to the pump works at Byrd Park and the City ceased to divert any water from the Canal into its reservoirs but continued to use Canal water at Byrd Park for generating power to operate its pumps, all the water being returned to the Canal. When the existing filter plant was constructed in 1924 and subsequently enlarged, water has been taken from the river, filtered and pumped into the City's reservoirs and distribution systems.

In the agreement dated November 16, 1928, between the Railway Company and the City, the Railway Company consented to the transfer to the City of the water rights held by the Atlantic Coast Line Railroad Co., which rights were originally covered by lease dated June 9, 1887 to Richmond Paper Manufacturing Company. The rights entitle the City to use 88 cfs. at either the City's Hollywood Electric Plant (just west of the Albemarle Paper Company), or at a point at the Settling Basin. By authority of agreement dated June 15, 1930, between the Railway Company and the City, the City constructed a flume from the Canal to its Hollywood Electric Plant and draws its entitlement of water from the Canal at that location for the purpose of generating electric current, except during periods of prolonged droughts.

During prolonged droughts when little or no water flows over Bosher's Dam, the City quickly exhausts the supply of river water between Bosher's Dam and the City's dam at Williams Island. The City then exercises its right to draw water from the Canal at the Settling Basin instead of at the Hollywood Electric Plant. The Canal, during such periods, becomes the principal, and sometimes the sole source of water supply for the City. Spent water, if any, was not required to be delivered to any raceway or canal by these contracts.

Simultaneously with the making of these contracts, an agreement was entered into with VEPCO whereby that Company granted and conveyed to the City all of its right, title and interest in and to the 88 cfs. and agreed that the City should have the right to take the water or so much as the City may require, from the Canal at a point mutually agreed upon by the Railway Company and the City near the settling basin or filter plant or to take the water or so much as the City may require to generate electricity from the Canal at or near the City's Hollywood electric plant and as such other point or points as may be agreed to between the City and the Railway Company upon the condition:

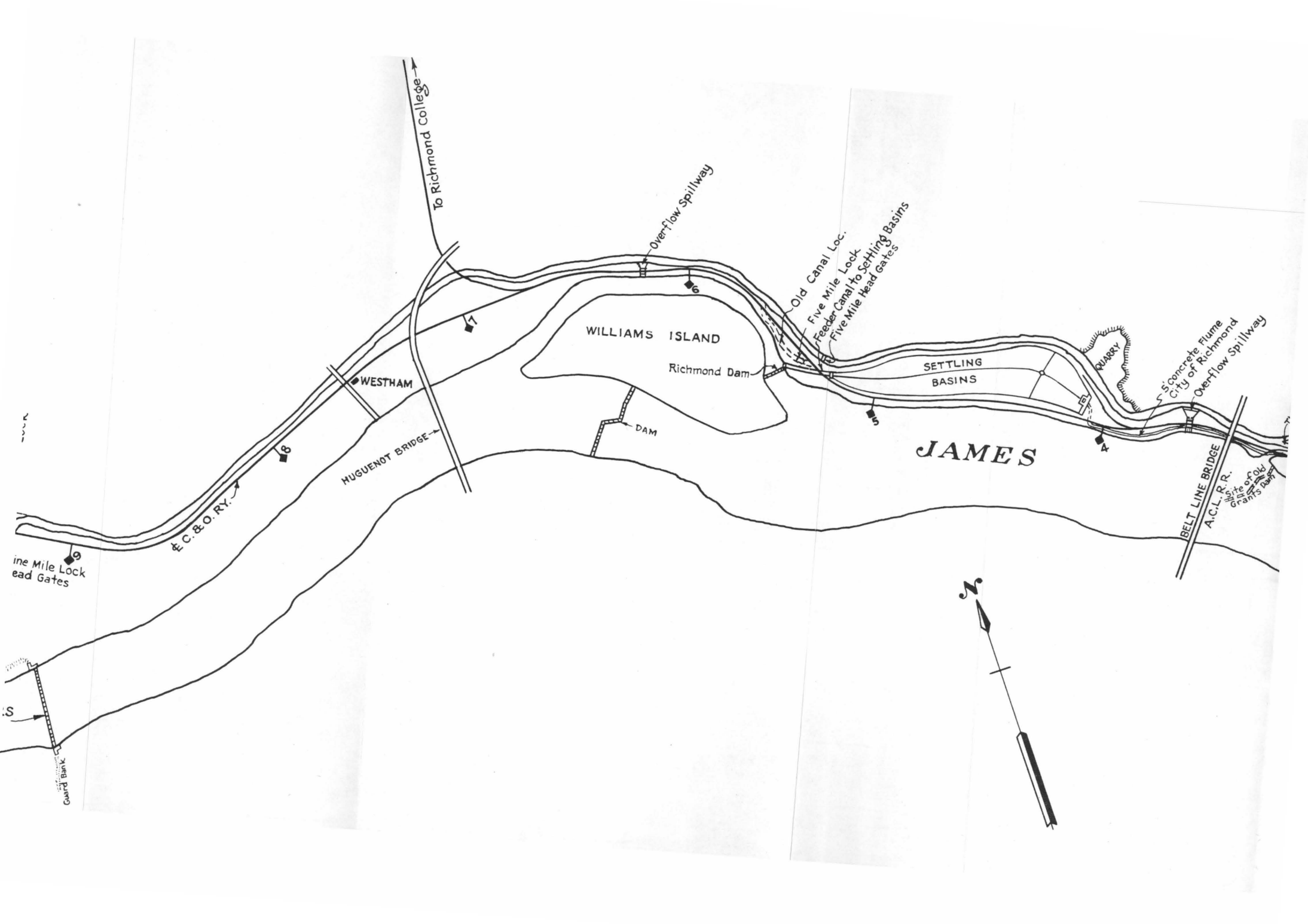
(1) That the City in taking the water at or near the settling basin and emptying it therein, only so much of the water as may be required in the judgment of the Director of Public Utilities from time to time for supplying the necessary requirements of the City's water supply system will be taken; and

(2) That in taking the water at or near the Hollywood electric plant and using it there, the residue will be discharged into the James River at or immediately below the Hollywood plant or at some convenient point or points west of the Power Company's Twelfth Street dam extending across the river in a line with Sixth Street.

By latter agreement dated August 21, 1939, the Railway Company and Vepco, jointly and serverally agreed to indemnify and save harmless the City from damages or costs, etc. resulting from the construction and maintenance or operation of a flume under Tredegar Street at Vepco's Park Station. This is the flume that carries under Tredegar Street and thence to the river the water used by Vepco for generating electric current at Park Station and the water passed through the wasteway at said Station.

An agreement, dated May 15, 1950, between the Railway Company and the City confirms and clarifies the provisions of aforesaid agreement dated March 3, 1880, pertaining to the maintenance and repair of Bosher's Dam and the upper level on the Canal. It also provided for the installation of new equipment on the headgates at Nine Mile Lock. It confirmed long standing arrangements whereby the City pays 1/2 the salary of the gate attendant at Nine Mile Lock (C. & O. pays 1/2), and also the payment by the City of 1/2 the salary of one gate attendant (8-hour trick) at Haxall. The Railway pays all other salaries at Haxall.

An agreement dated February 4, 1958, confirmed the City's right to take its entitlement, or any portion thereof, from the Canal at the Settling Basin, and the Railway Company agreed to the City's enlarging and improving the intake flume at that location. The City does not take water from the Canal at that location except during periods when there is insufficient water in the river back of its William's Island Dam.


To Richmond College
Overflow Spillway
Old Canal Loc.
Five Mile Lock
Feeder Canal to Settling Basins
Five Mile Head Gates
WILLIAMS ISLAND
Richmond Dam
WESTHAM
HUGUENOT BRIDGE
DAM
SETTLING BASINS
QUARRY
5' Concrete Flume City of Richmond
Overflow Spillway
JAMES
BELT LINE BRIDGE
A.C.L.R.R.
Site of Old Grant's Dam
C. & O. RY.
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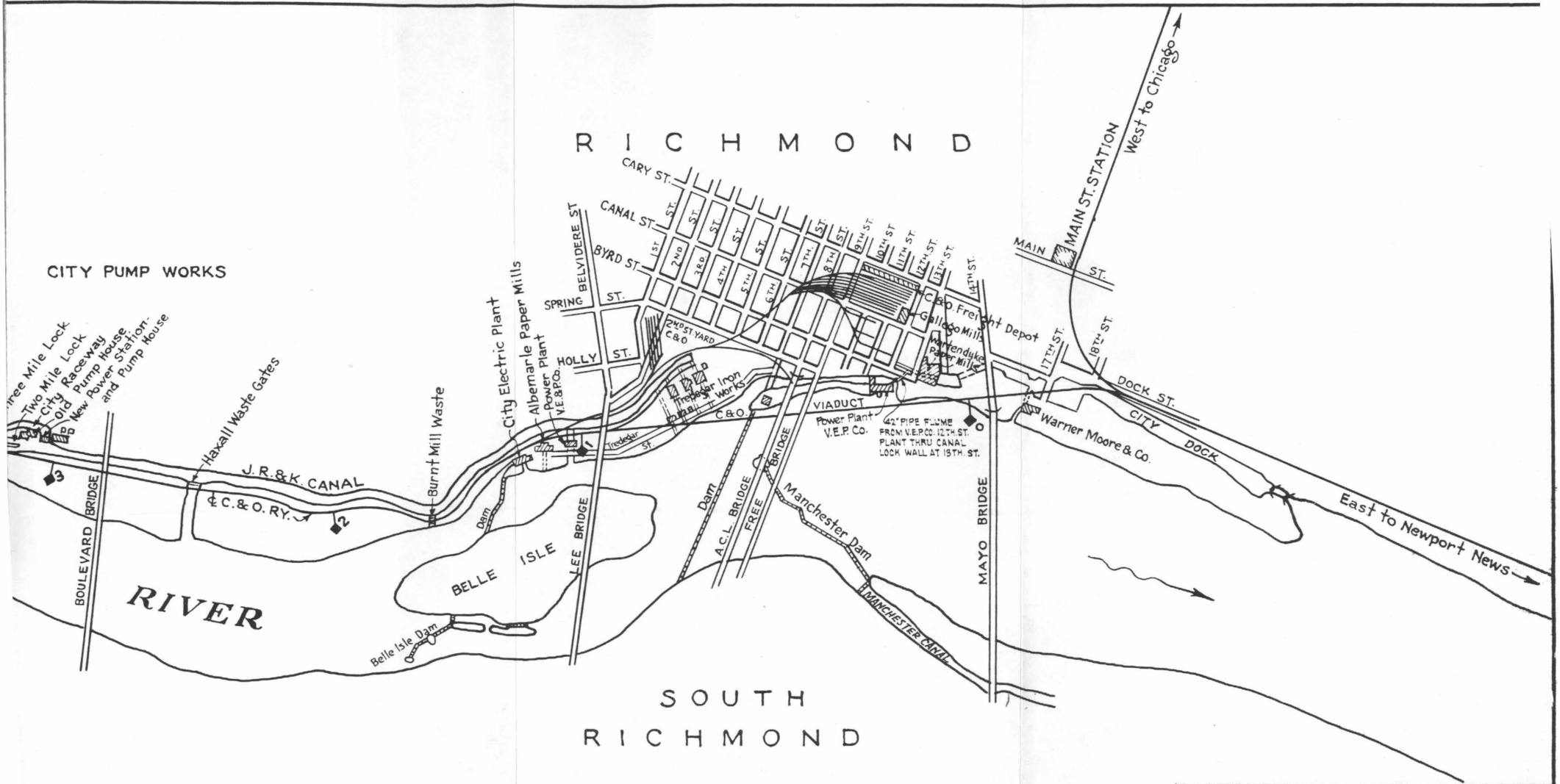

REVISIONS	THE CHESAPEAKE AND OHIO RAILWAY COMPANY Chief Engineer's Office - Richmond, Virginia.		
12-7-43 W.Z.M.	SKETCH MAP OF CANAL BETWEEN BOSHERS DAM AND RICHMOND		
	RICHMOND DIVISION - RIVANNA SUB-DIVISION		
	Scale: None Date: 6-23-42 Drawn By: B.O.W. Checked By:	VAL. SEC. V-3	DRAWING No 3194-B

WATER RESOURCES RESEARCH CENTER
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