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# STATE REGULATION OF CHANNEL ENCROACHMENTS

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Efforts to combat losses caused by floods may take two general approaches. The first and most common approach is the erection of protective works such as dams and levees, and lesser positive governmental projects such as detention reservoirs, land filling, and channel enlargements and straightening. Such projects rest on the theory that losses may be reduced by preventing flood waters from reaching susceptible areas. The second approach results from the fact that protective works cannot be a complete solution because of their great expense and because they are not adaptable to the flood problems of many areas.<sup>1</sup> Instead of protective works, the second approach advocates that the flood plain itself be regulated in various ways in order to reduce loss. This may take a number of forms: zoning, enacting channel encroachment laws, regulating the construction of dams, regulating subdivision development, enacting building codes, enacting conservation measures, providing for permanent evacuation, providing for government acquisition, erecting warning signs, and distributing publicity to groups interested in the financing of construction.<sup>2</sup>

The emphasis of this article will be on one of the methods mentioned above—channel encroachment regulation, which is an attempt to maintain an adequate channel or floodway for flood waters by preventing any flow-constricting development in the channel or floodway. Model legislation is proposed, along with an analysis of the existing state of the law. It must be stated, however, that a certain

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1. This was generally realized in the Flood Control Act of 1936 which provided that the Federal Government should improve or participate in the improvement of navigable waters . . . for flood control purposes if the benefits . . . are in excess of the estimated costs.

49 Stat. 1570 (1936).

2. Flood insurance might also be listed to the extent that it may incorporate requirements for the adoption of other measures. This was attempted in the Federal Flood Insurance Act of 1936 in two ways: (1) "No insurance . . . shall be issued . . . on any property . . . in violation of state or local flood zoning laws"; (2) "no insurance . . . shall be issued in any geographical location unless an appropriate public body shall have adopted . . . such flood zoning restrictions, if any, as may be deemed necessary . . . to reduce . . . damages." 70 Stat. 1082 (1936), 42 U.S.C. § 2411 (1958). For various reasons (particularly the fact that the Act would have, in its practical operation, given a high subsidy to those frequently flooded) this particular program was abandoned, Congress refusing to give an appropriation for 1957 and subsequent years.

regulatory framework is assumed, for example, a state administrative procedure act setting forth the form to be followed in the issuance of rulings, the procedure by which hearings are to be conducted, the availability of the subpoena power in an investigation, and the like. It is also assumed that certain basic laws are already being administered in the general area, such as a statute regulating the construction of dams on the rivers of the state. In short, the Model Act intends to give a thorough coverage to a relatively narrow area in which it is felt that the present development of the law has been inadequate; it is meant to be a part of a greater plan of water regulation and not an isolated enactment for which a new agency must be set up.

## I

### INADEQUACY OF PRIVATE RIGHTS AT COMMON LAW

Before entering into a discussion of statutory regulation, it is necessary to glance briefly at the rights a private person has in this area at common law. A distinction is drawn between surface waters and those in a stream. As to surface waters the jurisdictions have divided sharply. Some adhere to the civil law rule of natural flow: a landowner cannot alter the manner of flow of surface water onto the land of another against the objection of the other landowner. Other states adhere to the so-called "common enemy" rule: the landowner can act in any way which reduces his own damage to a minimum, irrespective of the effect on his neighbors. A few states have compromised these two approaches, applying the civil law rule in rural areas and the common enemy rule in urban districts. Some other cases seem to have taken a more *ad hoc* attitude, balancing the utility of the particular situation against the harm done, and adopting a general "reasonableness" test (*i.e.*, surface water may be fended off if done reasonably, for proper purposes and with due care in regard to the adjoining property).<sup>3</sup>

There is more uniformity of opinion in the area of riparian rights. The majority rule is that the riparian owner has no right to obstruct the stream or to erect a levee or other structure which will throw water onto the lands of others to their injury in times of ordinary flood, unless the privilege has been obtained by grant or prescription. The riparian owner can, however, erect levees and embankments to prevent the course of the stream from being altered or to protect

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3. 5 Powell, *Real Property* §§ 729-31 (1956); 56 *Am. Jur. Waters* §§ 67-70 (1947).

against extraordinary floods. If he acts with due care, he is not liable for damages incidentally resulting to others. Some states, however, treat all flood waters as a common enemy and permit the land to be protected irrespective of injury to others and irrespective of the type of flood.<sup>4</sup> A riparian owner is not bound to keep the channel free from debris coming there naturally, and is not liable if its accumulation sets the water back over the boundary line. However, in erecting any artificial structure in or across the stream, he is bound to take notice of any material impeded by such obstruction and will be liable if he builds in such a way as to necessarily cause the drifting material to dam back, or if he does not remove it when he sees that it is dammed.<sup>5</sup>

The question then arises that if the owner has these rights against one who obstructs a stream, why is there such a great need for encroachment legislation? It is suggested that there are five compelling reasons. First, it is often extremely difficult to prove, when flood waters have swept over an entire area, exactly what part of the resultant damage may be attributed to an obstruction belonging to a particular defendant. Second, even if a direct causal relation could be shown, floods are typically of such a catastrophic nature that collection of a judgment would probably involve the plaintiff as a creditor in a bankruptcy proceeding. Third, since a number of jurisdictions

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4. 6A American Law of Property § 28.60 (Casner ed. 1952); 5 Powell, Real Property § 717 (1956); 56 Am. Jur. *Waters* § 99 (1947); Annot., 23 A.L.R.2d 750 (1952). In *Wellman v. Kelley & Harrison*, 197 Ore. 553, 252 P.2d 816 (1953), the court stated that "extraordinary" floodwaters could be fended off by the owner to protect the land, but "ordinary" (*i.e.*, annual or regularly recurring) floodwaters could not. California distinguishes the overflow of a stream from the stream itself and permits the property to be protected, although no obstruction of the stream or of surface water is allowed. *Mogle v. Moore*, 16 Cal. 2d 1, 104 P.2d 785 (1940). In regard to obstructions not in the nature of protective works, see *Soules v. Northern Pac. Ry.*, 34 N.D. 7, 157 N.W. 823 (1916), which held that one who builds across a natural drainway has the duty to provide for the natural passage through the obstruction of water which may be reasonably anticipated, although he need not provide against unprecedented rains. Compare *Ohio & M. Ry. v. Nuetzel*, 43 Ill. App. 108 (1891), in which a railroad was held liable where it constructed a solid embankment over a watercourse which flooded the plaintiff's land during an extraordinary rain. The fact that the rain was extraordinary was held to be no defense. Note, however, that an entirely different set of legal rules applies to dams and other structures (not including docks and the like) which have a direct relation to the *use* of water. Except for seventeen western states which hold that priority of use determines the extent of water rights, the general rule is that riparian owners have correlative rights of enjoyment. These are broken down into several subcategories varying among the states. See generally, 6A American Law of Property §§ 28.55-60 (Casner ed. 1952). However, most of the injury due to encroachment seems attributable to structures which have no relation to water-use.

5. 2 Farnham, *Water and Water Rights* 1832 (1904); Annot., 29 A.L.R.2d 447 (1953).

allow protective works against "extraordinary" flood waters, and since this may mean any non-annual flood, a private person would seem fully helpless if he were injured by water thrown onto his land by reason of a protective work erected by a neighbor against such a flood.<sup>6</sup> Fourth, cases seeking to enjoin obstructions prior to the occurrence of damage seem nonexistent. While it may be possible to obtain an injunction before severe damage has occurred where the obstruction is directly within the channel of the stream since the ordinary flow of water may cause an overflow in a moderate way, it would seem extremely difficult to obtain an injunction where the obstruction is in the floodway but not in the channel<sup>7</sup> since damage would result only in time of more severe flood. Thus, to seek an injunction in the latter situation would actually be an attempt to obtain an injunction on a more or less hypothetical situation, even if the danger were foreseeable. Fifth, there is a clear social utility in attempting to prevent the situation which will cause injury, rather than permitting recovery in a lawsuit after it has occurred.<sup>8</sup>

## II

### EARLY LEGISLATION

The first step toward statutory regulation of channel encroachments began in the 19th century when a number of states passed laws requiring railroads to provide for the drainage or flow of waters. These statutes were of two types. Some statutes required the construction and maintenance of drainage facilities such as openings, ditches, or other outlets through, across, or along the railroad right-of-way or roadbed. However, a majority of the statutes declared that a railroad built along a stream or watercourse must be constructed in such a manner as not to impair the usefulness of the stream or watercourse, or that the stream or watercourse must be restored to its former state or condition.<sup>9</sup> The validity of the statutes

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6. See note 4 *supra* and accompanying text.

7. See Section 1(g) of the Model Floodway Encroachment Act, p. 501 *infra*, for a common definition of "floodway."

8. Admittedly this social utility may be outweighed if the benefits arising from the obstruction during the interval between floods exceed the damage caused by the obstruction during the flood.

9. Examples of the statutes requiring construction and maintenance of drainage facilities are Minn. Stat. Ann. § 219.37 (1947) (duty to keep ditches and culverts clean between certain dates each year) and Mont. Rev. Code § 72-644 (1947) (construction of such facilities required). An example of a statute forbidding the impairment of a stream's usefulness is Kan. Gen. Stat. Ann. § 66-501 (1949). See Annot., 19 A.L.R.2d 967 (1950).

has been upheld in two cases in which they were specifically challenged. In *Chicago & A.R.R. v. Tranbarger*,<sup>10</sup> the United States Supreme Court upheld a Missouri statute requiring that provision be made for the passage of water under embankments and imposing punitive and compensatory damages as a penalty for violation. The statute was upheld against a claim that it took a right-of-way for drainage for which compensation must be paid. The statute was held to be a valid exercise of the police power in spite of the fact that the state adhered to the common enemy rule. In *Peterson v. Northern Pac. Ry.*,<sup>11</sup> the Minnesota statute imposing a requirement to keep railroad ditches clean between certain dates each year was held to be a reasonable exercise of the police power.

### III

#### ENCROACHMENT LEGISLATION

Eventually it was more widely realized that encroachments upon channels and floodways so constricting their width that flood conditions would be aggravated would become ever more serious as population increased and was pressured into locating on the less desirable flood plain areas. For

[to] the extent that new occupance encroaches upon natural stream channels so as to increase flood heights and velocities, it adds to the flood hazard. In virtually all of the areas studied there was evidence of some encroachment, but it carried the most serious consequences in two types of situations. One of these is where bridges and highway fills constrict the channel so as to cause ponding. The other is where new structures, usually residences, are built in the bottom of dry washes or close to the channels of small streams having drainage areas of less than 10 square miles.<sup>12</sup>

In 1911, Illinois enacted the first channel-encroachment law of general application on a statewide level.<sup>13</sup> Illinois was followed by Pennsylvania (1913),<sup>14</sup> New Jersey (1929),<sup>15</sup> Maryland (1933),<sup>16</sup>

10. 238 U.S. 67 (1915).

11. 132 Minn. 265, 156 N.W. 121 (1916).

12. White, *Changes in Urban Occupance of Flood Plains in the United States* 229 (Univ. of Chicago Dept. of Geography Research Paper No. 57, 1958).

13. Ill. Ann. Stat. ch. 19, §§ 70-78 (1963) (encroachments along banks prohibited without permit).

14. Pa. Stat. Ann. tit. 32, §§ 681-91 (1949) (obstruction to stream prohibited without permit).

15. N.J. Stat. Ann. § 58:1-26 (1940) (structures within high water mark prohibited without permit).

16. Md. Code Ann. art. 66C, §§ 721-34 (1957) (obstructions to waterways prohibited without permit).

Washington (1935),<sup>17</sup> Massachusetts (1939),<sup>18</sup> Indiana (1945),<sup>19</sup> Kentucky (1948),<sup>20</sup> Iowa (1949),<sup>21</sup> and Connecticut (1955).<sup>22</sup> In New York, the power to establish encroachment lines has been given to one county, Westchester (1956).<sup>23</sup> Los Angeles County has made channel encroachment regulation a part of its zoning ordinance.<sup>24</sup> Hayward, California, has an ordinance relating to it.<sup>25</sup> Welch, West Virginia, seems to have been given the power by its city charter.<sup>26</sup> There are also a number of others.<sup>27</sup> This does not include legislation giving a private person the right to cause removal of the obstruction,<sup>28</sup>

17. Wash. Rev. Code § 86.16 (1962) (agency to establish flood zones).

18. Mass. Gen. Laws Ann. ch. 91, § 12A (1958) (structures within high water mark prohibited without permit).

19. Ind. Ann. Stat. §§ 27-1102 to -1123 (1960) (agency to establish floodway).

20. Ky. Rev. Stat. ch. 104.400 (1962) (agency to establish floodway).

21. Iowa Code Ann. §§ 455A.33-39 (1958) (agency to establish floodway).

22. Conn. Gen. Stat. Ann. §§ 25-3, -5, -69 (1960) (agency to establish encroachment lines).

23. N.Y. Laws 1956, ch. 853, as amended, Westchester County Local Law 1-1957 and N.Y. Laws 1959, ch. 97 (structures within 100 feet on each side of channel lines prohibited without permit).

24. Los Angeles County, Cal., Zoning Ordinance art. 5, §§ 760-64 (1951), *Flood Plain Regulation 9* (A.S.P.O. Planning Advisory Service Information Report No. 53, 1953).

25. Hayward, Cal., Zoning Ordinance No. 546 N.S. (1953). See also Murphy, *Regulating Flood Plain Development* 103 (Univ. of Chicago Dept. of Geography Research Paper No. 56, 1958) [hereinafter cited as Murphy].

26. *City of Welch v. Mitchell*, 95 W. Va. 377, 121 S.E. 165 (1924).

27. See West Lafayette, Ind., Zoning Ordinance art. III-A (1956) (extending over floodway), in Murphy 180; Albuquerque, N.M., Zoning Ordinance § 16 (1956) (150 feet of the centerline of the flood channel), in Murphy 184-85; Farmington, Mich., Zoning Ordinance No. C-180-63 (1963) (floodway of seventy-year flood); Iowa City, Iowa, Zoning Ordinance art. VI (1962) (floodway of fifty-year flood); Kingsport, Tenn., Zoning Ordinance § V & VI (1957) (forty to sixty-five feet of the centerline of the creek), in Murphy 185; Knoxville, Tenn., Zoning Ordinance art. IV, § 19 (1963) (floodway); Lewisburg, Tenn., Zoning Ordinance art. VIII & IX (1956) (floodway), in Murphy 186-87; Milwaukee County, Wis., Zoning Ordinance § 58.16(5) (1953) (channel lines), in Murphy 188; Tehama County, Cal., Zoning Ordinance No. 302 (1961) (floodway).

In 1961 the state of Hawaii enacted legislation providing for zoning on a statewide level. Hawaii Rev. Laws § 98H-1 to -16 (1963). While flood plain zoning is included in this first attempt at statewide zoning, the statute does not mention channel encroachment regulation as such, but the Land Use Commission which administers the statute apparently feels it has the implied power to so regulate and states that such controls "may very well be forthcoming in the immediate future." Letter from Raymond S. Yamashita, Hawaii Land Use Comm'n, March 10, 1964.

28. Wis. Stat. Ann. § 88.41 (1957), which gives any person injured by an obstruction which is due to the negligence of its owner the right to request its removal, which if not followed and if justified, imposes the duty on the supervisors of the town to order its removal at the cost of the owner. This seems to be declaratory of the injured party's common law rights, except that he may go to the town supervisors instead of a court of equity for an injunction.

nor legislation giving a public agency the power to remove natural obstructions such as trees and silt from watercourses,<sup>29</sup> nor statutes regulating dams.<sup>30</sup> The great majority of all these laws (except those regulating dams) were enacted after severe floods.

The effectiveness and enforcement of these statutes has varied, as evidenced by an extensive investigation in 1958 by Francis C. Murphy of the University of Chicago.<sup>31</sup> In some states, such as Connecticut, the program of encroachment line delineation and enforcement has been pressed with diligence, but in others no encroachment lines have been established, policing is nonexistent, and there are no predetermined standards.

It would seem that a major factor in the lack of efficacy of many of these statutes is the unavailability of funds, a problem only the legislature can cure.<sup>32</sup> When memories of the last major flood fade, the sense of an urgent need to curb encroachment fades with them. It is suggested, however, that if a statute is enacted which is so drafted that the public is induced to apply for permits granting the right to obstruct a channel (thus automatically giving work to the agency), coupled with the imposition of certain duties upon the agency (rather than mere powers), that agency is more likely to obtain at least the minimum funds for effective operation in subsequent years.

Analysis of existing legislation has led to the conclusion that the following are the principal defects of at least a majority of the encroachment statutes:

1. Too many aspects of the laws are permissive rather than mandatory, both as to the agency (*e.g.*, the establishment of encroachment lines) and the public (*e.g.*, permits);

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29. Neb. Rev. Stat. § 31-202.02 (1952).

30. For a comprehensive list of citations to such statutes, see Heath, Flood Damage Prevention in North Carolina 68 (1963). Certain legislation which might at first glance appear to be channel encroachment regulation may actually be limited to dams. See, *e.g.*, W. Va. Code § 5988 (1961), providing that no persons shall construct any "obstruction more than 10 feet in height across any stream or watercourse unless the design and the proposed construction shall have been declared to be safe . . . ."

31. Murphy 16-32, 101-04.

32. The Indiana statute attempts to avoid this problem by providing for an automatic annual appropriation of \$50,000 to be diverted into a special fund for the sole use of the Commission. Ind. Ann. Stat. § 27-1123 (1960). Such a procedure appears to recommend itself should local legislative custom not be hostile to it.



2. There exists a general lack of clarity, not only in definition of terms but in the standards to be applied (as to the establishing of encroachment lines and the granting of permits) ;
3. There is a failure to provide flexibility of remedies to the agency ;
4. There is a failure to provide for informing the public of the requirements of the statute ;
5. The coverage of the statute is limited to channel encroachment rather than floodway encroachment ;
6. Some of the statutes do not even provide for the establishment of encroachment lines, merely prohibiting the obstruction of a channel unless a permit has been granted.

The Model Act and the further detailed discussion of its provisions show how these defects may be cured.

As we have seen, some attempts at encroachment legislation have been made at the county and city level. However, legislation on this level appears undesirable. Apart from the fact that funds may not be available, enforcement on a lower level would seem to be proportionately more expensive since there is greater likelihood that a new agency would have to be created. Enforcement on a statewide basis would be preferable since the program could probably be administered within the framework of an existing agency. Furthermore, there is a need to correlate flood data on a fairly wide geographical basis. While information made available by the Tennessee Valley Authority, the Corps of Engineers, and the United States Geological Survey or similar groups may suffice, financial difficulties are likely to be encountered if the agency must also obtain information on its own and pay for technical services. Moreover, the dangers created by such encroachments may not be as local as they seem ; ponding behind a bridge may cause flooding of a wide area, and if structures are swept away by the current, they may cause damming miles downstream with the same ponding results. If one community does pass a channel encroachment law, it may still suffer severe damage if neighboring communities do not. Lastly, such legislation, if it is effective, will meet opposition from the local populace af-

fectured.<sup>33</sup> A state agency will be better able to withstand such pressure than a local city council.<sup>34</sup>

As is usual in the entire area of flood plain regulation, there have been few cases dealing with the validity of encroachment laws. The first was *Sioux City v. Simmons Warehouse Co.*,<sup>35</sup> in which the court held that where the defendant constructed a building over a stream in violation of an ordinance which permitted such construction only if certain specifications as to the size of the conduit were met, and where an inadequate conduit caused ponding during a flood, reconstruction of the building would be required in order to conform with the ordinance since it was an obstruction to the flood flow of the stream and a public nuisance.

Some years later arose the case of *City of Welch v. Mitchell*,<sup>36</sup> where the city, under due charter authorization, adopted an ordinance fixing building lines on each side of the stream in order to prevent the obstruction of its flow. The court said that this was a valid exercise of the police power and that the owner need not be paid compensation if the restriction was reasonable. However, the court then held that the city could not permit encroachment beyond the line on one side of the stream to the disadvantage of those on the opposite side without compensation.<sup>37</sup> The case basically reflects the idea of equal protection of the laws, and emphasizes to the draftsman that care must be taken if the legislation sets up standards for permits, or if it is to apply to only certain types of streams, or only to certain types of applicants for permits.

The next case, *State v. Metropolitan St. Louis Sewer Dist.*,<sup>38</sup>

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33. Murphy 22, 29 indicates that this was the case with the Connecticut and New Jersey statutes. If encroachment provisions are incorporated into a flood plain zoning ordinance, the local government may tend either to fail to administer the ordinance with diligence by treating the encroachment danger as "just another factor" in considering whether to grant a permit, or be prone to grant variances, or fail to be able to have an ordinance with "teeth" in it passed in the first place. Also, the frequent inability of a municipality to deal effectively with non-conforming uses may tie the hands of local government.

34. Giving the specific power to establish encroachment lines to cities and towns would not seem to be of much effect. Both Connecticut (since 1945) and Pennsylvania (since 1931) have given their political subdivisions such power, but no community has even taken advantage of it. Murphy 20, 31.

35. 151 Iowa 334, 129 N.W. 978 (1911).

36. 95 W. Va. 377, 121 S.E. 165 (1924).

37. *Ibid.* The city attempted to relocate the building lines, moving one toward the stream on one side in order to permit the completion of a building for which it had negligently issued a permit, and moving the other away from the stream on the other side, farther onto the defendant's land, in order to maintain its sixty-foot clearance area.

38. 365 Mo. 1, 275 S.W.2d 225 (1955).

came thirty-one years later. There, pursuant to a statute, a sewer district plan was adopted which granted the power, *inter alia*,

to establish flood control lines and to control the use of private lands within said lines, to alter channels and regulate the erection of all structures within such flood lines.<sup>39</sup>

As against the argument that the plan was an improper assumption of the zoning power, the court held that the enumerated powers were valid powers for a sewerage district to possess and that the plan did not violate a provision in the state constitution authorizing the people to establish "districts for the functional administration of services common to the area."<sup>40</sup>

In *Water & Power Resources Bd. v. Green Spring Co.*,<sup>41</sup> the defendant increased the height of its dam seventeen inches without a permit and the agency sought an injunction. The court held that the statute,<sup>42</sup> giving the Board the power to grant or withhold consent for a permit to construct a dam or water obstruction, was not an invalid delegation of power since the standards were sufficient (*i.e.*, does the obstruction cause danger to life and property, or will it divert the natural course of the stream).

The Connecticut encroachment statute<sup>43</sup> came under attack in *Vartelas v. Water Resources Comm'n*,<sup>44</sup> perhaps the most significant case in the area. The plaintiff owned land adjacent to a river; buildings which had been located there had been swept away by a 1955 flood. Almost all the land fell within the encroachment line later established by the Commission, and the Commission refused permission to build the type of structure applied for, a retail market, on the ground that it would "impair the capacities of the channel and result in increased upstream water stages in time of flood."<sup>45</sup> The trial court upheld the contention that the Commission's refusal of permission was an unconstitutional taking of property for public use without compensation. This was reversed on appeal. The statute authorized the establishment of encroachment lines, directing that the police power be used where there were no existing structures or encroachments within the lines, and directing that the power of emi-

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39. St. Louis Metropolitan Sewer District Plan § 3.030.

40. Mo. Const. art. 6, § 30(a).

41. 394 Pa. 1, 145 A.2d 178 (1958).

42. Pa. Stat. Ann. tit. 32, §§ 681-91 (1949).

43. Conn. Gen. Stat. Ann. §§ 25-3, -5, -69 (1960).

44. 146 Conn. 650, 153 A.2d 822 (1959).

45. 153 A.2d at 825.

nent domain be used where there were such structures. The court held that the statute created a classification which was within the power of the legislature. The court found that the statute was not unconstitutional, as against a contention that it worked an illegal discrimination in respect to situations where there were no existing structures, holding that there is a natural and substantial difference between the two situations. The legislation, with the aim of facilitating channel clearance and improvement, is an exercise of the police power. The police power may validly regulate the use of property when its uncontrolled use would be harmful to the public interest; private property may be taken under eminent domain when the property is useful to the public. In addition, the court noted that merely because the plaintiff was refused permission to build one type of structure did not mean that permission to build another type of structure would be refused. For example, a structure built on piers or cantilevers, which would not impair channel capacity, might be permissible. Thus, it was not shown that the plaintiff had been deprived of a reasonable and proper use of his property.<sup>46</sup>

It is clear from the above discussion that such channel encroachment laws are a valid exercise of the police power. However, it will be shown that the Model Act goes beyond the legislation that was before the courts in the above cases in two significant respects: (1) under the Model Act, the jurisdiction of the agency clearly extends

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46. Dunham, *Flood Control via the Police Power*, 107 U. Pa. L. Rev. 1102, 1123 (1959), felt that the Connecticut statute might be unconstitutional on another ground, in that the act applies only to streams which are being considered for flood control work. This may imply that perhaps its real purpose is to prevent encroachment on the right-of-way of proposed channel improvements, and so save the government acquisition costs at a later date. Such would be a violation of due process since it compels one owner to confer a benefit on all taxpayers. The more a statute excludes activities needing regulation as much as those regulated, the more difficult it is to say that the prevention of uncompensated-for harm is the real objective.

It should also be noted that the Connecticut statute [Conn. Gen. Stat. Ann. §§ 25-3, -5, -69 (1960)] is the only one providing for the use of eminent domain, thus lending support to the position that the purpose is not really to prevent ponding because of channel constriction but rather is part of a program for the acquisition of a right-of-way for channel improvement. The Indiana Commission does have the power to be used as part of its general flood control program but it does not seem to be part of the encroachment provisions. See Ind. Ann. Stat. § 27-1114 (1960).

A like argument may also be made as to the Massachusetts statute which provides: The Department may license . . . the construction . . . of a dam . . . upon the waters . . . with respect to which expenditures from federal, state or municipal funds have been made for . . . flood control or prevention work. Mass. Gen. Laws Ann. ch. 91, § 12A (1958). Similarly, Ky. Rev. Stat. ch. 104.400(3) (1962), grants the Board authority to establish floodways along streams "upon which any public funds have been . . . expended for improvement."

over the entire floodway and not merely to channel encroachments;<sup>47</sup> and (2) the Model Act gives the agency power to order the removal of an obstruction which existed at the time of the passage of the statute.<sup>48</sup> These additional provisions can be upheld on the basis of the police power. As to whether obstructions existing at the time of the passage of the statute can be removed under the police power, the Model Act declares that any obstruction in violation of the Act is a public nuisance.<sup>49</sup> If this classification can be sustained, there would seem to be little problem in giving the agency the power to order the removal of an obstruction existing at the time of the enactment of the statute. This is so because the obstruction, even if it were not a nuisance before the enactment of the statute, can later become a a nuisance and be enjoined as such, even if what caused it to be classified as a nuisance was a legislative act.<sup>50</sup>

The general rule is that the legislature may classify as a nuisance anything which is detrimental to the health, morals, peace, or welfare of the citizens of the state.<sup>51</sup> It may also enlarge the category of

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47. The Indiana, Iowa, Kentucky and New York statutes also do this. The Connecticut statute does not speak in terms of a "floodway" but just provides generally that "the Commission shall establish . . . on any waterway under consideration for . . . flood control . . . lines beyond which . . . no obstruction . . . shall be placed." Conn. Stat. Ann. § 25-3 (1960). (Emphasis added.) It might be argued that the use of the word "on" implies a channel encroachment rather than a floodway-encroachment statute. This point was not raised in *Vartelas v. Water Resources Comm'n*, 146 Conn. 650, 153 A.2d 822 (1959), and the Commission apparently has interpreted its power more broadly. See *Murphy* 23, 35. It seems probable that both *City of Welch v. Mitchell*, 95 W. Va. 377, 121 S.E. 165 (1924), and the *Vartelas* case actually dealt with floodway encroachment, though it is not clear from the facts as reported.

48. This is also true of the Indiana, Iowa, New Jersey, and Pennsylvania statutes. See notes 19, 21, 15 and 14 *supra*. The Connecticut law provides for the use of eminent domain as to existing structures. See note 22 *supra*.

49. The statutes of Indiana, Iowa and Massachusetts also do this. See notes 19, 21 and 18 *supra*.

50. See *Lawton v. Steele*, 152 U.S. 133 (1894), which upheld a statute declaring that any net used to catch fish illegally was a public nuisance and could be summarily destroyed.

51. *Id.* at 136-37:

The police power . . . is universally conceded to include everything essential to the public safety, health, and morals, and to justify the destruction or abatement, by summary proceedings, of whatever may be regarded as a public nuisance. Under this power it has been held that the State may order the destruction of a house falling to decay or otherwise endangering the lives of passers-by. . . . Beyond this, however, the State may interfere wherever the public interest demands it, and in this particular a large discretion is vested in the legislature to determine not only what the interests of the public require, but what measures are necessary for the protection of such interests . . . . To justify the State in thus interposing its authority in behalf of the public, it must appear, first, that the interests of the public generally, as distinguished from those of a par-

nuisances by classifying as nuisances acts or things which were not so at common law. However, the legislature cannot classify as a nuisance something which is not so in fact.<sup>52</sup> But this does not mean that the act or thing must actually be a nuisance at the time it is so classified by the legislature. Whenever a thing is of such a nature that it may become a nuisance, it may be regulated or prohibited. And where there is a substantial difference of opinion as to whether or not there is a real danger of a future nuisance, great deference will be given to the legislature.<sup>53</sup>

At common law it was clear that an action to enjoin a private nuisance would lie where an obstruction was so placed in the water-course that the lands of riparian proprietors and other landowners were inundated.<sup>54</sup> Although there are numerous cases finding liability

tical class, require such interference, and, second, that the means are reasonably necessary for the accomplishment of the purpose, and not unduly oppressive on individuals.

52. In *Pompano Horse Club v. State*, 93 Fla. 415, 441, 111 So. 801, 810 (1927), the court upheld a legislative declaration that any premises where gambling is carried on is a public nuisance. However, the court noted that:

it does not lie within the legislative power to arbitrarily declare any or every act a nuisance . . . . It does not at all follow that every statute enacted ostensibly for the promotion of . . . health, safety, and morals is to be accepted as a legitimate exertion of the police power of the state . . . . It rests, however, very largely within the province of the legislative body to prescribe what shall constitute a nuisance, and in defining nuisances, the Legislature may rightfully exercise a broad and extended discretion.

In *State v. Chicago, M. & St. P. Ry.*, 114 Minn. 122, 125-26, 130 N.W. 545, 546-47 (1911), the court upheld an ordinance enacted by a city under a special state legislative authority, the ordinance declaring that the use of soft coal within the city constituted a public nuisance. Here again, however, the court warned that:

the Legislature cannot . . . declar[e] a certain use to be a nuisance which is not in fact a nuisance . . . . [But it is] clear that acts or conditions which are detrimental to the comfort and health of the community may be effectively declared nuisances by the Legislature . . . although not so determined at common law. . . . [T]he scope of legislative action, when invoked to promote the general welfare, is very great.

See also *Des Plaines v. Poyer*, 123 Ill. 348, 14 N.E. 677 (1888), which held that picnics and dances cannot be declared nuisances as a matter of law.

53. See *Laurel Hill Cemetery v. City & County of San Francisco*, 152 Cal. 464, 93 Pac. 70 (1907), *aff'd*, 216 U.S. 358 (1910). The California court held that it was not an unreasonable legislative act to prohibit further interments in a cemetery in a thickly populated district due to the health hazard. The United States Supreme Court, per Holmes, J., affirmed, holding that while it might not agree that there was a health danger, since there was "no consensus of civilized opinion" favoring either party on the subject, and since the ordinance would be valid if the danger were real, the legislative judgment would stand.

54. See *Haage v. Kansas City So. Ry.*, 104 Fed. 391 (C.C.W.D. Mo. 1900), in which the court held that a nuisance existed where cutoff bridge pilings obstructed the natural current and caused flooding; *Omaha & R.V.R.R. v. Standen*, 22 Neb. 343, 35 N.W. 183

where an obstruction has been placed outside the normal channel area (*i.e.*, in the floodway),<sup>55</sup> there have been relatively few discussing such liability in terms of nuisance, although such a basis of liability may have been present by implication. In *Farris & McCurdy v. Dudley*,<sup>56</sup> the defendants built an embankment on their own land along a creek and in time of heavy rain the waters were thrown in increased volume onto the plaintiff's land on the other side of the creek. The court held that the embankment was a nuisance which could be abated. In *Moore v. Chicago, B. & Q. Ry.*,<sup>57</sup> the defendant so built a culvert that, while it apparently was sufficient for the stream itself, in time of flood, when the entire bottom land became a part of the stream, the plaintiff's lands were more inundated than previously. The court held that this obstruction of flow was a nuisance which could be enjoined. In *West & Brother v. Louisville, C. & L.R.R.*,<sup>58</sup> the construction by the defendant of a culvert of insufficient capacity to take care of

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(1887), where a bridge which, due to negligent construction, prevented the passage of ice and water, was held to be a nuisance; *Great Falls Co. v. Worster*, 15 N.H. 412 (1844), where a dam which caused water to overflow onto lands of others was held to be a nuisance which could be abated by breaking the dam if done in a reasonable manner; *Casebeer v. Mowry*, 55 Pa. 419 (1867), where a dam was held to be a nuisance, with resulting liability not only for injury caused or enhanced by ordinary stages of water, but also for stages occasioned by ordinarily recurring freshets.

See also Angell, *Watercourses* § 330 (7th ed. 1877):

The obstruction of a natural stream in such a manner or to such an extent as to infringe the rights or injure the property of others has frequently been held to constitute a nuisance.

See also 56 Am. Jur. *Waters* § 18 n.12 (1947).

55. See *Evansville & C.R.R. v. Dick*, 9 Ind. 433 (1857), where an embankment across bottom land caused liability where it increased the height of the stream at high stages so as to overflow the plaintiff's land; *Noe v. Chicago, B. & Q. Ry.*, 76 Iowa 360, 41 N.W. 42 (1889), where the defendant's trestle, an obstruction not in the main channel of the river but in that part which would be overflowed in time of freshet, was held to cause liability where it increased the overflow on the plaintiff's land; *St. Louis & S.F. Ry. v. Craig*, 10 Tex. Civ. App. 238, 31 S.W. 207 (1895), where an embankment which prevented the water from passing in its usual course in time of high water resulted in liability when the water was turned back onto the plaintiff's land. See also cases cited in 56 Am. Jur. *Waters* § 99 n.16 (1947).

These obstructions may actually have been nuisances. See Prosser, *Torts* § 70 (2d ed. 1955), which defines private nuisance as an "unreasonable interference with the interest of an individual in the use or enjoyment of land." However, many courts say that a private nuisance must also involve a continuance or recurrence of injury over a considerable period of time. But Prosser feels that what is really meant is that these factors are to be taken into account in determining whether the damage is substantial. One reason why the language of nuisance may not have been employed in the above cases is that they were suits for damages, as are most cases sounding in tort; "nuisance" is a term more likely to be applied in a suit for an injunction.

56. 78 Ala. 124, 56 Am. Rep. 24 (1889).

57. 75 Iowa 263, 39 N.W. 390 (1888).

58. 71 Ky. (8 Bush) 404 (1871).

waters swollen by heavy rain, causing the flooding of adjacent property, was held to be a private nuisance. In *Powell v. City of Rochester*,<sup>59</sup> the court approved the construction by the city of a channel wall which, by its construction, would remove parts of buildings overhanging the stream. The overhanging buildings caused ponding in time of flood. The construction of the channel wall was undertaken pursuant to a statute which, *inter alia*, permitted the removal of obstructions to a public highway. The stream was held to be a public highway. The court noted that the ponding caused by these overhanging buildings was a "nuisance to the city and its inhabitants."<sup>60</sup> And Farnham states:

The flood channel [*i.e.*, the floodway] of the stream is as much a natural part of it as the ordinary channel. . . . With this flood channel, no one is permitted to interfere to the injury of other riparian owners.<sup>61</sup>

Therefore, it would seem quite likely that legislation declaring that an obstruction of the floodway is a public nuisance would be upheld. It is true that most of the above cases involved a private nuisance. However, as the *Powell* case indicated,<sup>62</sup> the constriction of the floodway may well affect the entire community since such ponding is generally not limited to a narrow area. And the entire community will have to bear the cost of any flood relief program, the burden of which is increased in proportion to the increased damage caused by floodway encroachment. Moreover, the remedy in a suit for damages or for an injunction to abate a private nuisance may often be unavailable due to the difficulty of proving any particular damage or causal relationship between any one obstruction and particular realty.

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59. 93 Misc. 227, 157 N.Y. Supp. 109 (Sup. Ct. 1916).

60. *Id.* at 231, 157 N.Y. Supp. at 112.

61. 3 Farnham, *Water and Water Rights* 2562 (1904). Farnham also states:

The principles which prevent interference with the water when a part of the rushing torrent, or when finding its way by well defined outlets from one stream to another do not apply with equal force to water when spread out over the face of the country in such a way as to have lost its power to maintain a continued flow. *Id.*

This would seem to indicate that it would be much more difficult to sustain a legislative enactment declaring all structures on the flood plain to be "public nuisances" if they are not obstructions of the floodway.

62. *Powell v. City of Rochester*, 93 Misc. 227, 157 N.Y. Supp. 109 (Sup. Ct. 1916). See note 59 *supra* and accompanying text.



IV

A MODEL FLOODWAY ENCROACHMENT ACT

The following is the text of a Model Floodway Encroachment Act:

AN ACT

RELATING TO THE REGULATION OF CHANNEL ENCROACHMENTS

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF . . . . . :

Section 1. DEFINITIONS.—For the purpose of this Act:

(a) "Department" means the Department of Water Resources.

(b) "Watercourse" means any depression two feet or more below the surrounding land serving to give direction to a current of water at least nine months of the year, having a bed and well-defined banks; provided, however, that it shall, upon order of the Department, also include any particular depression which would not otherwise be within the definition of watercourse.

(c) "Drainway" means any depression two feet or more below the surrounding land serving to give direction to a current of water less than nine months of the year, having a bed and well-defined banks; provided, however, that in the event of doubt as to if a depression is a watercourse or drainway, it shall be presumed to be a watercourse.

(d) "Channel" means the geographical area within either the natural or artificial banks of a watercourse or drainway.

(e) "Flood" means the water of any watercourse or drainway which is above the bank or outside the channel and banks of such watercourse or drainway.

(f) "Flood plain" means the area adjoining the watercourse or drainway which has been or may hereafter be covered by flood water.

(g) "Floodway" means the channel of a watercourse or drainway and those portions of the flood plain adjoining the channel which are reasonably required to carry and discharge the flood water of any watercourse or drainway.

(h) "Statutory Floodway" means a floodway whose limits are measured by the channel of the watercourse or drainway plus, at any particular point, 200 feet on each side of the channel or three times the width of the channel on each side, whichever is greater.

(i) "Department Floodway" means a floodway whose limits have been designated and established by order of the Department.

(j) "Obstruction" means any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, or other analogous structure or matter in, along, across, or projecting into any floodway which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that is placed where the natural flow of the water would carry the same downstream to the damage or detriment of either life or property.

(k) "Natural obstruction" means any rock, tree, gravel, or analogous natural matter that is an obstruction and has been located within the floodway by a non-human cause.

(l) "Artificial obstruction" means any obstruction which is not a natural obstruction.

(m) "Floodway-encroachment lines" mean the lines limiting a Department Floodway.

(n) "Locate" means construct, place, insert, or excavate.

(o) "Owner" means any person who has dominion over, control of, or title to an obstruction.

(p) "Person" means any individual, firm, partnership, association, corporation, the State of . . . . ., any agency of the State, municipal corporation, political subdivision of the State, or any other legal entity.

Section 2. STATEMENT OF PURPOSE.—It is hereby declared that, because of the loss of lives and property caused by floods in various areas of the State, in the interest of public health, safety, and general welfare, floodway-encroachment lines are to be established along watercourses and drainways, and other appropriate regulations made as to the floodways of watercourses and drainways, in order to minimize the extent of floods and reduce the height and violence thereof insofar as such are caused by any natural or artificial obstruction restricting the capacity of the floodways of the inland waters of the State.

Section 3. ESTABLISHMENT OF DEPARTMENT FLOODWAYS.—The Department shall initiate a program for the delineation of Department Floodways for every watercourse and drainway in the State. It shall make a comprehensive study relating

to the acquiring of flood data, establish means for the acquisition of such data, and have authority to enter into arrangements with the United States Geological Survey, the United States Army Corps of Engineers, and any other State or federal group for such acquisition. When sufficient data has been acquired to reasonably locate the magnitude of a flood of fifty-year frequency, the Department shall establish, by order after a public hearing, floodway-encroachment lines for such a fifty-year flood within which, in the direction of the watercourse or drainway, no artificial obstruction shall be located by any person or allowed to remain by any owner unless specifically authorized by the Department. The location of the encroachment lines shall be the estimated outer boundary of the floodway of a fifty-year frequency flood, as determined from the available data. The Department shall have the power to alter said lines at any later time if a reevaluation of the then available flood data warrants it. Notice of any such hearing or order of the Department establishing or altering any such line shall be given by mailing notice thereof to all persons known to be affected thereby and by publishing such notice for three successive days in a newspaper having a general circulation in the area involved.

The designation of a floodway as a Department Floodway shall supersede any reference to it as a Statutory Floodway, except that for the purposes of Section 5 (b) such designation shall not become effective until such floodway is protected by Section 5 (c).

The Department shall record all floodway-encroachment lines established by it in such local office as also records deeds to real property.

Section 4. NUISANCE.—Any artificial obstruction in any Statutory Floodway, Department Floodway, or floodway of a flood of the magnitude of the highest flood of record is hereby declared to be a public nuisance unless a permit has been obtained from the Department under this Act.

Section 5. UNLAWFUL ACTS.—It shall be unlawful

(a) for any person to locate any artificial obstruction within any Statutory Floodway or any Department Floodway, or

(b) for any owner to allow any artificial obstruction to remain within any Statutory Floodway after six months of the effective date of this Act, or

(c) for any owner to allow any artificial obstruction to remain within any Department Floodway after six months after the floodway is declared to be a Department Floodway

in this State without a permit from the Department. The Attorney General of the State shall, at the request of the Department, institute proceedings to prosecute any such person under Section 11 of this Act, and/or enjoin or abate any obstruction declared to be a public nuisance by Section 4 of this Act.

Section 6. PERMITS.—The Department shall have the power to issue permits for the location, continuance, or alteration of obstructions which would otherwise violate or be enjoined under Section 5 of this Act. The application for the permit shall contain such information as the Department shall by rule require, including complete maps, plans, profiles, and specifications of the obstruction and watercourse or drainway, or of the changes or additions proposed to be made.

In passing upon the application, the Department shall consider the danger to life and property by water which may be backed up or diverted by such obstruction, the danger that the obstruction will be swept downstream to the injury of others, the availability of alternate locations, the construction or alteration of the obstruction in such a manner as to lessen the danger, the permanence of the obstruction, the anticipated development in the foreseeable future of the area which may be affected by the obstruction, and such other factors as are in harmony with the purpose of this Act. In respect to an application to allow an artificial obstruction to remain, the Department shall also consider the investment involved to the extent that such obstruction existed on the effective date of this Act. The Department may make a part of such permit such conditions as may be deemed by it advisable. In order for the permit to continue to remain in force, the obstruction must be maintained so as to comply with the conditions and specifications of the permit.

Permits for obstructions to be located or to be allowed to remain in the floodways of watercourses must be specifically approved by the Department; permits for obstructions in the floodways of drainways shall be conclusively deemed to have been granted thirty days after the receipt of such application by the Department, or after such time as the Department shall by rule specify, unless the Department notifies the applicant that the permit is denied.

In all cases where there is an application for a permit for an obstruction to be allowed to remain in the floodway, the Department may, in its discretion, grant a renewable temporary permit good for not over six months; the granting of such temporary permit shall in no way prejudice the right of the Department to revoke such permit at any time, or to deny an application for a regular permit.

Section 7. POWER TO REMOVE OBSTRUCTION.—As to obstructions in a Statutory Floodway, Department Floodway, or floodway of a flood of the magnitude of the highest flood of record, for which permits have not been obtained from the Department, the powers and duties of the Department shall include the following:

(a) where a natural obstruction to a floodway has been created by fallen trees, silt, debris, and like matter, the Department shall have the power to remove the obstruction, in which case the cost of removal shall be borne by the Department;

(b) where, after investigation, the condition of an artificial obstruction is found to be so dangerous to the public safety as not to permit the giving of notice and hearing as provided for in Section 10 of this Act to the titleholder of the land affected and to the owner of such obstruction to remove or repair the dangerous condition, the Department shall have the duty to remedy such condition by repair, removal, or otherwise, the cost of which shall be borne by the owner and shall be recoverable in the same manner as debts are now by law recoverable;

(c) where, after investigation, notice, and hearing, an order has been issued to the owner of an obstruction for its removal or repair, and the order is not complied with within such reasonable time as may be prescribed, or if the owner cannot be found or determined, the Department shall have the power to make or cause such removal or repairs to be made, the cost of which shall be borne by the owner and shall be recoverable in the same manner as debts are now by law recoverable.

Section 8. RIGHT OF ENTRY ON LANDS AND WATERS; INVESTIGATIONS.—The Department, its agents, surveyors, or other employees, may make reasonable entry upon any lands and waters in the State for the purpose of making any investigation, survey, removal, or repair contemplated by this Act. An investigation of any natural or artificial obstruction shall be made by the Department either on its own initiative, on the written request of

any three titleholders of land abutting the watercourse or drainway involved, or on the written request of any political subdivision of the State.

**Section 9. EXCEPTION FOR CERTAIN WATERCOURSES AND DRAINWAYS.**—This Act shall not extend to any obstruction in the floodway of a watercourse or drainway where the drainage area above the same, either within or without the State, is less than one square mile in extent, unless a particular watercourse or drainway is expressly declared to be within the coverage of this Act by order of the Department.

**Section 10. ORDERS AND RULES OF THE DEPARTMENT.**—The Department shall have the power to issue such orders and rules as are necessary to implement the provisions of this Act. If an order is issued to the owner of an artificial obstruction for its removal or repair, such order shall not become effective less than ten days after a hearing is held relating to such order; provided, however, such hearing need not be held for an order issued pursuant to Section 7 (b) of this Act. In addition to any requirement imposed by Section 3 of this Act, where any order is issued which affects with particularity the land adjacent to any watercourse or drainway, notice of the contents of such order and of any required hearing shall be mailed by the Department to the titleholder of such land not less than ten days before the effective date of such order, or, if there is a required hearing, to the titleholder of such land and to the owner of the obstruction not less than ten days before the date of such hearing; provided, however, that such notice need not be given for an order issued pursuant to Section 7 (b) of this Act, nor to the owner of the obstruction for an order issued pursuant to Section 7 (c) of this Act if the owner cannot be found or determined.

All orders and rules issued by the Department shall be on file at the offices of the Department and in the office of the county clerk of each county affected by such order or rule.

Any person aggrieved by any order of the Department issued under this Act may appeal from such order to a court of competent jurisdiction within thirty days after its effective date. In the event such an appeal is taken, enforcement of such order shall be stayed pending the outcome of such appeal. Service of notice of the appeal shall be made upon the Chairman of the Department.

Section 11. **PENALTIES.**—Any person who violates Section 5 of this Act shall be guilty of a misdemeanor, and shall be fined not over \$100, and be imprisoned not over ten days, or both, for each and every offense. Every day's continuance of a violation shall be deemed a separate and distinct offense.

Section 12. **EFFECT OF PERMIT.**—The granting of a permit under the provisions of this Act shall in no way affect any other type of approval required by any other statute or ordinance of the State, of any political subdivision of the State, or of the United States, but shall be construed as an added requirement. Nor shall the grant or denial of a permit have any effect on any remedy of any person at law or in equity; provided, however, that where it is shown that there was a wrongful failure to comply with this Act, there shall be a rebuttable presumption that the obstruction was the proximate cause of the flooding of the land of any person bringing suit.

No permit for the construction of any structure to be located within a Statutory Floodway or a Department Floodway shall be granted by any political subdivision of the State unless the applicant has first obtained the permit required by this Act from the Department, or until the Department acknowledges that such structure would not be an obstruction within the meaning of this Act.

No action for damages sustained because of injury caused by an obstruction for which a permit has been granted under this Act shall be brought against the State, the Department, a member of the Department, or its employees or agents. Nor shall any provision of this Act be construed as interfering in any way with the right of the United States to regulate the interstate commerce or the navigable waters of the United States.

Section 13. **REMEDIES.**—The use of any one of the remedies or powers given to the Department herein shall not constitute a bar to the exercise of any other remedy or power given by this Act.

Section 14. **SEVERABILITY.**—The provisions of this Act are severable and in the event a court shall declare any section or provision herein invalid, then such decision shall affect only the section or provision declared invalid and shall not affect the validity of any other section or provision of this Act.

## V

## DISCUSSION OF THE MODEL ACT

Before examining the provisions of the Model Act in detail, the general scheme will be discussed. That scheme rests on the concept of "floodway." Three types of floodway, admittedly somewhat artificial, are presented. First is the traditional<sup>63</sup> "Department Floodway" whose limits are specifically set by the Department on the basis of flood data. The second is the "Statutory Floodway" whose limits are a specified number of feet on each side of the banks of the channel, or a specified multiple of the width of the channel, whichever is greater.<sup>64</sup> The purpose of the Statutory Floodway is to prevent major floodway encroachment during that period of time preceding the establishment of a Department Floodway (which supersedes the Statutory Floodway). The third type of floodway is that of a flood of the magnitude of the highest flood of record. Only obstructions in the first two types are made unlawful under Section 5 of the Act (and so subject to the penalties of Section 11), but obstructions in all three types are enjoined as public nuisances.

It is realized that the definition of a Statutory Floodway may not correspond to the actual floodway of a particular stream. However, it would seem necessary to have a standard that would permit fairly mechanical application of the statute. Otherwise, there being possible criminal penalties involved, the statute might be declared "void for vagueness." Furthermore, to have any less precise standard might also result in undue delay of construction throughout the state since the Department might be overcome with applications for permits when the applicants do not have the ability to discern for themselves whether their project falls within the coverage of the Act (*e.g.*, if the standard were based on flood data which could not readily be computed by the applicant). Further delay due to an imprecise standard

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63. The Department Floodway is traditional only in the sense that it is the only one of the three specified floodways that has any close resemblance to provisions in previous encroachment statutes. The Connecticut, Indiana, Iowa, and New York statutes are the only ones (passed by a state legislature) which provide for the specific agency establishment of encroachment lines. Conn. Gen. Stat. Ann. § 25-3 (1960); Ind. Ann. Stat. § 27-1118 (1960); Iowa Code Ann. § 455A.35 (1958); N.Y. Laws 1956, ch. 853, § 196.

64. While certain figures have been inserted in the text of the Model Act reproduced above, *i.e.*, 200 feet on each side of the channel or three times the width of the channel, these are by no means intended to be a specific recommendation. The figures should vary, depending on the general topography of the state. For example, a low-lying plains state would probably be advised to increase the area of the Statutory Floodway, while a mountainous state might even decrease it. If need be, the requirement might vary according to county.



might result since Section 12 would prohibit any city building permit to be issued unless a permit under the Act is first acquired.

The third type of floodway, that of one of the highest flood of record, is designed to give the Department the power to obtain at least an injunction against an obstruction, even if it is not within a Statutory Floodway. It is admitted that the standard chosen—the highest flood of record—is far from ideal. But such a standard would seem to be necessary on the basis of practicality and fairness. The Department would have to show that the obstruction is in the floodway of a specific flood that has already occurred; the Department does not take the greater risk that action would be barred altogether if there were insufficient flood data to satisfy a court that the obstruction is within a floodway of a theoretical rather than some specific flood. Thus, while some standard such as a 100-year frequency flood might be preferable, it does seem that any really dangerous obstruction will be enjoined under this “catch-all” floodway provision.<sup>65</sup>

It is admitted that in some cases there may be a substantial difficulty of proof if the high water marks of the highest flood of record are not adequate. But available flood data for the general area should suffice in most instances to enable the Department to prove at least the minimum floodway that was required for that record flood. It is not to be supposed that the Department will make any great effort to enjoin borderline cases.

Looking at the Act in detail, Section 1 provides for a fairly complete list of definitions. As has been discussed, it is suggested that the task of administering the statute be given to an existing agency in some related area such as the regulation of dam construction, flood control, or the like.<sup>66</sup>

All but four of the definitions in Section 1 are more or less standard. Of these four, two, the Department and Statutory Floodways, have been discussed above. The other two are the definitions of “watercourse” and “drainway.” “Drainway,” in general usage, often refers to depressions which carry off surface water. “Watercourse” generally implies a running stream (which may be dry at times) with

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65. The phrase “150-year frequency” does not mean that a flood of such a magnitude will happen only once in 150 years. What it does mean is that an analysis of the available hydrologic data indicates that the chances that a flood of such a magnitude will occur in any particular year are 150 to 1. The chances in each year are the same no matter whether the previous flood of such a magnitude occurred last year or 200 years ago.

66. Some states, however, have created entirely new agencies to administer their statutes. See, *e.g.*, Iowa Code Ann. § 455A.3 (1958), creating the Iowa Natural Resources Council.

fairly definite banks.<sup>67</sup> Under Section 1, however, "watercourse" means a well-defined depression with water flowing nine months of the year, while "drainway" refers to a similar depression with water flowing less than nine months of the year, with a presumption in favor of the existence of a watercourse in case of doubt. The purpose of this distinction is to facilitate the handling of permits under Section 6. For if the obstruction is in a watercourse, a permit must be specifically approved, while if the obstruction is in a drainway, the permit is deemed granted in thirty days unless the Department specifically denies it. This rests, of course, on the assumption that drainways do not present as serious a danger since water does not flow in a drainway as often as it does in a watercourse. This may not always be true; therefore, the Department is given the express power to classify any type depression as a watercourse if it feels that conditions warrant such a classification.<sup>68</sup> The nine-month dividing line is intended to exclude from "watercourse" the depression that is normally dry for more than a three-month summer drought period; if this definition is not appropriate for a particular state, it may be varied. It should be noted that in spite of the apparent all-inclusive language of the Act as referring to "any watercourse or drainway," Section 9 provides for an exemption if the drainage area is less than one square mile, in the absence of a contrary Department order, thus excluding the great number of small streams and drainways which present no serious flood problem. Presumably this would lessen the administrative burden on the Department to manageable proportions.

Any doubt as to whether a watercourse or drainway may be artificial (*e.g.*, a canal) or natural should be dispelled by the words "natural or artificial banks" in the Section 1 (d) definition of "channel."<sup>69</sup>

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67. Neb. Rev. Stat. § 31-202 (1952):

'Watercourse' defined. Any depression or draw two feet below the surrounding lands and having a continuous outlet to a stream of water or river or brook shall be deemed a watercourse.

Wood v. Brown, 98 Kan. 597, 159 Pac. 396 (1916) (watercourse must have a distinct channel cut in the soil by the force of running water and having a bed and banks discernible by casual glance). *Cf.* Lambert v. Alcorn, 144 Ill. 313, 33 N.E. 53 (1893) (definite or well-marked sides or banks are not necessary for a depression to be a watercourse).

68. Such a situation might be presented by Arthur v. Glover, 82 Neb. 528, 118 N.W. 111 (1908), where a draw ten feet deep which was a natural outlet for surface water was held to be a natural drainway despite the fact that at a point the draw disappeared and there was just a very wide and slight depression. The type of rock and general topography may not have permitted the cutting of well-defined banks, even though an annual spring flood may have rushed through the draw.

69. Such a definition of "channel" will avoid the litigated issue in Ranney v. St.

The definition of "obstruction" in Section 1 (j) is to be all-inclusive. However, it is particularly intended to affect several situations. The current law generally permits a structure to be erected in a stream if the current has cut away part of the riparian owner's bank, if the purpose of the structure is to hold in the bank with pilings or to restore the bank to its original condition, even if the structure causes the current to shift so as to erode the bank belonging to another or if it deflects water onto another's land, as long as the original bank would have had the same effect.<sup>70</sup> While there is no specific statutory intent to change this rule (although in practical operation the Act may well do so), such structures at least should be regulated to accord with the purpose of the Act. For example, in *Sinclair Prairie Oil Co. v. Fleming*,<sup>71</sup> the defendant's land had been eroded by a river and, in order to protect its land, the defendant built a fence within the washed-out area. Eventually silt accumulated, formed an island and sand bar larger than the original washed-out area, and changed the course of the channel so as to erode the plaintiff's bank. No recovery was permitted. While the principle of law applied by the court may stand, it would seem that such a fence ought not to be permitted under the Act. Not only is such an island an obstruction<sup>72</sup> but if the fence was of such a nature as to cause the formation of the island described, there would also seem to be substantial danger that it would cause accumulation of hazardous debris during a flood. Perhaps the most the defendant should be permitted to do would be to refill the land and build a bulkhead no higher than the original bank, so constructed as not to catch debris or silt.<sup>73</sup>

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Louis & S.F.R.R., 137 Mo. App. 537, 119 S.W. 484 (1909), where it was held that a statute requiring lateral ditches to be dug wherever there was a watercourse does not refer only to natural streams but includes artificial ditches and canals.

70. See *Gulf, C. & S.F. Ry. v. Clark*, 101 Fed. 678 (8th Cir. 1900), where the railroad was sued for having deflected water onto the plaintiff's land when it built dikes in order to protect its roadbed which was being eroded. The court held that the railroad could construct the dikes in order to maintain the bank of the stream in its original place or to restore it to its former condition when the stream has cut into the defendant's land. If it does no more, other riparian owners cannot recover for any injury caused.

71. 203 Okla. 600, 225 P.2d 348 (1949).

72. Such an obstruction would be illegal under Section 5 since it is an artificial obstruction; for its true cause is not a natural but an artificial object, the fence. *Prairie Oil Co. v. Fleming*, *supra* note 71. In *Sinclair*, the accumulation of such silt was expected, being part of the defendant's "reclamation" project.

73. This of course would not necessarily prevent injury to other riparian owners. However, in any case Section 12 insures that the granting of a permit will not affect the remedy any other riparian owner may have against the permittee.

A further instance of the lack of judicial consideration of possible flood obstruction may be found in *Knight v. Barr*, 130 Mich. 673, 90 N.W. 849 (1902), where the court

The definition of "obstruction" also includes excavations if they change the direction of the flow of water. This should be included since an excavation may well have the same practical effect as a structure that is an obstruction in the more usual sense. The agencies administering the Iowa and Massachusetts encroachment laws have a similar power over excavations.<sup>74</sup> It seems that the danger of increased damage through excavation is especially prominent when a municipality undertakes some minor flood prevention work by straightening a watercourse without full consideration of possible consequences. For example, in *Diamond Match Co. v. Town of New Haven*,<sup>75</sup> the town ordered the straightening of a river. This resulted in the river being narrowed and deepened at one point, but with apparently no added channel capacity. This, plus the factor of a new embankment, caused the plaintiff's land to be flooded by a rain that might "reasonably . . . be expected occasionally to occur."<sup>76</sup> The town was held liable for negligence.<sup>77</sup>

Section 1 makes a further distinction between a natural obstruction (natural matter located by a non-human cause) and an artificial obstruction (whatever is not a natural obstruction), the Act generally dealing only with the latter. However, Section 7 (a) does give the Department the power to remove any natural obstruction at public expense. Perhaps of more importance, however, is the fact that the definition would alter the holdings of cases like *Commonwealth v. Temple Coal Co.*<sup>78</sup> There a stream passed through refuse

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held that a riparian owner who owned to the center of the stream would not be restrained from driving piles into the bed of the river belonging to him as long as they did not obstruct the flow of water. There is no indication that the court considered the possibility that the piles might catch debris during a flood.

74. See Iowa Code Ann. § 455A.33 (1958); Mass. Gen. Laws Ann. ch. 91, § 12A (1960).

Los Angeles County, Cal., Zoning Ordinance art. 5, §§ 763-64 (1951), exerts a similar authority over excavations that result from quarrying. If a flood hazard would be created, the ordinance provides that permits are required which are to be conditional on the erection of dikes and other barriers which will give the same protection as if no excavation were made, or at least adequate to prevent the flow of flood waters out of their natural channel.

75. 55 Conn. 510, 13 Atl. 409 (1888).

76. 13 Atl. at 411.

77. See also *Kidde Mfg. Co. v. Town of Bloomfield*, 20 N.J. 52, 118 A.2d 535 (1955), where the defendant made improvements which accelerated the velocity of a stream and the plaintiff alleged that this caused damage to a structure located on the stream. The court stated that the city would be liable if it should have known of possible damage. The court found, however, that there was insufficient evidence to support the plaintiff's allegations.

78. 76 D. & C. 7 (C.P. Pa. 1949).

culm piles on the defendant's land and during a flood the erosion of this debris created an obstruction in the creek. Acting under the Pennsylvania encroachment statute which defined "water obstruction" as "any dam . . . embankment . . . or any other obstruction whatsoever,"<sup>79</sup> the Board ordered the defendant to construct satisfactory protection to stabilize the refuse. The court, however, held that such an accumulation was not a water obstruction as defined in the act, since the act limited the definition of "water obstruction" to artificial structures. While the Board had authority to remove such debris, no duty was imposed on riparian owners. However, under the Model Act, the culm would be considered an "artificial obstruction" since it probably is not natural matter (*i.e.*, not in its natural state), but in any event would not have been located within the floodway by a non-human cause. However, a further holding of that case is followed in the Act: the Department does not have the power to order a riparian owner to do any work in a stream or on his land but can only order him to remove or alter the obstruction.

It may be noted that the definition of obstruction also includes structures which may be carried downstream to the detriment of either life or property. This forestalls any argument that an object like a storage tank is not an obstruction because a flood will carry it along. Needless to say, such a structure may be just as dangerous as a building since it may be swept downstream and catch on a bridge and restrict the capacity of the floodway at a most crucial point.

Section 2 sets forth the general statement of purpose of the Act. It is hoped that its language is comprehensive enough to hinder any restrictive interpretation by a court so that the difficulty which existed in Connecticut in an analogous situation may be avoided. Under the Connecticut statute, which provides for the supervision of dams, at a time when the encroachment law had not yet been enacted, the statute covered "all dams . . . in any locality where, by breaking away of the same, life and property may be endangered."<sup>80</sup> In *Cox Shops, Inc. v. Collins Co.*,<sup>81</sup> the defendant constructed flashboards on its dam which permitted ice to accumulate forcing water back onto the land of the plaintiff, an upstream proprietor. The court held that the plaintiff could not show that the defendant had not obtained the requisite statutory approval since the purpose of the act was merely

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79. Pa. Stat. Ann. tit. 32, § 681 (1949).

80. See Conn. Gen. Stat. Ann. § 25-110 (1960).

81. 4 Conn. Supp. 374 (Super. Ct. 1936).

to protect downstream proprietors against a dam giving way and not to protect upstream proprietors. The defendant was not within the class the statute intended to protect. The legislature then changed the wording of the law so that it now reads "by breaking away *or otherwise*,"<sup>82</sup> thus avoiding a repetition of the above result.

Section 3 provides for a comprehensive program to delineate encroachment lines for every watercourse and drainway in the state draining one square mile or more. Of course, once it is determined that no flood problem exists on a particular watercourse, the lines may be set at the banks. No existing statute provides for any definite plan to be followed, the agency merely being given the power to establish such lines generally.

Another feature of Section 3 is the fixing of a definite standard upon which encroachment lines are to be established, namely the floodway limits of a fifty-year frequency flood. No other statute provides for such a standard and it may be argued that there should be none: the unavailability of sufficient flood data may cause undue delay in establishing the lines, and local conditions may vary so that the protection given by the Department Floodway should also vary. However, these objections should not prevail. As to the first objection, not only will a certain amount of flood data be required in any case in order to give a rational basis to the encroachment lines, but also a substantial amount of flood data is available for the nation as a whole. While it is clear that only a relatively few watercourses have gauging stations,<sup>83</sup> reasonably accurate extrapolation for individual streams (based on the flood and other hydrologic data that is available for an entire region) seems quite feasible, at least for fifty-year frequencies.<sup>84</sup> If a higher, say 150-year, frequency were specified, more serious problems of accurate calculation might result. However, if enough flood data is available for the state in general, a frequency standard of above fifty years should be seriously considered. The alternative is use of a standard such as the highest flood of re-

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82. Conn. Gen. Stat. Ann. § 25-110 (1960). (Emphasis added.)

83. However, there are a large number of gauging stations. The Geological Survey alone maintains over 6,000 gauging stations throughout the United States. For a more complete breakdown of the extent of the collection of flood data, see Hoyt & Langbein, *Floods* 331-32 (1954).

84. Hoyt & Langbein, *Floods* 98 (1954), explicitly state that for most of the inhabited areas of the country it is possible to delineate flood hazard areas at least up to the fifty-year level, providing that the necessary surveys are made by persons experienced in river hydraulics. The most difficult areas to delineate are where streams flow across alluvial fans and debris cones of mountain streams in the West since they are apt to change course so frequently that accurate predictions are not possible.

cord, a criterion which is much more likely to be held unreasonable since it may be a flood of 10- or 200-year frequency.

Assistance in gathering and applying such flood data is available. The Tennessee Valley Authority has a systematic program for the preparation of flood evaluation reports for its region. Significant aid can be obtained (on a cost-sharing basis) from the Geological Survey of the United States Department of the Interior. The Geological Survey is currently engaged in the preparation of flood frequency reports by drainage basins which will cover the entire United States; reports covering parts or all of thirty-seven states are currently available. Another national group is the Corps of Engineers which has been specifically authorized by the Flood Control Act of 1960

to compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies, and general criteria for guidance in the use of flood plain areas; and to provide engineering advice to local interests for their use in planning to ameliorate the flood hazard.<sup>85</sup>

Next we shall consider the second objection: that varying local conditions demand varying standards. There appears no basis for such a contention except perhaps in one qualified respect—the fifty-year frequency standard is not sufficiently high to adequately protect certain urban areas, and the flood data is too inadequate in the rural parts of the state for the legislature to raise the statewide standard to, say, a 150-year frequency. If such is the case, the legislature might add a provision that the Department may provide for higher flood frequency standards where the conditions warrant. However, at least a minimum standard should remain. And while it is true that in some localities there may be flooded areas of shallow water depths and low velocities so that one would not be truly justified in placing the area within encroachment lines, the answer is not to permit varying standards but to realize that it would not be improper to exclude such an area from the definition of “floodway.” For, quite clearly, the floodway is normally not coextensive with the flood plain. The argument in favor of a definite flood frequency standard is that it avoids the danger of local pressure being able to weaken the force of the Act. This may be the case in Connecticut. The Commission

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85. 74 Stat. 480 (1960), 33 U.S.C. § 709a (Supp. 1963). Unlike the Geological Survey, the Corps of Engineers does not require cost sharing of its projects.

there indicates that the standard most used by it is the 150-year frequency. However, Murphy has calculated that, according to Corps of Engineer frequency curves, some of the encroachment lines of this supposed standard actually fall into the thirty-four-year frequency class.<sup>86</sup> Local pressure may be the cause. Also, even if the nature of a particular area is such that a flood would not cause heavy damage, for example, if the area were chiefly agricultural, this fact does not bear heavily against the use of a uniform standard. Not only would such an area impose little burden on the Department, since presumably little obstructive activity requiring a permit would occur, but, also, the inability to obtain a building permit until a permit has been obtained from the Department under the Act would serve as a warning of possible flood danger to unsuspecting contractors, even if a permit is granted. And the power of the Department to pass upon all obstructions would prevent the erection of truly hazardous obstructions even for such a locality. The standards under which permits are to be issued, as prescribed in Section 6, should provide enough flexibility to insure that the granting of permits in a rural area will be easier than in an urban area.

Section 4, providing that an artificial obstruction in the specified types of floodways without a permit is a public nuisance, has been discussed above.<sup>87</sup>

Section 5 specifies what is unlawful under the Act, and provides for criminal prosecution or an injunction. A distinction is made between locating an obstruction (in that it extends to "any person") and allowing an obstruction to remain (which extends only to the "owner" of the obstruction). The reason for the difference is that "owner" (as defined) is probably the broadest term which could properly be used where a criminal penalty is imposed for allowing an obstruction to remain on the land, a rather passive type of crime. It basically imposes a duty on the owner to inspect his land and obtain a permit for any artificial obstruction located thereon, as long as he has control over the obstruction. It relieves any person from liability if he owns the land but has no control over the obstruction itself since Section 1 (o) defines "owner" as a person who has dominion over, control of, or title to *an obstruction*. A six-month period of grace is given after the effective date of the Act.

It might be objected that the Act is unduly harsh in at least one hypothetical case: if some other person abandoned an obstruction

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86. Murphy 21.

87. See text at p. 497-500, 508 *supra*.



(*e.g.*, a large oil storage tank) on the land, within the floodway, unknown to the owner of the land, Section 5 would impose criminal liability upon the owner without even a prior order of removal from the Department. It is not believed that special provision need be made for this rare case, for it is probably constitutionally required and implied that the owner be given a reasonable time to learn of the obstruction and remove it. And the Department would not be expected to prosecute except in the more extreme cases, for example, where there was a refusal to obey a Department order to remove an obstruction, or a willful disregard of the requirement to obtain a permit.

On the other hand, it is unlawful under Section 5 for any person to locate an obstruction within the floodway. This clearly requires a positive act, and would not excuse anyone claiming, for example, to be the agent of the actual owner of the obstruction, who may be outside the state. It also covers, in the above hypothetical situation, the person who abandons the obstruction on the land. And any defense of vagueness as to the geographical extent of the floodway is avoided since Section 5 refers only to obstructions within a Statutory or Department Floodway (which have readily ascertainable limits).

Section 6 sets forth provisions relating to the granting of permits. A major feature not present in the existing encroachment statutes is the prescribing of certain factors to be considered in passing upon the permit. Assuming that they are followed and that they are held to be reasonable, the difficulty that presented itself in *City of Welch v. Mitchell*<sup>88</sup> would be avoided. In *Mitchell*, the court held that the city could not permit an encroachment beyond the line on one side of the stream to the disadvantage of those on the opposite side without compensation. However, the test the court used in arriving at its conclusion was whether the restriction was reasonable. Thus, if a reasonable basis can be shown for granting a permit to one person and denying it to another, no difficulty should be met.

These factors must of course be correlated with the purpose of the Act as set forth in Section 2. Thus, for example, "the danger to life and property" would cover not only the nature of the surrounding area but also the nature of the obstruction itself; an embankment would be in a stronger position to obtain a permit than a factory building of the same size and shape. The "availability of alternate locations" would bear not only on factory requirements of large

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88. 95 W. Va. 377, 121 S.E. 165 (1924). See note 36 *supra* and accompanying text.

amounts of water for its productive activity, but also on whether the surrounding area of the proposed location is urban or agricultural. The "construction . . . in such a way as to lessen the danger" might not only refer to putting the structure on piles but also, if it were rectangular in shape, to locating the length parallel to the flow of the water or to requiring that the design emphasize vertical rather than horizontal construction (*i.e.*, that the structure be several stories high and thus use less ground flood space).

Provision is also made in Section 6 that if an artificial obstruction existed at the time of the passage of the Act, the investment in such structure shall be considered in determining whether, and the extent to which, a permit shall be granted. While this provision may not be fully in harmony with the main purpose of the Act in protecting lives and property, the provision appears advisable in order to blunt an attack on constitutional grounds. Courts may not be willing to agree that a valuable structure, lawfully erected prior to the passage of the Act, can properly be declared a nuisance by legislative act. Of course, the problem should not be as severe in the case of a structure representing a small investment.<sup>89</sup>

The distinction made between watercourses and drainways has already been discussed.<sup>90</sup> Provision is also made in Section 6 for the issuance of temporary permits where an application is made for an obstruction to be allowed to remain in the floodway. This provision is designed to meet the situation in which the Department is overwhelmed with applications for permits, especially in the initial stages of the administration of the Act. Under such circumstances, the provision allows the granting of temporary permits until the Department is able to process and investigate the obstruction properly. While the specified standards are still to be applied, it is anticipated that their application will be in a preliminary way, for the temporary permit is granted without prejudice to any later determination. The provision's coverage does not extend to the situation where a permit is requested for the location of an obstruction that may be only temporary in nature (*e.g.*, construction equipment and buildings). The standards in such a case must be fully applied, and appropriate conditions may

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89. In a closely related area, the amount of investment seems to be a weighty, if not fully articulated, factor in many of the cases passing upon the constitutional validity of provisions in zoning ordinances requiring the removal of preexisting nonconforming uses. See, *e.g.*, *People v. Miller*, 304 N.Y. 105, 106 N.E.2d 34 (1952).

90. See text at p. 509-10 *supra*.

be attached such as limiting the effectiveness of the permit to those periods of the year when there is no substantial danger of a flood.

Section 7 gives the Department the power to remove natural obstructions at its own cost. It could be argued that those particularly benefited by the removal of the obstruction should pay the cost of removal. However, since the natural obstruction exists through no fault of any person, and since channel improvement projects are undertaken most often at public expense, it appears more satisfactory that the state bear the cost. This is especially so since if the persons benefited will have to bear part or all of the cost, the more natural tendency will be to bear the risk and not report the obstruction to the Department. This failure to report obstructions is sought to be avoided.

The Department is also given the power by Section 7 to remove artificial obstructions at the cost of the owner in cases where an emergency does not permit time for notice and hearing. In such a case, Section 7 casts a duty upon the Department to remove the obstruction. The Department is also given power to remove artificial obstructions where, after notice and hearing, the owner refuses to comply with the order for removal or cannot be found or determined. This, of course, does not imply that the Department must issue an order to remove an obstruction before an unlawful act can occur under Section 5, nor, necessarily, that a formal hearing must be held and an order to remove issued before the Department can seek to enjoin an obstruction as a public nuisance. What is emphasized here is the flexibility of remedies. In some cases the Department, rather than issuing an order, may prefer to ask for a court injunction, thereby invoking the prestige of the court; at other times the issuance of an order may be preferable since a court on appeal would defer more to the Department's expertise in the area than if the case began as an equity suit for an injunction.

Section 8 gives the Department a right of entry on private lands and waters within the state for purposes within the Act, and provides for mandatory investigation of any obstruction by the Department upon request of three neighboring landowners or any political subdivision of the state. This of course does not mean that individual complaints about obstructions are to be ignored, nor that the Department might not have some sort of arrangement with agencies like the Fish and Game Commission to report violations of the Act. Such arrangements are fully recommended. Section 9 sets forth the

exemption from the Act for watercourses and drainways draining less than one square mile unless the Department issues a contrary order.

Section 10 has general provisions relating to notice, hearings, orders, rules, and appeals. Orders and rules are required to be filed both with the Department and locally at the county level, thus tying in with the recording of floodway encroachment lines as provided in Section 3. This remedies the publicity deficiency apparent in most of the present statutes. Penalties are provided in Section 11.

Section 12 makes clear that the granting of a permit is a requirement independent of any other legislation. Thus, the granting of a permit would not affect, for example, any requirement to conform with a local flood plain zoning regulation. Nor is it intended to supersede previously existing legal or equitable remedies.<sup>91</sup> However, as an inducement to obtain the required permit, if there is a wrongful failure to comply with the Act and at some later time a riparian owner's land is flooded, there is a rebuttable presumption that the obstruction is the proximate cause of the flooding; this shifts the burden of proof on a point with which the plaintiff might otherwise have substantial difficulty. As already mentioned, no municipal building permit can be obtained for an obstruction until a permit has first been granted by the Department. This requirement could be extended to such other types of construction and excavation as the legislature deems appropriate (*e.g.*, state highway department permits for the construction of roads).

Section 13 is intended to make clear that the use of one remedy under the Act does not act as a bar to any other remedy (*i.e.*, criminal prosecution, injunctive relief, or the power to order removal under Section 7). Section 14 is a standard severability clause.

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91. Even without such a specific provision, Pennsylvania has construed its encroachment law in the same way. See *Commonwealth v. Pennsylvania R.R.*, 78 Pa. Super. 389 (1922) (suit for common law nuisance could be maintained). See also *Borough of Windber v. Spadafora*, 356 Pa. 130, 51 A.2d 726 (1947), in which the right of the city to complain of a common law public nuisance was apparently recognized, but only to the extent that the rights of the public were affected by the obstruction of the flow of the stream causing the streets to be flooded. The New Jersey provision [N.J. Stat. Ann. § 58:1-26 (1940)] that "no such approval . . . shall affect any property rights otherwise existing" was applied in *Kidde Mfg. Co. v. Town of Bloomfield*, 20 N.J. 52, 118 A.2d 530 (1955). See note 77 *supra*. See also *Henry Ford & Son v. Little Falls Fibre Co.*, 280 U.S. 369 (1930), in which a license to use flashboards on a dam under the Federal Water Power Act was held not to exempt the licensee from liability to riparian owners under local law, in view of an express saving clause.

## CONCLUSION

The common law has not adequately protected individuals against damage resulting from obstructions to the flood channels of watercourses. There seems little doubt that encroachment legislation is valid. However, most of the presently existing legislation in that direction is inadequate, both from the viewpoint of draftmanship and enforcement. Stronger legislative programs, making full use of government hydrologic assistance, should be implemented.<sup>92</sup>

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92. For readers interested in other aspects of the subject, *Flood Damage Prevention, An Indexed Bibliography* (1963), published by the Technical Library of the Tennessee Valley Authority, is suggested as a comprehensive bibliography.