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URBAN DRAINAGE: ASPECTS OF PUBLIC AND PRIVATE LIABILITY

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As April showers bring May flowers, it seems to be equally true that July thunderstorms bring August litigation concerning drainage. The greater portion of this litigation arises in cities where open ground, which once eagerly absorbed rain, has been replaced by roads, sidewalks and rooftops. Drains have been constructed and maintained with varying degrees of foresight and care. Improvements have been made which change the natural grade of the land. The phenomenon of the large-scale residential subdivision has added problems of new dimension and scope. Not only is the storm run-off increased in volume from the waterproofed urban landscape, but also the critical storm flow is concentrated into a shorter time.

Nevertheless, the problems incident to municipal drainage are by no means new. The will of Benjamin Franklin reflected his concern for the water supply and drainage situation in Philadelphia. Since that time a formidable, sometimes confusing, body of law has been developed on the various aspects of this subject. It is the aim of this article to present some of the basic doctrines and trends relating to both public and private liability for the interference with drainage within the confines of a municipality.

At the outset, it is advisable to review the basic rules relating to the drainage of surface waters which have been applied in the United States. Traditional analysis divides the nation into two camps: the common law or "common enemy" states and the civil law states. In reality there now seem to be four distinct approaches to the subject, with numerous variants upon each. Under the common law doctrine, surface waters are regarded as a "common enemy." Every property owner has the right to take steps to expel such waters from his own land by any appropriate means without liability for casting the water upon another's land. Under the civil law rule of "natural servitudes," lower lands are servient to the natural surface drainage from all lands above. However, the servitude exists only for natural drainage; an upper proprietor may not do anything to alter the natural drainage conditions in any way under the strict civil law rule.[1]

A third group of states have now adopted a modified version of either rule. Generally, it seems to make little difference whether the modification takes as its base the common enemy or the civil law rule. In either event a landowner is normally entitled to make reasonable changes in his land to alter or accelerate the natural drainage, so long as water is not collected and cast in a body upon the land of a neighbor. A fourth rule, based upon "reasonable user,"

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1 6-A American Law of Property § 28.63 (Casner ed. 1954).

reaches essentially the same result, while specifically rejecting both the common enemy and the civil law rules.[2]

The Restatement of Torts, section 833, takes the broad position that liability for interference with the flow of surface waters rests upon the same basis as liability for an invasion of property by vibrations, noise, smoke or pollution: "Where the invasion is not intentional, the liability . . . depends upon whether his conduct has been negligent, reckless or ultrahazardous. . . . Where, however, the invasion is intentional, liability depends upon whether the invasion is unreasonable." In viewing this broad basis, it should be borne in mind that invasion by water is not strictly analogous to invasion by the other forces mentioned above, all of which are created by the activity of man. However, the application of the rules stated would lead, in most instances, to the same result as the "modified doctrine" now applied in many states.

It may be noted in passing that there are circumstances from which an easement or irrevocable license for drainage may be created. Hence, the possible application of basic real property doctrines should not be overlooked.[3]

Two variables are common to almost every drainage case. The first is the original position of the parties on the surface of the land. Did waters originally drain from A toward B or vice versa? The second variable relates to the action of which complaint is made. The action may be preventive, by repelling water which would otherwise drain onto the land, or positive, which would consist of steps taken to increase the speed or quantity of drainage from the land. Neither of these variables per se changes the result under the common enemy doctrine. Either the upper or the lower proprietor may improve his lot, and it makes no difference whether the water is cast off or simply repelled.[4]

I. PRIVATE LIABILITY

A. The Common Enemy Doctrine

The first known application of the common enemy doctrine in the United States is *Gannon v. Hargadon*[5] in 1865. In 1881 the com-

2 An excellent review of general law pertinent to the subject of surface drainage can be found in an annotation at 59 A.L.R.2d 421 (1958). The following list compiled from the annotation and other sources may be found useful for quick reference. There is some overlapping in the lists due to the application of different rules to urban and rural property.

Common Enemy States	Civil Law States	Civil Law States (Continued)	Modified Doctrine (Continued)
Arkansas	Alabama		
Connecticut	Arizona	Tennessee	No. Dakota
Dist. of Columbia	California	Texas	Ohio
Hawaii	Georgia	Vermont	Oklahoma
Indiana	Idaho		Oregon
Iowa	Illinois	Modified Doctrine	Virginia
Maine	Iowa		Pennsylvania
Massachusetts	Kansas	Alabama	So. Dakota
Missouri	Kentucky	Arkansas	
Montana	Louisiana	Florida	Reasonable User
New York	Michigan	Iowa	
North Dakota	New Mexico	Colorado	Minnesota
So. Carolina	No. Carolina	Maryland	New Hampshire
Washington	Ohio	Mississippi	New Jersey
Wisconsin	So. Dakota	Nebraska	

It appears significant to note that, unlike the clear-cut distinction between riparian and appropriation doctrine states with respect to the use of water, there is little pattern along geographical or climatological lines in the states differing as to the drainage of water.

3 See, e.g., Messinger v. Township of Washington, 185 Pa.Super. 554, 137 A.2d 890 (1958), an irrevocable license for a drain.

4 United States v. Shapiro, 202 F.2d 459 (D.C. Cir. 1952); Kossoff v. Rathgeb-Walsh, Inc., 3 N.Y.2d 583, 170 N.Y.S.2d 789, 148 N.E.2d 132 (1958).

5 10 Allen (Mass.) 106 (1865).

mon enemy doctrine was applied to urban drainage problems in the state of New York.[6] The plaintiff brought an action against a neighbor who had filled his own lot, thereby preventing the historic drainage from a small pond in the street in front of the plaintiff's lot. Adopting the dictum of an earlier case, it was held that surface waters could be repelled at will without liability. The decision was limited, however, to those improvements made in good faith.

New Jersey initially followed the common enemy doctrine. Some of the most interesting applications of that doctrine to urban conditions arose there.[7] In one instance litigation arose over rain water even before it reached the ground. Adjoining property owners each constructed a garage about one tenth of one foot from the division line and directly opposite the other's garage. The plaintiff complained that water from the defendant's higher roof poured against his garage, causing a wet wall. It was held that no relief could be granted since the common enemy doctrine applied.[8]

The common enemy doctrine was also applied in New Jersey to favor the development of land for residential subdivisions. A most exhaustive discussion of this aspect, as well as drainage law generally throughout the country, can be found in *Yonadi v. Homestead Country Homes, Inc.*[9] Action there was brought by a lower proprietor against the developer of a higher forty-acre tract, which previously had been farm land. The defendant had installed drains and had increased the run-off by the change to residential uses. It was found that at least thirty of the forty acres still drained to the same area or point as originally, but there was some doubt as to whether the grading had changed the drainage pattern for the remaining ten acres. It was pointed out that, in general, one who improves or alters land is not subject to liability for affecting the flow of surface waters. However, an exception exists that imposes absolute liability for transmitting water, by means of artificial devices such as drains or ditches, in a body large enough to do substantial injury and casting it upon lands where it otherwise would not have flowed. The trial court's judgment for the plaintiff was

6 Barkley v. Wilcox, 86 N.Y. 140, 40 Am.Rep. 519 (1881).

7 In Hopler v. Morris Hills Regional Dist., 45 N.J.Super. 409, 133 A.2d 336 (Super. Ct. App. Div. 1957), a "reasonable use" rule was adopted. See text, section E. Reasonable Use Rule.

8 McCullough v. Hartpence, 141 N.J.Eq. 499, 58 A.2d 233 (Ch. 1948).

9 35 N.J.Super. 514, 114 A.2d 564 (Super. Ct. App. Div. 1955). See also Granger v. Elm Tree Village, 23 N.J.Super. 592, 93 A.2d 641 (Super. Ct. Ch. 1952).

remanded with directions to determine whether this exception applied to the ten acres.[10]

Application of the common enemy doctrine to subdivision developments was summarized in *Wallace v. Schneider*,[11] a Kentucky case: "The owner of the dominant estate may drain and ditch his land for the purpose of ridding it of surface water . . . building sewers, gutters and culverts without liability . . . so long as he does not tap additional territory from which surface waters otherwise would not have flowed."[12]

B. The Civil Law Doctrine

The strict civil law approach, prohibiting both upper and lower proprietors from altering natural drainage conditions has seemingly found little application to purely urban conditions. However, some modern cases apply the doctrine to city property.[13] In one instance it was invoked as a basis for municipal liability arising from a defective storm sewer.[14]

The process of urbanization necessarily changes the drainage regimen; natural drainage conditions no longer exist. Hence, the application of strict civil law doctrines to land within cities tends to be unrealistic. Furthermore, such a rule has a tendency to inhibit growth and development. Property owners may be discouraged from bringing their land to grade. As will be shown subsequently, these considerations have led some states to adopt a distinction between rural and urban property in their drainage law. In other states the civil law rule has been modified in order to free urban development from its liabilities.[15]

C. Modified Common Law Rule

In those states modifying the common law rule, it has been stated in effect that one may repel surface water subject to the limitation that he must not act wantonly or unnecessarily. This means that improvements must be made in good faith with such care as not to injure needlessly the adjoining property.[16] A further qualification has been expressed that one cannot collect water in an artificial channel and cast it upon his neighbor's land.[17] Another stated exception is that the landowner must not act negligently in shutting out the flow of surface water.[18] Normally the action affecting drainage is incident to some other program of improvement.[19] However, the improvement of drainage conditions alone should suffice to justify action.

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10 An application of the same exception is West Orange v. Field, 37 N.J.Eq. 600, 45 Am.Rep. 670 (Ct. Err. & App. 1882). It should also be noted that the common enemy doctrine does not apply to collections of ice or snow, Brownsey v. General Printing Ink Corp., 118 N.J.L. 505, 193 Atl. 824 (Sup. Ct. 1937).

11 310 Ky. 17, 219 S.W.2d 977 (1949).

12 *Id.* at 22, 219 S.W.2d at 980.

13 See, e.g., Rinzler v. Folsom, 209 Ga. 549, 74 S.E.2d 661 (1953); Hancock v. Stull, 199 Md. 434, 86 A.2d 734 (1952); Olson v. Westerberg, 2 Ill.App.2d 285, 119 N.E.2d 413 (1954). The latter case, although applying the civil law approach, speaks of trespass by successive invasions of water and silt.

14 Cannon v. City of Macon, 81 Ga.App. 310, 58 S.E.2d 563 (1950).

15 6-A American Law of Property § 28.63 (Casner ed. 1954).

16 Mason v. Lamb, 189 Va. 348, 53 S.E.2d 7 (1949).

17 Hodges Manor Corp. v. Mayflower Park Corp., 197 Va. 344, 89 S.E.2d 59 (1955).

18 Taylor v. Harrison Constr. Co., 178 Pa.Super. 544, 115 A.2d 757 (1955).

19 Roth v. Great A & P Tea Co., 108 F.Supp. 390 (E.D. N.Y. 1952); Nassau County v. Cherry Valley Estates, Inc., 281 App.Div. 692, 117 N.Y.S.2d 616 (1952); Pfeil v. Trischett, 137 N.Y.S.2d 668 (Sup. Ct. 1954).

D. Modified Civil Law Rule

The civil law rule has been modified in some instances to permit the alteration of natural drainage conditions by an upper proprietor, provided the water is not sent down in a manner or quantity to do more harm than formerly. This has been expressed as the civil law rule, "modified to meet the exigencies and circumstances of each particular case."[20] Again, questions of due care become involved.[21]

There is some support for a rule that where two methods of disposing of water are available, each equally efficacious, and neither requiring unreasonable expense, the one which will not damage adjoining property must be chosen. For instance, in *Holman v. Richardson*,[22] a lower proprietor had to dig a drainage ditch rather than build a brick wall, the cost of either being equal.

An interesting application of the civil law approach occurred in Maryland. The defendant's predecessor had installed a tile drain in place of a ditch across the premises and had built over the drain. Because a very unhealthy condition was eventually created by lack of maintenance, the defendant blocked the drain. The plaintiff, an upper proprietor, sought an injunction. It was decreed that the defendant need not reopen the drain unless the plaintiff put it in repair and maintained it.[23]

E. Reasonable Use Rule

After years of adherence to the common enemy doctrine, New Jersey recently abandoned it in favor of the "reasonable use" rule.[24] Minnesota and New Hampshire also follow it. Reasonablesness becomes a question of fact, allowing consideration of all pertinent factors. As stated by the New Hampshire court: "In determining the question of reasonableness, the effect of the use upon the interests of both parties, the benefits derived from it by one, the injury caused by it to the other, and all the circumstances affecting either of them, are to be considered."[25]

F. The Urban-Rural Distinction

As a general rule, most states recognize a distinction between rural and urban conditions in the application of drainage law.[26] However, the results are not uniform among the states making this distinction. In a limited number of civil law states it makes no difference whether the controversy arises in a city or in the country.[27]

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20 Boulder v. Boulder & White Rock Ditch & Reservoir Co., 73 Colo. 426, 430, 216 Pac. 553, 555 (1923); *accord*, Johnson v. Johnson, 89 Colo. 274, 1 P.2d 581 (1931).

21 Drainage Dist. v. Auckland, 83 Colo. 510, 267 Pac. 605 (1928).

22 115 Miss. 169, 76 So. 136 (1917); *accord*, Cowan v. Baker, 227 Miss. 828, 87 So.2d 74 (1956).

23 Whitman v. Forney, 181 Md. 652, 31 A.2d 630 (1943).

24 Hopler v. Morris Hills Regional Dist., 45 N.J. Super. 409, 133 A.2d 336 (Super. Ct. App. Div. 1957).

25 Franklin v. Durgee, 71 N.H. 186, 191, 51 Atl. 911, 913 (1901). See also Enderson v. Kelehan, 226 Minn. 163, 32 N.W.2d 286 (1948).

26 There seems to be little definition of the demarcation between rural and urban areas. It has been held that land in an incorporated village is urban, in spite of the total absence of sewer improvements. Keiser v. Mann, 102 Ohio App. 324, 143 N.E.2d 146 (1956). The case first recognizing the distinction in Ohio was Lunsford v. Steward, 95 Ohio App. 383, 129 N.E.2d 136 (1953), which added the qualification that the improvements made in an urban area must be made in a "reasonable manner." It has also been held that a subdivision with four lots per acre, without drains, gutters, or sewers, would be regarded as urban. Leiper v. Heywood-Hall Constr. Co., 381 Pa. 317, 113 A.2d 148 (1955).

27 56 Am. Jur. *Waters* § 78 (1947); Johnson v. Marcum, 152 Ky. 629, 153 S.W. 959 (1913); Carland v. Aurin, 103 Tenn. 555, 53 S.W. 940 (1899). In the latter case it was expressly stated, "We are unable to see any difference in principle between the reciprocal rights and duties of adjacent urban proprietors and adjacent rural proprietors."

In some instances the distinction has applied in reverse, with a more strict rule concerning the drainage of surface water being applied to urban property. Thus, in *Ginter v. Rector of St. Mark's Church*[28] the court stated:

> It does not follow that because in the country an upper proprietor may be permitted to aid the surface water on his field in its exit through a natural channel upon a lower proprietor . . . the same thing can be done in a city in thickly settled portions, where improvements are general, and a common drainage system has been provided.[29]

28 95 Minn. 14, 103 N.W. 738 (1905).
29 *Id.* at 22, 103 N.W. at 741.

The reasoning in that case seems to assume that the city is obligated to provide a common drainage system. As will be noted subsequently, this assumption is fallacious. At one time in Pennsylvania it was intimated that the owner of an urban lot was obligated to convey his surface water to a public drain. This dictum was subsequently overruled.[30]

Apparently the first case strongly recognizing the distinction between urban and rural properties arose in Iowa, a civil law state.[31] Arkansas subsequently adopted a rule strongly favoring urban development.[32] Strangely, the cases most strongly expressing the rural-urban distinction are from predominantly agricultural states.

In Kansas an unusual situation arose because of a statute abolishing the common enemy rule concerning surface waters. The plaintiff in *Liston v. Scott*[33] had maintained a retaining wall at the rear of his premises to ward off water. The defendant constructed a higher retaining wall and filled his lot, causing water from a roof to drain onto the plaintiff's land. An order sustaining the defendant's demurrer was affirmed. The court held that the statute abolishing the common enemy rule applied only to rural areas.

Even though more liberal rules apply to urban property, it appears to be universally stated that an upper proprietor cannot accumulate or concentrate water into artificial channels and discharge it upon his neighbor.[34] Furthermore, at least in California, a special rule applies to waters in those intermittent watercourses which handle storm waters after heavy rains. Such waters are not surface waters; nor are they in a natural watercourse. One cannot lawfully cast such waters upon the land of another to his damage. In making provisions for such waters, however, a municipality will not be liable if acting reasonably upon the basis of past experience.[35]

Alabama has a long line of cases dealing with the distinction between urban and rural areas. These cases illustrate the difficulty which has been experienced in finding the proper rule for the development of urban areas. Initially, the court boldly held that urban property may be improved without liability.[36] At that time Alabama was declared to generally follow the civil law rule. This initial urban case was modified by subsequent decisions holding that an upper proprietor cannot alter the natural drainage so as to increase the total area to which the lower is servient.[37] It was also implied that the development of a lot by a lower proprietor, so as to impede drainage, must be reasonable and natural.[38] Subsequently, it was determined that "the only basis for liability in such cases is to be found in a wrongful or negligent exercise of the right" to

30 Reilly v. Stephenson, 222 Pa. 252, 70 Atl. 1097 (1908). Compare Chamberline v. Ciaffoni, 373 Pa. 430, 96 A.2d 140 (1953).

31 Phillips v. Waterhouse, 60 Iowa 199, 28 N.W. 539 (1886).

32 Timmons v. Clayton, 222 Ark. 327, 259 S.W.2d 501 (1953); Levy v. Nash, 87 Ark. 41, 112 S.W. 173 (1908).

33 108 Kan. 180, 194 Pac. 642 (1921).

34 Jaxon v. Clapp, 45 Cal.App. 214, 187 Pac. 69 (Dist. Ct. App. 1919); 93 C.J.S. *Waters* § 116 (c) (1956).

35 Los Angeles Cemetery Ass'n v. City of Los Angeles, 103 Cal. 461, 37 Pac. 375 (1894); Weck v. Los Angeles County Flood Control Dist., 104 Cal.App.2d 599, 232 P.2d 293 (Dist. Ct. App. 1951).

36 Hall v. Rising, 141 Ala. 433, 37 So. 586 (1904). In this case the lower proprietor impeded drainage by filling his lot.

37 Perry v. McCrow, 226 Ala. 400, 147 So. 178 (1933); Southern Ry. v. Lewis, 165 Ala. 555, 51 So. 746 (1910).

38 Shahan v. Brown, 179 Ala. 425, 60 So. 891 (1913).

impede drainage.[39] Finally, two recent companion cases demonstrated that a different policy applies to upper proprietors as contrasted to lower proprietors in urban areas.[40] The defendant had developed a subdivision which included a system of drains alleged to cast water upon the plaintiffs, who were owners of lower ground. The right of lower proprietors in urban areas to obstruct drainage was reaffirmed. However, the court said that the liability of an upper proprietor for collecting surface waters and casting them upon the lower is not affected by whether the area is within an incorporated town or city. The degree of care exercised by the developer is immaterial. Liability exists for concentrating surface water and casting it upon a lower owner to his damage, when, if it were not so collected, it would be scattered and diffused. In Alabama then, the civil law doctrine appears to apply without exception to upper proprietors.[41]

In passing from the subject of the rural-urban distinction, it must be noted that basic principles of torts may create liabilities superimposed upon specific drainage law.[42]

G. Application of Rules to Residential Subdivisions

Problems incident to the development of large-scale residential subdivisions require special consideration. Since these developments take place in previously rural areas, the vital question is whether one can, by changing the use of his land, alter legal duties to his neighbor. Apparently, the issue has been faced squarely in only one case, *Rau v. Wilden Acres, Inc.*[43] In the course of subdividing his land, the defendant constructed a drainage ditch in a swale leading onto the plaintiff's land. Both tracts were formerly rural property, and the court indicated that the matter should be treated accordingly. This ruling was unnecessary to the case, for the court applied the generally applicable rule that one may not collect waters in an artificial channel and cast them upon another's property. As noted, this holds true in either rural or urban areas.[44] Accordingly, an injunction was granted. In contrast, a subsequent case from the same jurisdiction intimated that the rules governing urban areas should be applied initially to subdivision developers.[45] The issue remains in doubt.

Two recent cases having virtually identical facts, with opposing results, highlight the different approaches to the problems posed by subdivisions. In both cases the developer had installed a system of storm drains which discharged into a natural watercourse traversing the plaintiff's property. The increased flow in both instances resulted in erosion of land along the stream. New Jersey, applying its reasonable use rule, required the defendant to pipe the entire stream to an outlet on a lake.[46] In so doing, the court commented:

39 *Ex parte* Tennessee Coal, Iron & R. Co., 206 Ala. 403, 90 So. 876 (1921).
40 Kay-Noojin Dev. Co. v. Kinzer, 259 Ala. 49, 65 So.2d 510 (1953); Kay-Noojin Dev. Co. v. Hackett, 253 Ala. 588, 45 So.2d 792 (1950).
41 Vinson v. Turner, 252 Ala. 271, 40 So.2d 863 (1949).
42 See, for example, the annotation concerning overflow or escape of water from excavation made in the course of construction, 23 A.L.R.2d 827 (1952).
43 376 Pa. 493, 103 A.2d 422 (1954).
44 Since such subdivisions normally contain some system of drains, this rule may find frequent application. For a similar case see Hodges Manor Corp. v. Mayflower Park Corp., 197 Va. 344, 89 S.E.2d 59 (1955). Here the "artificial channel" rule was recognized as an exception to Virginia's modified common enemy approach.
45 Leiper v. Heywood-Hall Constr. Co., 381 Pa. 317, 113 A.2d 148 (1955).
46 Armstrong v. Francis Corp., 20 N.J. 320, 120 A.2d 4 (1956).

"The issue of reasonableness or unreasonableness becomes a question of fact to be determined in each case upon a consideration of all the relevant circumstances, including such factors as the amount of harm caused, the foreseeability of the harm which results, the purpose or motive with which the possessor acted, and all other relevant matter."[47] The New Jersey court also took the position that the economic burden of the expulsion of surface waters from areas being developed for urban use should be borne by those who are in the business for profit rather than by adjoining landowners.

The same facts appeared in Colorado,[48] which follows a modified civil law doctrine. The defendant was not charged with negligence. The basis for the appellate decision, which affirmed the judgment for the defendant, was that a natural watercourse may be used as a conduit for the drainage of lands, at least where the augmented flow will not tax the stream beyond its capacity and cause the flooding of lower lands. By implication, acceleration of erosion does not constitute taxing a stream beyond its capacity.

II. MUNICIPAL LIABILITY

The second major aspect of urban drainage law involves the bases of liability against municipal corporations for faulty drainage.[49] The importance of this topic is indicated by the fact that in every modern community throughout the world the storm drainage problem is regarded and undertaken as a municipal function.[50]

The potential theories of liability advanced against municipal corporations are numerous: negligent planning or construction; negligent maintenance; nonfeasance by failure to correct known inadequacies; positive interference with natural drainage, including obstruction by roads; eminent domain; nuisance and other absolute liabilities. Each of these bases receives separate consideration hereafter.

A. Negligent Planning or Construction

As a general proposition, municipal corporations are not liable for mere failure to provide drainage systems. Nor are they liable for negligence in the initial planning of storm water disposal.[51] The establishment of a drainage system is a discretionary exercise of legislative power, with which the courts cannot interfere.[52] If a party has constructed improvements below a legally established grade, a city is almost certainly not bound to protect him.[53]

On the other hand, a city may be held liable for negligence in the course of construction, as distinguished from design.[54] This is a

47 *Id.* at 330, 120 A.2d at 10.

48 Ambrosio v. Perl-Mack Constr. Co., 143 Colo. 49, 351 P.2d 803 (1960).

49 An excellent general discussion of this aspect may be found in 18 McQuillin, Municipal Corporations §§ 53.117-53.144 (3d ed. 1950).

50 In comparison to sanitary sewers, storm drains are expensive because of their large capacity. Los Angeles County, after spending $179,000,000 on storm drains to relieve local flooding, needs additional storm drains costing about a billion dollars to provide adequate relief from local floods and to protect areas as yet undeveloped. Engineering News-Record, March 13, 1958, p. 28.

51 18 McQuillin, Municipal Corporations § 53.121 (3d ed. 1950); City of Englewood v. Linkenheil, 362 P.2d 186 (Colo. 1961); Denver v. Rhodes, 9 Colo. 554, 13 Pac. 729 (1887); Daniels v. City of Denver, 2 Colo. 669 (1875); Martinez v. Cook, 56 N.M. 343, 244 P.2d 134 (1952).

52 Martinez v. Cook, 56 N.M. 343, 244 P.2d 134 (1952).

53 Denver v. Stanley Aviation, 143 Colo. 182, 352 P.2d 291 (1960); Aicher v. City of Denver, 10 Colo.App. 413, 52 Pac. 86 (1897).

54 Denver v. Rhodes, 9 Colo. 554, 13 Pac. 729 (1887); Gibson v. State, 187 Misc. 931, 64 N.Y.S.2d 632 (Ct. Cl. 1946). The former case held the city liable where earth thrown up temporarily in the course of sewer excavation created in effect a dam across the street, causing flooding after a heavy rain.

purely proprietary action which does not call for the exercise of governmental discretion. It appears that this rule has been applied to hold a city liable for faults in design, calling the defect one of "construction."[55] The distinction requires close observance.

There are two principal exceptions to the statement that a city is not liable for failure to provide drainage or for negligence in planning. If, as a result of the city's affirmative acts, additional waters are cast upon the plaintiff's land, then there is liability for negligent adoption of a plan. Also, if the city abandons a drain, it will be liable where property is thereby left in a worse position than it was before construction of a drain.[56] The liability for positive misfeasance applies not only to drainage of surface waters but also to alterations in surface watercourses. If the municipality should know that its actions will result in increased erosion, action must be taken reasonably calculated to avoid that result.[57]

B. Negligent Maintenance and Failure to Correct Inadequacies

On the other hand, it is generally acknowledged that a city is liable for negligence in maintenance of existing sewers.[58] However, in Georgia, maintenance of sewers has been held to be a governmental function for which there is no liability based on negligence.[59] One vital question which arises here is whether a city may be liable for continuing to maintain a storm sewer, with actual knowledge of its inadequacy. As noted above, the city is not liable for planning an inadequate system. But liability may be predicated upon failure to correct that inadequacy after it has been demonstrated by experience.[60]

The next question which naturally arises in this connection is whether a city must have a program of inspection and preventive maintenance. Logically, the issue would resolve into whether a reasonable man, in the exercise of due care, would inspect. Beyond

55 City of Ashland v. Kittle, 305 S.W.2d 768 (Ky. Ct. App. 1957).

56 Cattin v. Omaha, 149 Neb. 434, 31 N.W.2d 300 (1943); Martinez v. Cook, 56 N.M. 343, 244 P.2d 134 (1952); Gibson v. State, 187 Misc. 931, 64 N.Y.S.2d 632 (Ct. Cl. 1946).

57 Kidde Mfg. Co. v. Bloomfield, 20 N.J. 52, 118 A.2d 535 (1955).

58 Malvernia Inv. Co. v. Trinidad, 123 Colo. 394, 229 P.2d 945 (1951); Denver v. Capelli, 4 Colo. 29 (1877); True v. Mayor of Westernport, 196 Md. 280, 76 A.2d 135 (1950); City of Meridian v. Sullivan, 209 Miss. 61, 45 So.2d 851 (1950); Sigurdson v. Seattle, 48 Wash.2d 155, 292 P.2d 214 (1956); McCabe v. City of Parkersburg, 138 W.Va. 830, 79 S.E.2d 87 (1953).

59 Foster v. Savannah, 77 Ga.App. 346, 48 S.E.2d 686 (1948).

60 Denver v. Mason, 88 Colo. 294, 295 Pac. 788 (1931); Cannon v. City of Macon, 81 Ga.App. 310, 58 S.E.2d 563 (1950). *Contra*, Bratonja v. Milwaukee, 3 Wis.2d 120, 87 N.W.2d 775 (1958), holding that mere inadequacy, no matter how obvious it becomes, can never be the basis for liability. See annot., 70 A.L.R. 1347 (1931), "Liability of municipality where sewer originally of ample size has become inadequate by growth or development of territory."

that it must be determined what constitutes a reasonable inspection and preventive maintenance program. These issues seem to be factual in nature. Nevertheless, most of the decisions on this question indicate that the city must have an inspection and periodic maintenance program.[61] The city must take notice of such conditions as ordinary care will discover. As expressed in one case, the city is bound to take notice of the susceptibility of timbers or other materials to deteriorate from time and use.[62]

Does the occurrence of sewer stoppage raise a presumption that the city has failed in its duty of inspection and maintenance? In one instance it was held that there must be proof of the nature of the obstruction, in order to show that it was something which should have been anticipated or which periodic inspection would have disclosed.[63] On the other hand, such circumstances have been viewed as proper for the application of the doctrine of *res ipsa loquitur*.[64]

Some states have statutes prohibiting civil actions against a city arising because of defective conditions unless written notice of the condition is given to the authorities before the damage occurs. Such a statute was avoided in interesting fashion in one New York case.[65] It was alleged that the city controlled the drains and that, by reason of negligence in maintenance, overflow upon the plaintiff's property had been caused. The court observed that prior notice is not required where the alleged negligence is active in nature. It was then observed that the city had undertaken to provide drains, and, having done so, negligence in the performance of duties of maintenance rendered the city liable without notice.

Ever since *Rylands v. Fletcher*,[66] the law has viewed with a jaundiced eye any party who impounds large quantities of water. Thus, in the course of protecting the city from surface water, if a large quantity is impounded, negligence at any stage will furnish a basis for liability.[67]

C. *Positive Interference with Natural Drainage*

Where a city takes action which interferes in a positive manner with natural drainage conditions, it will be liable for damage thereby resulting to private property.[68] A special instance of this liability may occur when a city illegally and improperly establishes or changes a high street grade so as to obstruct drainage.[69] Normally, the establishment of a street grade requires approval by ordinance. In *Brown v. Sigourney*,[70] an action was brought for damages caused when the city raised the level of the street, resulting in an accumulation of water on plaintiff's land. In affirming judgment for the plaintiff, the court said:

So far as the record shows there is no established grade for

61 Yearsley v. City of Pocatello, 69 Idaho 500, 210 P.2d 795 (1949); City of Meridian v. Bryant, 232 Miss. 892, 100 So.2d 860 (1958); Scamp v. State, 189 Misc. 802, 70 N.Y.S.2d 752 (Ct. Cl. 1947).
62 Dunn v. Boise City, 48 Idaho 538, 283 Pac. 609 (1929).
63 Lobster Pot v. City of Lowell, 333 Mass. 31, 127 N.E.2d 659 (1955).
64 Anello v. Kansas City, 286 S.W.2d 49 (Mo. Ct. App. 1955).
65 Randle v. City of Rome, 195 N.Y.S.2d 373 (Oneida County Ct. 1960).
66 L.R. 3 H.L. 330 (1868).
67 Hogan v. Hot Springs, 58 N.M. 220, 269 P.2d 1102 (1954).
68 Andrew Jergens Co. v. Los Angeles, 103 Cal.App.2d 232, 229 P.2d 475 (Dist. Ct. App. 1951), in which water from a 500 acre area would be funneled onto the plaintiff's land.
69 63 C.J.S. *Municipal Corporations* § 1227 (1950).
70 164 Iowa 184, 145 N.W. 478 (1914).

> the streets of the city of Sigourney. Such [can be done] only by means of an ordinance. . . . When the grade is so established, streets may be changed in their height to conform to it without creating liability for resulting damages. But until a grade is so established a city may not make changes in the surface of the street resulting in damages to adjacent property owners without being liable for the same.[71]

A number of other cases support this position.[72]

McQuillin takes the view that a city should not be liable for the unauthorized acts of its agents if the city would not be liable if acting properly.[73] Nevertheless, an adjacent property owner cannot rely upon an illegally established grade in improving his property.[74] The alteration of a street level is not some casual caprice of a minor official of which the responsible parties may claim ignorance. It would therefore seem just to impose liability upon the city for the obstruction which its agents have erected.

If a grade is properly established, then there can be no liability for mere obstruction of surface drainage.[75] But if it can be shown that the road constitutes a trap or funnel, collecting and discharging water on private property, liability again may be predicated upon the positive action of the municipality.[76] Furthermore, it is incumbent upon a municipality, in crossing a natural watercourse with a road, to provide an adequate culvert or other means for the passage of water.[77]

D. Eminent Domain

Still another potential basis for liability is found in the recovery of consequential damages in eminent domain proceedings. It is recognized as a general rule that "where land is flooded, or its drainage prevented, by the obstruction of the flow of water, or its diversion from its natural channel, there is, in general, such a taking or injury as entitles the owner to compensation, although the improvement causing the injury was authorized by the legislature."[78] Obstruction of drainage occasionally results from new highway or street construction. The resulting injury to private property is an item which is to be considered in proceedings in eminent domain.[79] In *Board of County Comm'rs v. Adler*,[80] the county had caused the flooding of plaintiff's lands when, in constructing a bridge across the Platte River, it had filled up certain of its channels. This caused a backwater effect in time of flood which inundated the land in question. Recovery for this damage was allowed even though the

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71 *Id.* at 186, 145 N.W. at 479.

72 Gonzalez v. Pensacola, 65 Fla. 241, 61 So. 503 (1913); Delphi v. Evans, 36 Ind. 90, 10 Am.Rep. 12 (1871); Blandon v. Fort Dodge, 102 Iowa 441, 71 N.W. 411 (1913); Richardson v. Webster City, 111 Iowa 427, 82 N.W. 920 (1900); Trustees of P.E. Church v. Anamosa, 76 Iowa 538, 41 N.W. 313 (1889); Radcliffe v. Brooklyn, 4 N.Y. 195, 53 Am.Dec. 357 (1850); Smith v. Cincinnati, 4 Ohio 514 (1831); Meinzer v. City of Racine, 74 Wis. 166, 42 N.W. 230 (1889); Crossett v. Janesville, 28 Wis. 420 (1871).

73 13 McQuillin, Municipal Corporations 592 (3d ed. 1950).

74 Leadville v. McDonald, 67 Colo. 131, 186 Pac. 715 (1919).

75 Scamp v. State, 189 Misc. 802, 70 N.Y.S.2d 752 (Ct. Cl. 1947); Lynch v. Mayor, 76 N.Y. 60, 32 Am.Rep. 271 (1879).

76 Sheehan v. Richmond County, 100 Ga.App. 496, 111 S.E.2d 924 (1959); Lynch v. Mayor, 76 N.Y. 60, 32 Am.Rep. 271 (1879).

77 Board of County Comm'rs v. Adler, 69 Colo. 290, 194 Pac. 621 (1920); Powelson v. Seattle, 87 Wash. 617, 152 Pac. 329 (1915).

78 29 C.J.S. *Eminent Domain* § 117 (1941).

79 Board of Comm'rs v. Noble, 117 Colo. 77, 184 P.2d 142 (1947); Bockover v. Board of Supervisors, 13 S.D. 317, 83 N.W. 335 (1900).

80 *Supra* note 77.

plaintiff's land did not abut upon the improvement. A slightly different question is presented when a municipal collection system for storm waters tends to discharge water in a location where it floods private property. There appears to be a division of authority as to whether this action constitutes an injuring of private property for public use.[81]

E. Nuisance and Other Absolute Liabilities

Theories of nuisance have been applied as a basis for municipal liability in appropriate instances, thereby avoiding the necessity for proof of negligence. Where a city has created a condition which results in the flooding of private property after each heavy rain, only a temporary nuisance exists. Consequently, each subsequent flooding creates a new cause of action, largely due to the impossibility of estimating damage to be suffered in the future.[82] In some cases it has been shown that, due to a defect in the system, storm waters were able to percolate into sanitary sewers. The natural consequence is an overtaxing of the sanitary sewer and the flooding of private homes with filth. After repeated occasions, this constitutes a nuisance in every sense of the term.[83] Of course, the condition must have persisted for a period of time sufficient to demonstrate that it is a recurrent interference with the enjoyment of property.

A sewer system, once adequate, tends to become inadequate and insufficient as a result of continued growth of the community. Where this results in repeated instances of damage to private property, the city will be liable if, after notice of the nuisance, it fails to adopt and execute measures necessary to correct the condition.[84]

81 City of Englewood v. Linkenheil, 362 P.2d 186 (Colo. 1961); City of Jackson v. Cook, 214 Miss. 201, 58 So.2d 498 (1952).

82 City of Tucson v. Apache Motors, 74 Ariz. 98, 245 P.2d 255 (1952); City of Tucson v. O'Reilly Motor Co., 64 Ariz. 240, 168 P.2d 245 (1946) (obstruction of natural watercourse by inadequate culvert).

83 Pettinger v. Village of Winnebago, 239 Minn. 156, 58 N.W.2d 325 (1953); Clark v. City of Springfield, 241 S.W.2d 100 (Mo. Ct. App. 1951).

84 City of Ada v. Conoy, 198 Okla. 206, 177 P.2d 89 (1947).

Therefore, although a city is not liable for any initial failure to adopt an adequate drainage plan, liability will result for continued maintenance of a system which constitutes a private nuisance.[85]

Municipal liability also exists, independent of negligence, where water is artificially impounded or collected and then discharged upon private property.[86] Although the cases in such instances occasionally speak in terms of nuisance, it is unnecessary to show recurrent injury with notice to the municipality.[87] Even though the liability is absolute, equity will not be required to grant an injunction where no substantial injury to the private property is shown and great public detriment would result from discontinuance of the sewer facilities.[88]

Since flooding as a result of the failure of municipal dams or dikes occurs typically after unusually heavy rains, it is natural to expect an "Act of God" to be alleged as a defense. In this respect, the duty is thrust upon a city to anticipate such rainfalls as experience shows do occur occasionally, although at infrequent intervals.[89]

III. CONCLUSION

It must be remembered that the growth of urban civilization results in a radical alteration of the natural drainage regimen. A well-planned municipal drainage system is a necessity. Otherwise a chaotic situation results, with each individual property owner seeking to protect his property as best he can. Yet, the courts have recognized that in the process of planning and executing a drainage system there exists an area of legislative discretion with which they cannot interfere. A most interesting approach to the resulting plight of the property owner has been adopted by a South Carolina statute which is believed to be unique: "Whenever . . . it shall be necessary or desirable to carry off the surface water from any street, alley, or other public thoroughfare along such thoroughfare rather than over private lands adjacent to or adjoining such thoroughfare, such municipality shall, upon demand from the owner of such private lands, provide sufficient drainage. . . ."[90] This statute has been interpreted to require some positive act by the municipality which alters the natural drainage pattern before the property owner has a right to demand that drainage be provided.[91] Thus, a city is not liable to provide drainage if it merely annexes an area in which roads are already constructed.[92] Nevertheless, this statute appears to present a step in the right direction. The continuing process of urbanization will render municipal drainage problems increasingly important. It would appear to be time for the relative rights and responsibilities of cities and property owners to be set forth in systematic fashion.

85 Denver v. Mason, 88 Colo. 294, 295 Pac. 788 (1931).

86 Willson v. Boise City, 20 Idaho 133, 117 Pac. 115 (1911); Woods v. State Centre, 249 Iowa 38, 85 N.W.2d 519 (1957); Wendel & Sons, Inc. v. Newark, 138 N.J.Eq. 69, 46 A.2d 793 (Ch. 1946); Nolan v. Carr, 189 N.Y.S.2d 82 (Sup. Ct. 1959); Dixon v. Nashville, 29 Tenn.App. 282, 203 S.W.2d 178 (1946).

87 See, e.g., Dixon v. Nashville, 29 Tenn.App. 282, 203 S.W.2d 178 (1946).

88 Nolan v. Carr, 189 N.Y.S.2d 82 (Sup. Ct. 1959).

89 Willson v. Boise City, 20 Idaho 133, 117 Pac. 115 (1911).

90 S.C. Code § 59-224 (Supp. 1960).

91 Belue v. Greenville, 226 S.C. 192, 84 S.E.2d 631 (1954); Holliday v. Greenville, 224 S.C. 207, 78 S.E.2d 279 (1953).

92 Hill v. Greenville, 223 S.C. 392, 76 S.E.2d 294 (1953). Compare Macedonia Baptist Church v. Columbia, 195 S.C. 59, 10 S.E.2d 350 (1940) where, as a result of several alterations in the drainage pattern by the city, recovery was upheld.