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I. INTRODUCTION

In October 1969, Mr. and Mrs. Raymond J. Tucker bought a house and parcel of land designated "lot 23" in Marshfield, Massachusetts, from Ronald Tocco. Between the time the Tuckers first saw lot 23 and the time they purchased it, Morningside Realty Trust, the Tuckers' northern neighbor, filled and levelled part of Morningside's land in preparation for a proposed road. The filling caused subsurface water to back up onto lot 23. Within a week of the Tuckers' taking possession of lot 23, water began pouring into their cellar. The house and cellar smelled of raw sewage, and as much as three feet of water collected in the backyard. The Tuckers sued both Morningside Realty Trust and Badoian, trustee of

1. Until the spring of 1969, lot 23 was an unimproved, muddy, marsh-like tract of land. During the spring and summer of 1969, Ronald Tocco, the owner, built a house on lot 23. He first filled in a drainage ditch that crossed the lot and then dug holes for the septic tank and cellar. The cellar is in the path of the former ditch. During construction these holes partially filled with water. Tucker v. Badoian, 1978 Mass. Adv. Sh. 3207, 3210, 384 N.E.2d 1195, 1197.

Lot 23 is bordered to the north by a lot belonging to Morningside Realty Trust, to the south by land uninvolved in this discussion, to the west by an old cranberry bog, and to the east by Winslow Cemetery Road. To the east of Winslow Cemetery Road are two ponds which drain through a man-made ditch and then through a culvert under the road. Until Ronald Tocco filled in the ditch in the spring of 1969, the water then flowed into a ditch that crossed lot 23 and drained into a small pothole which lies partially on lot 23 and partially on Morningside's abutting land. Lot 23 was both the locus of a system formerly used to flood the old cranberry bog and the low point of Winslow Cemetery Road. Id. at 3209-10, 384 N.E.2d at 1197.

2. To alleviate these problems, Tocco installed a drainage system and filled in parts of the backyard. Polluted water, however, continued to collect in the cellar. Tucker v. Badoian, 1978 Mass. Adv. Sh. 3207, 3211, 384 N.E.2d 1195, 1198. Although the evidence did not clearly establish the water's source, due to the slope of the land and the placement of the pothole, the court inferred that the water in the backyard was overflow from the pothole. Id. at 3211 n.5, 384 N.E.2d at 1198 n.5.

Morningside, for negligence and sought recovery for the damages to their house and land.4

At trial, the Plymouth County Superior Court held for the Tuckers, and the appeals court reversed.5 The Massachusetts Supreme Judicial Court granted review and held in Tucker v. Badoian6 that the trial judge erred in denying the defendants' motion for a directed verdict and entered judgment for the defendants. Since neither of the parties asked that the existing law be changed, the court applied the long-standing common enemy rule to the case.7 Stated generally, the "common enemy" rule, as applied to surface water disputes, allows a property owner to improve his land and thereby cause water to flow onto his neighbor's land without incurring liability for his neighbor's damages.8 Thus, Morningside and Badoian were not liable for the damages caused to their neighbors by their land improvements. Although the court recognized that the defendants might have contributed to the plaintiffs' damages, under the common enemy rule as followed in Massachusetts, there would be no liability without proof that the defendants "caused surface water, which might otherwise have been absorbed or have flowed elsewhere, to be artificially channelled and discharged on the plaintiff's land in a place and quantity sufficient to entitle the plaintiff to relief."9 As the defendants did not use an artificial channel in causing water to flow onto the plaintiffs' land, the defendants were not liable for the resulting damage.

A concurring opinion by Justice Benjamin Kaplan, with five justices joining, stated that future quarrels10 between landowners

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5. The jury awarded the plaintiffs $60,000. The defendants moved for a directed verdict and later for a new trial. After a hearing, the judge denied the directed verdict and reduced the award to $25,000. The appeals court reversed, holding that the trial judge had erred in denying defendants' motion for a directed verdict. Tucker v. Badoian, id. at 3207-08, 384 N.E.2d at 1196-97.


7. Id. at 3215, 384 N.E.2d at 1199.


9. 1978 Mass. Adv. Sh. at 3214, 384 N.E.2d at 1199. See notes 44-54 infra and accompanying text (discussion of Massachusetts' modifications and exceptions to the common enemy rule and the artificial channel exception).

10. The reasonable use standard is to be applied to conduct occurring after the decision in Tucker, "excepting future conduct so related in a continuum with past
concerning surface waters will be resolved by the reasonable use standard instead of by the common enemy rule. Although Justice Kaplan did not define “reasonable use” or set up guidelines for determining what constitutes a reasonable use of land, he did suggest consulting several out-of-state cases and the Restatement of Torts in deciding future disputes concerning surface water diversion. By not defining “reasonable use,” the Massachusetts court leaves property owners in the unenviable situation of not knowing whether contemplated land improvements will result in liability for subsequent surface water diversion until the improvement is a fait accompli.

This note discusses the evolution of the Massachusetts rules governing surface water diversion, the suitability of the reasonable use standard for use in Massachusetts and the need for a clear standard to use in determining reasonableness in the context of surface water diversion.

II. BACKGROUND

During the booming urban development of the second half of the nineteenth century, surface water controversies increased rapidly. Because land excavation and road building central to this development affected surface water drainage, surface water controversies arose. States resolved these controversies in three ways. Most states adopted either the common enemy rule or the civil conduct that it would be unjust to apply the new standard to it.” 1978 Mass. Adv. Sh. at 3220, 384 N.E.2d at 1202.

11. Justices Hennessey, Braucher, Wilkins, Liacos and Abrams joined concurring. Thus, six of the seven justices hearing the case supported the adoption of the reasonable use rule. Id. at 3218, 384 N.E.2d at 1201.

12. See note 85 infra.

13. See note 86 infra.

14. The nineteenth century was the first time the urban population was increasing faster than the rural population. Bridges, The Application of Surface Water Rules in Urban Areas, 42 Mo. L. Rev. 76, 77 (1977).

15. Surface water is generally defined as runoff from rain or melting snow or ice. MASS. WATER RESOURCES COMM’N, COMPILATION AND SUMMARIZATION OF THE MASSACHUSETTS GENERAL LAWS, SPECIAL LAWS, PERTINENT COURT DECISIONS, ETC. RELATING TO WATER AND WATER RIGHTS 31 (1970) [hereinafter cited as Compilation & Summarization].

When a landowner improves his property by building structures or paving ground, he often renders impervious the previously bare ground. The result may be that surface water, which before the improvement spread fanwise across adjacent property, now flows in a concentrated manner and in an increased volume thereby causing damage to the adjacent property. See note 14 supra at 76.

16. See notes 19-22 infra and accompanying text (discussion of the common enemy approach).
law rule, while one state, New Hampshire, adopted the reasonable use rule.

The common enemy approach to the resolution of surface water controversies is based on property law concepts. The term "common enemy" was first used in the 1875 New Jersey decision of *Town of Union v. Durkes* which stated "surface water was the common enemy, which every proprietor may fight and get rid of as best he may." The common enemy rule allows a landowner to deal with surface waters as he pleases without incurring liability for harm he may cause to others. Those states adopting the common enemy rule believed it would foster land development since the developer need not bear the costs to others of his improvements. At a time when urban development was greatly desired, courts were reluctant to set precedents contrary to this social goal.

The "civil law" rule, a rule also based on property law, holds
an improving landowner who interferes with the natural flow of surface waters liable for resulting injuries to other landowners. This approach recognizes a servitude of natural drainage. Lower owners must accept surface water draining onto their land while upper owners may not alter natural systems of drainage to the lower owners' detriment. Thus, under the civil law approach, each landowner must leave the natural drainage system undisturbed or risk liability for any injury to his adjoining landowners. States adopting this civil law rule believed that holding liable a person changing the natural flow of waters was fair. These states also believed the rule would not inhibit urban growth or development.

Problems arose in applying either the common enemy or civil law rules to the wide variety of conflicts which occurred within a given jurisdiction. A strict application of the civil law rule did, in practice, tend to hinder land improvement since the improver had to bear the costs to others of his improvements. On the other hand, while the common enemy rule fostered free land improve-

New Orleans, 2 Mart. 214 (La. 1812). The court held that an owner of lower ground is bound to receive water running from that of a superior landowner; but the water must be received as it flows by the course of nature, and it cannot be altered or modified, except by agreement between the parties interested. Id. at 232-33. Bridges states that at one time the civil law rule was followed by at least 27 states. See note 14 supra at 79.

24. See note 14 supra at 78.

25. The reasoning for adoption of the civil law rule was clearly stated in Gormley v. Sanford, 52 Ill. 158 (1869), as follows:

As water must flow, and some rule in regard to it must be established . . . there can clearly be no other rule at once so equitable and so easy of application as that which enforces natural laws. There is no surprise or hardship in this, for each successive owner takes with whatever advantages or inconveniences nature has stamped upon his land.

Id. at 162.

26. Bridges states that there are highly urbanized states that follow the civil law rule without their growth rate being discouraged. See note 14 supra at 83. See also Hanks, The Law of Water in New Jersey, 22 Rutgers L. Rev. 621, 691 (1968), which states that cases claiming that the civil law rule discourages land improvement assume that land developers' decisions are influenced by rules regarding surface waters, and that the cases do not mention data to support this assumption.

27. See Keys v. Romley, 64 Cal. 2d 396, 412 P.2d 529, 50 Cal. Rptr. 273 (1966), where the Supreme Court of California held that, since the civil law rule may be too rigid and occasionally unjust in heavily developed areas, the rule must be modified by a test of reasonableness. In Lunsford v. Stewart, 95 Ohio App. 383, 120 N.E.2d 136 (1953) and Mulder v. Tague, 85 S.D. 544, 186 N.W.2d 884 (1971), courts refused to strictly apply the civil law rules to urban areas.

See note 14 supra at 86-91 (problems of applying a strict common enemy rule and the resulting modifications to the rule). See also notes 44-54 & 79 infra and accompanying text.
ment, it also established a belief in landowners that might made right.28 For example, if a person filled his land, thereby causing surface waters to flow onto his neighbor's land, the neighbor could build an embankment and force the water to flow back onto the improver's land, thus rendering the improvement useless. To cope with the problems encountered in applying these rules to widely varying situations, exceptions and modifications to the rules arose.29 Some states applied one rule to urban areas and another to rural areas,30 or incorporated the tort principles of "reasonableness" and "negligence" into their rules.31

As the overwhelming importance ascribed to land development during the industrial revolution diminished, the courts reflected this change in social policy by further modifying the common enemy and civil law rules. Eventually, too many such modifications caused the rules to lose their effectiveness and created a great deal of confusion.32 To determine whether an improvement would result in liability for subsequent surface water diversion, one would first have to determine what the general rule was and then thread through numerous exceptions and modifications made to the general rule. To alleviate this confusion, several states adopted a reasonable use rule for resolving surface water controversies.33

29. See note 27 supra. See also notes 44-54 & 79 infra and accompanying text (modifications made to the common enemy rule by the Massachusetts courts).
30. Id.
32. Kinyon & McClure, supra note 21, at 931-35 (discussion of the numerous and confusing qualifications of the civil law and common enemy rules).
33. Before 1956 only two states had adopted the reasonable use rule for the resolution of surface water disputes. See Enderson v. Kelehan, 226 Minn. 163, 32 N.W.2d 286 (1948), where Minnesota adopted the reasonable use rule and Swett v. Cutts, 50 N.H. 439 (1870), where New Hampshire adopted the reasonable use rule for the resolution of surface water disputes.

The reasonable use rule, emanating not from property but from tort principles, gives a landowner the right to make reasonable alterations to the flow of surface waters without incurring liability for the harm resulting to others. Factors relevant in determining liability vary according to jurisdiction, but they generally include the necessity for the drainage, the care taken to avoid injury to the land receiving the water, the benefit to the improved land compared to the resulting harm to the damaged land, and the reasonableness and feasibility of the drainage system adopted.

The reasonable use rule is noted for its flexibility. While the common enemy and civil law rules require many modifications and exceptions to avoid harsh results in their application to urban and rural areas, the reasonable use rule can be applied to both areas without the need for these numerous and confusing modifications.

III. Development of Surface Water Law in Massachusetts

The earliest approach followed by Massachusetts in resolving surface water disputes was a strict common enemy rule first adopted in Luther v. Winnisimmet Co. In Luther, the court held

University of Utah, 26 Utah 2d 285, 488 P.2d 741 (1971); State v. Deetz, 66 Wis. 2d 1, 224 N.W.2d 407 (1974).

Several other states have modified the common enemy or civil law rules to a point approaching actual adoption of the reasonable use rule. See Keys v. Romley, 64 Cal. 2d 396, 412 P.2d 529, 50 Cal. Rptr. 273 (1966); Templeton v. Huss, 57 Ill. 2d 134, 311 N.E.2d 141 (1974); Klutey v. Commonwealth Dep't of Highways, 428 S.W.2d 766 (Ky. 1967); Baer v. Board of County Comm'rs, 255 Md. 163, 257 A.2d 201 (1969); Lunsford v. Stewart, 95 Ohio App. 383, 120 N.E.2d 136 (1953) (for urban land); Morris v. McNicol, 83 Wash. 2d 491, 519 P.2d 7 (1974).

34. See, e.g., Swett v. Cutts, 50 N.H. 439 (1870). In Swett, where the reasonable use rule was first adopted in New Hampshire, the court stated that in determining reasonableness one should consider all the circumstances of the case, among them the nature and importance of the improvement, the extent of the interference, the amount of injury to the other landowners as compared with the value of the improvement, and whether or not the injury could have reasonably been foreseen. Id. at 446.

35. See note 34 supra & note 85 infra and accompanying text (factors used in determining reasonableness of surface water diversion in several states).


37. See notes 27-32 supra and accompanying text.

38. 63 Mass. (9 Cush.) 171 (1851). The term “common enemy” is not used in the opinion, however, the elements of the rule are stated. Water from the plaintiff's land drained into a pond on the defendant's land. The defendant filled in the pond, thereby obstructing the flow of water from the plaintiff's land, and the plaintiff sued
that one landowner is free to stop surface water from entering his land despite harm to his neighbor. The Massachusetts court reaffirmed this approach in *Gannon v. Hargadon.*

In the Massachusetts application of the common enemy rule, it is not material whether a party obstructs or changes the direction and flow of surface water by preventing it from coming within the limits of his land, or by erecting barriers or changing the level of the soil, so as to turn it off in a new course after it has come within its boundaries.

The court stressed that a landowner has a right to the free and unfettered control of his land which cannot be interfered with by any considerations of injury caused to others by interference with the flow of surface waters. At that time, in order to promote land development, the Massachusetts court applied the common enemy rule in a pure form.

To prevent the unjust results which arose from the strictness and rigidity of the common enemy rule in its pure form, the Massachusetts court began making exceptions and modifications to this rule. One such modification was the artificial channel

for the resulting damages. The court held that the plaintiff would have a right of drainage from his land to the defendant's land if the water flowed through a watercourse, but the plaintiff would not have a right of drainage if the water was merely surface water. *Id.* at 174.

"Watercourse" is defined as a stream, usually flowing in a definite channel, having a bed and sides or banks. The size is not important, and the flow need not be constant, but it must be more than a mere surface drainage over an entire face of a tract of land. *Id.* at 174.

39. 92 Mass. (10 Allen) 106 (1865). Melting snow and rain flowed through a ditch to the north of the defendant's land and then flowed over a way and through ruts upon the defendant's land. The defendant placed turf in the ruts and upon his own land to protect the way from injury, thereby causing water to flow onto the plaintiff's land.

40. *Id.* at 109-10.

41. *Id.* The court stated that the free and unfettered control extended to "lawful appropriation of land by its owner to a particular use or mode of enjoyment." *Id.* (emphasis added).

42. See note 22 supra and accompanying text (discussion of limiting liability as a means of promoting the social policy of furthering land development in the nineteenth century).

43. Massachusetts laws governing the use of surface waters have been primarily developed judicially and not legislatively. "There is no reference in the General Laws to any authority to regulate water use beyond the references to pollution, drinking and swimming water standards and the right to use certain public water for fishing, bowling, etc." MASS. WATER RESOURCES COMM'N, A SUMMARY OF MASSACHUSETTS STATE LAWS, POLICIES & PROGRAMS PERTAINING TO WATER & RELATED LAND RESOURCES 68 (1971).

44. See Butler v. Bruno, 115 R.I. 264, 269-70, 341 A.2d 735, 739 (1975)
ception first expressed in 1866 in Franklin v. Fisk. In Franklin, the court held that a landowner may not collect surface water into an artificial channel and then discharge it upon his neighbor’s land. A few years later, in Jackman v. Arlington Mills, the Massachusetts court modified this artificial channel exception by holding that a landowner may use an artificial channel to discharge surface water into a watercourse if the watercourse is “the natural outlet of the waters thus collected, even though, by this artificial arrangement, the flow of waters is accelerated, and the volume at times is increased . . . .” In Bates v. Inhabitants of Westborough, this exception was further modified by expanding the improving landowner’s liability to include resulting damages when surface water in an artificial channel is deflected upon another’s land by either the improver’s setting an obstacle in its direct course or by negligently allowing an obstacle to remain. Thus, amidst the numerous modifications of the common enemy rule, the

(discussion of the rigid formulations of property law on which both the civil law and the common enemy rules are based); State v. Deetz, 66 Wis. 2d 1, 14-16, 224 N.W.2d 407, 414-15 (1974) (discussion of the need to modify the common enemy rule in order to implement changing social needs). Bridges states that certain modifications, such as the due care modifications, merely mitigate the harshness of the common enemy rule. See note 14 supra at 88. See also note 52 infra (an example of Massachusetts’ insertion of the due care modification, referred to as the tort element of negligence, into one of its exceptions to the common enemy rule).

45. 95 Mass. (13 Allen) 211 (1866). The plaintiffs built a culvert across a highway which caused surface water to flow onto the defendant’s land. The defendant blocked the culvert thereby preventing the flow of much of the water from entering the defendant’s land and causing it to flow over and injure the highway.

46. Id. at 211.

47. 137 Mass. 277 (1884). The defendant built tenement houses and cesspools on his land. The sink water from the houses and the cesspools emptied into a ditch on the defendant’s land which connected with a brook about 500 feet from the plaintiff’s land. Surface water from the defendant’s land also flowed through the ditch and then into the brook. The plaintiff claimed that the defendant’s acts increased the water in the brook causing it to overflow into the plaintiff’s cellar resulting in the house being unfit for habitation.

48. See note 38 supra (definition of “watercourse”).

49. 137 Mass. at 283. This modification of the artificial channel exception is further qualified by the requirement that the landowner’s action be “done in the reasonable use of his . . . land, and that the discharge is not beyond the natural capacity of the watercourse, and the land of a riparian owner is not thereby overflowed, and materially injured.” Id.

50. 151 Mass. 174, 23 N.E. 1070 (1890). Bates involved a town’s new drainage system. The new system discharged more water more rapidly through a culvert than the old system. The culvert filled up, and the drain failed at times to discharge water freely. The drain on the plaintiff’s side of the culvert filled up and overflowed onto the plaintiff’s land.

51. Id. at 181, 23 N.E. at 1071.
Massachusetts court inserted the tort element of negligence. As recently as 1957, the Massachusetts Supreme Judicial Court once again qualified this exception by holding that an artificial channel may, if in existence for a long time, be treated as a watercourse. Under Massachusetts law watercourses are treated separately from surface water. Since its adoption of the common enemy rule, Massachusetts has continued to modify this rule in an effort to achieve more equitable results. As the artificial channel exception illustrates, however, the common enemy rule is not well suited to meet this task. The inflexibility of the common enemy rule necessitates numerous modifications which render the rule ineffective and confusing.

In Tucker v. Badoian, the Massachusetts Supreme Judicial Court wisely decided to abandon its modified common enemy rule and to adopt the reasonable use rule for subsequent controversies. With its adoption of the common enemy rule in the nineteenth century, the Massachusetts court had implemented the then existing social policy of fostering land development. By rejecting

52. Assessing the elements of negligence or lack of reasonable care was merely a modification of the common enemy rule in Massachusetts before the decision in Tucker. Absent negligence or lack of reasonable care the common enemy rule was applied. See notes 50-51 infra and accompanying text. See also note 14 supra at 88 ("due care" modification). Bridges criticizes this modification as it only serves to mitigate the harshness of the common enemy rule when the improving landowner is negligent. Id.

53. Kuklinska v. Maplewood Homes, 336 Mass. 489, 146 N.E.2d 523 (1957). An artificial channel on the defendant's land drained surface water into a swamp that was partially on the plaintiff's land. This artificial channel had "been in existence within the memory of man." Id. at 490, 146 N.E.2d at 524. There was testimony that the channel had been in existence for 150 years. Id. at 493, 146 N.E.2d at 526. The court held that, although the plaintiff may have objected to the maintenance of the channel at an earlier time, due to its long existence, it is to be treated as a watercourse, and there remains a right to have the same flow continue. Id. at 494, 146 N.E.2d at 526.

54. For a brief summary of Massachusetts laws pertaining to watercourses see Compilation & Summarization, supra note 15, at 17-24, 269.

Although the artificial channel exception imposes liability on a landowner who collects surface water into an artificial channel and then discharges the water upon his neighbor's land, the exception does not impose liability when the water is discharged into a watercourse to which the water would naturally have flowed, even though the flow of the water is accelerated and the volume is increased. See notes 45-53 supra and accompanying text.


56. Id. at 3218-20, 384 N.E.2d at 1201-02. See notes 1-13 supra and accompanying text.

57. See note 22 supra and accompanying text (discussion of the nineteenth century social policy of furthering land development).
the common enemy rule and adopting the reasonable use rule in 1978, the Massachusetts court has taken a great step toward implementing the current social policy of just allocation of development costs.\(^{58}\) That a person should have "free and unfettered control of his property,"\(^{59}\) a basic tenet of the common enemy rule, is no longer in harmony with current social policy.\(^{60}\) Although there is still a concern with land development for the greater good of society, justice is better served by the reasonable use rule which prevents the profit making developer from taking actions which are unreasonable in light of all circumstances surrounding his action and also which makes him liable for the resulting costs to others of his improvements when he fails to take such reasonable actions.\(^{61}\)

This awareness of changing social policy has been the basis for justifications for the abandonment of both the civil law and common enemy rules in several states. As stated in \textit{State v. Deetz},\(^ {62}\) in which Wisconsin adopted the reasonable use rule in favor of the common enemy rule:

\begin{quote}
[The common enemy rule] is not a timeless rule of property. Rather, it is one that apparently served the temporary purposes of society well in the days of burgeoning national expansion of the mid-nineteenth and early-twentieth centuries. The concept that a [sic] owner of real property can, in all cases, do as he pleases with his property is no longer in harmony with the realities of our society.\(^ {63}\)
\end{quote}

When New Jersey abandoned the common enemy rule and adopted the reasonable use rule in \textit{Armstrong v. Francis Corp.},\(^ {64}\) the court reasoned that, although building projects are in the social good, there is no reason for the adjoining landowners, rather than the profit making builders themselves, to bear the economic costs incident to the builders’ expulsion of surface waters. "Social prog-

\(^{58}\) See notes 62-70 infra and accompanying text (discussion of policy reasons for favoring the adoption of the reasonable use rule).


\(^{60}\) See \textit{State v. Deetz}, 66 Wis. 2d 1, 15-16, 224 N.W.2d 407, 414 (1974), where in discussing the rejection of the common enemy rule the court states that "[w]hen a rule of law thwarts social policy rather than promotes it, it is the obligation of a common law court to undo or modify a rule that it has previously made."

\(^{61}\) See notes 34 supra & note 85 infra (tests used in determining reasonableness in the context of surface water diversion). See also notes 88-96 infra (suggested test for determining reasonableness in the context of surface water diversion).

\(^{62}\) 66 Wis. 2d 1, 224 N.W.2d 407 (1974).

\(^{63}\) Id. at 14-15, 224 N.W.2d at 414.

\(^{64}\) 20 N.J. 320, 329, 120 A.2d 4, 10 (1956).
ress and the common wellbeing are in actuality better served by a just and right balancing of the competing interests according to the general principles of fairness and common sense which attend the application of the rule of reason. In Butler v. Bruno, the Rhode Island Supreme Court noted the reasonable use rule's flexibility in its applicability to "situations unthought of in the day when surface water was truly considered to be the common enemy." The court decided that the rule would "permit a more equitable allocation of the costs of . . . improvements, for the owner improving his land must take into consideration the true cost of such development to the community." When North Carolina abandoned the civil law rule and adopted the reasonable use rule in Pendergrast v. Aiken, the court noted that the numerous modifications made to the old rule, necessary to permit the reasonable use of land,

ha[ve] resulted in uncertainty of the law and reduced predictibility. . . . [The reasonable use rule] can be applied effectively, fairly and consistently in any factual setting . . . and thus has the capacity to accommodate changing social needs . . . . [and] is more in line with the realities of modern life and that consistency, fairness and justice are better served through the flexibility afforded by that rule.

The flexibility of the reasonable use rule makes it especially appropriate for application in a state as diverse as Massachusetts. Massachusetts has great variations in geography, climate, and population distribution and has varying water problems in different areas. Although rainfall is rather evenly distributed throughout the year, it rains more frequently in the upland areas. Snowfall,

65. Id. at 330, 120 A.2d at 10.
67. Id. at 274, 341 A.2d at 741.
68. Id.
70. Id. at 215-16, 236 S.E.2d at 795-96.
71. The land surface of Massachusetts is mountainous along the western border and generally hilly elsewhere. But certain coastal areas consist of flat land with marshes and small ponds and lakes. The climate of the state has wide daily and annual variations in temperature and precipitation. There are large differences between the same seasons in different years with great diversity between areas. WATER RESOURCES RESEARCH CENTER, YIELD OF STREAMS IN MASSACHUSETTS 3-5 (1967).
72. Thirty-four to seventy percent of the rainfall becomes surface water. Id. at 5.
73. Id. at 4. Since frequency of precipitation varies from area to area in Massachusetts and since such a large percentage of the precipitation becomes sur-
which accounts for much surface water in the spring, increases rapidly from the coast westward. Although Massachusetts does not have an overall water shortage, serious local shortages are present. It also has problems with the distribution of the available water supply and with the loss of potential water supplies due to increasing urbanization, especially around Boston. Since surface water accounts for a great percentage of the fresh water used and since all waters are interrelated in the hydrologic cycle, surface water laws will certainly have a far-reaching effect in Massachusetts. Due to the varying water problems in different parts of

face water, Massachusetts' present water resource problem is one of distribution and management. Id. at 5.

74. Id. at 4. Variations in seasonal accumulations of snow have ranged from over 100 inches in the west to less than four inches on Cape Cod, located in the southeastern part of the state. Id. at 5.

75. Massachusetts uses approximately one billion two hundred million gallons of fresh water per day, and approximately one billion gallons of this water is from surface water supplies which are not evenly distributed throughout the state. Id. at 3-5.

The coastal area must depend on ground water supplies for fresh water which are replenished by coastal precipitation. MASS. DIV. OF WATER RESOURCES, GROUNDWATER & GROUNDWATER LAW IN MASSACHUSETTS 4 (1976).

76. Id. at 3.

77. See notes 72-74 supra.

78. For an explanation of the hydrologic cycle see MASS. DIV. OF WATER RESOURCES, GROUNDWATER & GROUNDWATER LAW IN MASSACHUSETTS (1976).

79. Justice Kaplan's failure to define the term "surface water" in Tucker obscures Massachusetts' new standard governing liability for surface water diversion. He explains that the reasonable use standard will be used to resolve "quarrels between landowners about surface waters." 1978 Mass. Adv. Sh. at 3219, 384 N.E.2d at 1201 (emphasis added). It is unclear from Justice Kaplan's opinion whether the reasonable use rule will apply to controversies involving only surface waters or to controversies involving subterranean waters as well.

Although Massachusetts surface water rules once applied only to rain or melting snow or ice, the application of the rules has gradually expanded. In Wilson v. New Bedford, 108 Mass. 261 (1871), the Massachusetts court expanded application of the rules relating to surface waters to cover damages caused by underground percolating water. Principles of justice and economics were cited as reasons for expanding application of the rules. Id. at 266-67. In Kennison v. Beverly, 146 Mass. 467, 16 N.E. 278 (1888), application of the rules was further expanded by holding:

no distinction in respect to legal liability between an injury to land from surface water collected in gutters and catch basins which are below the surface of the adjoining land, and from which the water percolates through the soil, and an injury from surface water which, overflowing the gutters and catch basins, runs over the adjoining land, or which is turned directly upon it.

Id. at 469, 16 N.E. at 280. Thus, the application of surface water laws, once governing only interference with water on the surface of land, was expanded to include interference with subterranean waters.

In Deyo v. Athol Housing Auth., 335 Mass. 459, 140 N.E.2d 393 (1957), the
the state, a flexible reasonable use rule, which considers all the relevant circumstances of each situation, is better adapted for resolving Massachusetts water problems than the more rigid common enemy rule.\textsuperscript{80}

The most serious criticism of the reasonable use rule is that it sets no guidelines to provide landowners with a standard governing the use of their land.\textsuperscript{81} This is precisely the situation in which Justice Kaplan’s opinion leaves Massachusetts landowners. He writes: “[D]etails of the standard will evolve and be determined . . . through the decisional process.”\textsuperscript{82} A common but unpersuasive retort to the criticism that the reasonable use rule lacks sufficient guidelines is that “desire for certainty of liability should not and must not serve as a judicial pardon for the unreasonable conduct which has been manifested by any landowner in our modern society.”\textsuperscript{83} Landowners and the lawyers with whom they consult, however, should have some guidelines to follow other than a rather ambiguous “reasonableness” doctrine in deciding whether to spend time and money on land improvements.\textsuperscript{84}

Justice Kaplan suggests referring to cases from several states\textsuperscript{85}
court stated that a landowner is liable for resulting damages if he artificially retains surface water on his land “so that by its retention it is deflected or backed up upon another’s land . . . . It is immaterial whether injury from water so collected or retained results from the flow of surface water or from subsurface percolation.” \textit{Id}. at 462, 140 N.E.2d at 395.

\textsuperscript{80} See note 36 \textit{supra} and accompanying text.
\textsuperscript{81} See Butler v. Bruno, 115 R.I. at 275-76, 341 A.2d at 741, where Justice Joslin in dissent states that the reasonable use rule, though it may reflect current feelings about the use and development of land, is not sufficiently clear as stated by the majority opinion and thereby results in a landowner’s not knowing what actions involving diversion of surface waters are legal and what actions are not legal and, thus, may result in liability.
\textsuperscript{82} 1978 Mass. Adv. Sh. at 3220, 384 N.E.2d at 1202.
\textsuperscript{83} 115 R.I. at 275, 341 A.2d at 741.
\textsuperscript{84} See generally 115 R.I. at 275-76, 341 A.2d at 741 (Joslin, J., dissenting).
\textsuperscript{85} Justice Kaplan suggests consulting the following cases for determining reasonableness in the context of surface water diversion. 1978 Mass. Adv. Sh. at 3218, 3220, 384 N.E.2d at 1201.
Armstrong v. Francis Corp., 20 N.J. 320, 120 A.2d 4 (1956), which considers “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.” \textit{Id}. at 330, 120 A.2d at 10. Pendergrast weighs:

the gravity of the harm to the plaintiff against the utility of the conduct to the defendant . . . . Determination of the gravity of the harm involves consideration of the extent and character of the harm to the plaintiff, the social value which the law attaches to the type of use which is invaded, the suitability of the locality for that use, the burden on plaintiff to minimize the harm, and other relevant considerations arising upon the evidence. Determi-
and to the *Restatement of Torts* for guidance in determining reasonableness. This guidance may, however, be of dubious value since Justice Kaplan states that the Massachusetts courts are not committed "to follow in every detail the position elaborated by any other court or by the Restatement." 

Arguably, the strength of the judicial system is to define rules on a case-by-case basis and, thus, gradually to develop a body of law. This process alleviates the need for numerous modifications and exceptions necessary under a restrictive rule such as the common enemy rule. But in laying the foundation of a new rule of law, the law should be sufficiently clear to allow a rational decision about the utility of the conduct of the defendant involves consideration of the purpose of the defendant’s conduct, the social value which the law attaches to that purpose, the suitability of the locality for the use defendant makes of the property, and other relevant considerations arising upon the evidence.

293 N.C. at 217, 236 S.E.2d at 797. *Butler* states that liability turns on a determination of the reasonableness of the action and should be determined upon the consideration of all relevant circumstances. 115 R.I. at 272, 341 A.2d at 739. State v. Deetz, 66 Wis. 2d at 16-18, 224 N.W.2d at 415-16 (citing *Restatement (Second) of Torts* § 822, at 22 (Tent. Draft No. 17, 1971), § 826, at 3 (Tent. Draft No. 18, 1972), § 827, at 36 (Tent. Draft No. 17, 1971), § 828, at 41 (Tent. Draft No. 17, 1971); *Restatement of Torts* § 833 (1939)).


Section 833 states that "[n]on-trespassory invasions of a person’s interest in the use and enjoyment of land resulting from another’s interference with the flow of surface water are governed by the rules stated in §§ 822-831." *Restatement of Torts* § 833 (1939). Section 822 states that one is subject to liability when "the invasion is either a) intentional and unreasonable, or b) unintentional and otherwise actionable under the principles controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities." *Restatement (Second) of Torts* § 822 (Tent. Draft No. 17, 1971). Section 826 states that an intentional act is determined to be unreasonable if "a) the gravity of the harm outweighs the utility of the actor’s conduct, or b) the harm caused by the conduct is substantial and the financial burden of compensating for this and other harms does not render infeasible the continuation of the conduct." *Id.* § 826 (Tent. Draft No. 18, 1972). Section 827 states that gravity of the harm is to be determined by weighing "a) the extent of the harm involved; b) the character of harm involved; c) the social value which the law attaches to the type of use or enjoyment invaded; d) the suitability of the particular use or enjoyment invaded to the character of the locality; e) the burden on the person harmed of avoiding the harm." *Id.* § 827 (Tent. Draft No. 17, 1971). Section 828 states that the utility of the conduct is to be determined by weighing a) the social value the law attaches to the conduct's purpose; b) the suitability of the conduct to the locality; c) whether it is impracticable to prevent or avoid the invasion if the act is continued; d) whether it is impracticable to continue the act if it is required to bear the cost of compensation. *Id.* § 828.

whether an act complies with the law and whether the actor will be liable for possible damages to others caused by the act. In deciding whether to improve his land, a landowner should know whether liability for possible damages to others will ensue and whether, in computing the cost of an improvement, he must include the cost to others caused by the improvement.

Rather than citing varying and overlapping standards for determining reasonableness which the Massachusetts courts are not committed to follow, Justice Kaplan should have proposed one test stating the elements that the courts would consider when determining reasonableness in the context of surface water diversion. The test for determining whether an improvement is reasonable, and, therefore, whether the improver should not be liable for damages caused to others by his improvement’s diversion of surface waters, should consider all the relevant circumstances including such factors as: (1) The value the law attaches to the improvement compared to the value the law attaches to the right or action of the injured party with which the improvement interferes; (2) the benefit to society, the community, and the improver caused by the improvement compared to the detriment to society, the community, and the injured party caused by the improvement; (3) the cost to the improver of avoiding or mitigating the injury compared to the cost to the injured party of avoiding or mitigating the injury; (4) whether the injury was foreseeable by

88. See notes 85-86 supra.
89. See note 87 supra and accompanying text.
90. The test proposed in this paper is meant to be a guide for determining reasonableness of surface water diversion. Each element listed may not be appropriate in every case, and the elements are not meant to be mutually exclusive. The proposed test should give both decision makers and landowners a guideline for determining whether surface water diversion will give rise to liability for resulting damages. The proposed test contains elements of several other tests. See notes 85-86 supra.
91. See LeRoy Fibre Co. v. Chicago, M. & St. P. Ry., 232 U.S. 340 (1914), where the rights of the railroad, considered as a public improvement, are compared to an individual’s private property rights.
92. See Butler v. Bruno, 115 R.I. at 274, 341 A.2d at 741, for a discussion of the need to consider the true cost to the community of an improvement in order to achieve an equitable allocation of the costs of land improvement. See also Enderson v. Kelehan, 226 Minn. 163, 168-70, 32 N.W.2d 286, 289-90 (1948), which in determining liability for surface water diversion considers whether the benefit to the improved land outweighs the harm resulting to others.
93. See Keys v. Romlev, 64 Cal. 2d 396, 409, 412 P.2d 529, 537, 64 Cal. Rptr. 396, 409 (1966), which is determining liability for surface water diversion considers both the duty of an improving landowner to take reasonable care to avoid injury to
the improver and, if the injury were foreseeable, whether the improver knew or should have known of feasible alternate methods of improvement that would have avoided or mitigated the injury; and (5) whether imposing liability on either the improver or the injured party would preclude the continuance of an activity that is desired by society or by the community.

The applicability of this test can be examined by using *Tucker* as the hypothetical. If this test were applied to *Tucker*, it would be necessary to determine exactly what improvement Badoian made to his land, and then the first and second elements of the test could be applied. If Badoian’s improvement consisted of building a road to provide better access to a recreational area to be used solely by him, the first and second elements of the test would weigh toward holding him liable.

Under the third element of the test, it is necessary to determine which party could avoid or mitigate the injury more inexpensively. If Badoian could have avoided all injury to the Tuckers by digging a drainage ditch costing $50, but the Tuckers could have avoided injury only by spending several thousand dollars to rebank their property, the third element of the test would weigh toward holding Badoian liable.

Under the fourth element of the test, it would be necessary to determine whether the Tuckers’ injury was foreseeable to Badoian. If it were foreseeable, it would be necessary to determine whether Badoian knew or should have known of feasible alternate methods of improvement that would have avoided or mitigated the injury. If Badoian knew that his improvement would result in substantial injury to the Tuckers, and if he knew that the injury could have been avoided by digging a ditch costing only $50, the fourth element would weigh toward holding him liable.

Under the fifth element of the test, it is necessary to examine the nature of the defendant’s improvement. If the improvement is one that is desired by society or by the community and if holding others and the duty of a person threatened with injury to his property by the flow of surface waters to take reasonable precautions to avoid or reduce the injury.

94. *See* *Enderson v. Kelehans*, 226 Minn. 163, 168, 32 N.W.2d 286, 289 (1948) (in determining liability for surface water diversion considers whether reasonable care has been taken to avoid unnecessary injury to the land receiving the water); *Armstrong v. Francis Corp.*, 20 N.J. at 330, 120 A.2d at 10 (in determining liability for the diversion of surface water considers the foreseeability of the harm caused).

95. *See* notes 21-22 *supra* and accompanying (discussion of the judiciary’s promotion of the nineteenth century social goal of furthering land development by not imposing liability for surface water diversion).
Badoian liable would preclude the desired improvement, this ele-
ment would weigh toward not holding him liable. If Badoian’s im-
provement consisted of building a road to provide better access to
a recreational area to be used solely by him, and imposing liability
on him would preclude the building of the road by making the pro-
ject financially infeasible, it is unlikely that society or the commu-
nity would have sufficient interest in Badoian’s improvement to
free him from liability. In such a case, the fifth element of the test
would weigh toward holding Badoian liable. Each relevant element
of the test should be examined and weighed against the other ele-
ments to determine liability.

The foreseeability portion of the test should be applied more
or less stringently depending upon the circumstances. For exam-
ple, if the improvement is the building of a nuclear plant, the
foreseeability portion of the test should be applied more strin-
gently. The large scale nature of such a project and the clear
knowledge of far-reaching effects justify imposing the burden of
investigating the possibility of damages to others and the feasibility
of alternate methods of improvement. If the improvement is one
that affects only neighboring landowners, however, the fore-
seeability portion of the test should be applied less stringently. A
less stringent application of this portion of the test prevents the
need for costly research to determine both the possibility of dam-
ages which might result from the improvement and the feasibility
of alternate methods of improving the land. This is a task that few
landowners would pursue before making an improvement and a
task that few landowners could afford if the injured party brought
suit. The rationale for not imposing this task on a small landowner
whose improvement affects only his neighbor is that the effects of
the improvement are not sufficiently far-reaching to justify the cost
necessary for compliance with such a burden. Thus, whether an
improver “knew or should have known of feasible alternate meth-
ods of improvement that would have avoided or mitigated the in-
jury” depends on the circumstances of the particular case.

The suggested test retains the flexibility necessary for a rule to
be applied with equitable results in a state with diverse water
problems.96 It allows a landowner to make a rational, cost-based
decision of whether to improve his land by allowing him to know

96. See notes 71-80 supra and accompanying text (discussion of Massachusetts’
water problems).
whether his improvement will result in any liability for subsequent damages caused by surface water diversion and, therefore, whether he should consider potential liability costs in computing the total cost of the improvement. This test informs the landowner of the factors that will be used in determining liability and it precludes the uncertainty of liability that must follow Justice Kaplan's opinion\(^{97}\) which stated varying and overlapping standards that the courts are not committed to follow.\(^{98}\)

IV. Conclusion

Massachusetts laws governing surface water controversies have undergone continual change. In order to promote land development during the nineteenth century, Massachusetts adopted the common enemy rule for resolving these controversies. This rule allows a landowner to improve his land and thereby alter the flow of surface water to his neighbor's detriment without incurring liability for his neighbor's damages. As the overwhelming importance ascribed to land development diminished, Massachusetts reflected this change in social policy by modifying and making exceptions to the common enemy rule. The modifications and exceptions gradually became so numerous that confusion and uncertainty resulted. In *Tucker*, the Massachusetts Supreme Judicial Court wisely decided to abandon its modified form of the common enemy rule and to adopt the flexible reasonable use rule for future controversies.

By its adoption of the reasonable use rule in *Tucker*, Massachusetts has taken a great step toward implementing the current social policy of just allocation of development costs. The rule is also well suited in its flexibility for use in a state with diverse water problems. The Massachusetts Supreme Judicial Court, however, failed to provide clear guidelines for determining what constitutes a reasonable use of land in the context of surface water diversion.

Although surface water laws are extremely important due to their effect on the water cycle, courts can refer to only a narrow

\(^{97}\) See notes 81 & 84 *supra* and accompanying text (discussion of the lack of guidelines provided by the reasonable use standard adopted by Rhode Island in *Butler v. Bruno*, 115 R.I. at 264, 341 A.2d at 735).

\(^{98}\) See notes 85-86 *supra* (tests suggested as guidance in determining reasonableness of surface water diversion in Massachusetts). See also note 87 *supra* and accompanying text (Massachusetts' failure to commit itself to following the suggested tests is discussed).
range of cases. Many years must necessarily elapse before the courts rule on a sufficient number of cases to evolve a clear meaning of "reasonableness" in the context of surface water diversion. Rather than waiting many years, the Massachusetts court should adopt the test for determining reasonableness that is proposed in this note. The proposed test is sufficiently flexible to be equitably applied where there are diverse water problems, and it is sufficiently clear in its guidelines to enable a landowner to make a rational, cost-based decision of whether to improve his land. The uncertainty of liability will be obviated. The landowner, therefore, will be apprised of the factors used in determining liability and could direct his actions and decisions accordingly.

Although the Massachusetts court deserves praise both for adopting a rule well suited in its flexibility for use and for fulfilling its role as an implementer of changing social policy, it should soon delineate clear guidelines for determining what constitutes a reasonable use of land in the context of surface water diversion.

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